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# **Notre Dame University-Louaize Lebanon**

## **Catalog 2010 - 2011**

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## **MESSAGE FROM THE PRESIDENT**

Here at Notre Dame University-Louaize, and for over than two decades, students and faculty observe and study the present world in its endless and multifaceted norms. Here they contemplate, aspire, reflect, inspire, and above all, worship the Almighty and enrich their understanding of the universe and their vision of the future of mankind.

On this campus the family members of Notre Dame University seek the ultimate truth and question the relative truth. They learn how to acquire knowledge, analyze knowledge, and criticize knowledge as necessary steps in order to produce knowledge. They are trained how to be skillful citizens and taught how to become qualified, competent, and productive members of the community.

This is where students compete, and faculty members earn merit and promotion, in order to improve and advance their intellectual abilities. NDU campus in this sense is a busy and active spot where the power of reason grows every day hand in hand with the power of hope, faith, and spirit. Here we learn every day how to reconcile the authority of the mind with the supremacy of our beliefs.

We learn together how to engage with innovation and creativity. We learn together how to connect with originality, novelty, and modernity. We learn together how to commit ourselves with critical thinking, and analytical reevaluation of our existence. We joyfully realize that the ultimate scientific truth meets the vital spiritual legitimacy, and the very end of the material existence gets together with the very beginning of the basic moral values that reconstruct the universe and mankind every single morning.

This is how our academic endeavor bears its meaning and transmits its significance. This is how our programs, our teaching and learning activities, together with our research efforts grow with the growth of our vision, values, and beliefs. Thus, I call upon each one of you to maintain this intellectual and spiritual growth, and to keep the torch high.

**Fr. Walid Moussa, S.T.D.**  
President

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***Architecture, Art and Design***

Mr. John Kortbawi, *Coordinator*

Mr. Charbel Akl, *Technical and Academic Assistant*

Miss Marie-Reine Bou Nassif, *Secretary*

***Business Administration and Economics***

Mr. Hrair Hovivian, *Coordinator*

Miss Marie-Reine Bou Nassif, *Secretary*

***Engineering***

Dr. Charbel Zgheib, *Coordinator*

Mrs. Siham Antoun Chalhoub, *Secretary*

***Humanities***

Mr. Vatche Donerian, *Coordinator*

Miss Marie-Reine Bou Nassif, *Secretary*

***Natural and Applied Sciences***

Dr. Nazir Hawi, *Coordinator*

Mrs. Siham Antoun Chalhoub, *Secretary*

Mrs. Rêve Berberi-Richa, *FNAS/FNHS Lab Assistant*

***Office of the Registrar***

Mrs. Nancy Khoury Jurdy, *Assistant Registrar*

Mrs. Marina Bou Karroum-Beainy, *Secretary*

***Office of Admissions***

Mr. Maya Abou Khzam Awar, *Admissions Officer*

Mrs. Marina Bou Karroum-Beainy, *Secretary*

***Student Affairs Office***

Br. Abdo Sleiman, *Assistant Director of SAO*

Ms. Denise Nassif, *SAO Officer*

***Business Office***

Mr. Elie Bou Abdo, *Accountant*

***Library***

Ms. Claudine Chamoun, *Library Supervisor*

Ms. Isabelle Bittar-Ghanem, *Library Assistant*

***Computer Center***

Mr. Jean Hedary, *Technical Support Specialist*

Mr. Jack Bou-Nassif, *Assistant in the Computer Center*

***Office of Public Relations***

Mr. Emile Khoury, *Assistant Director of Public Relations*

***Security Services***

Mr. Saïd Bou Nassif, *Security Supervisor*

Mr. George Habib, *Security Guard*

Mr. Fadi Antoun, *Security Guard*

Mr. George Nader, *Security Guard*

Mr. Antoine Lahoud, *Security Guard*

***Cafeteria Services***

Mrs. Jihane Mouawad, *Cafeteria Worker*

Miss Daed Bou Nassif, *Cafeteria Worker*

Mrs. Fadia Keyrouz Madi, *Cafeteria Worker*

Mrs. Roula Khattar Antoun, *Cafeteria Worker*

Mrs. Antoinette Jraidy, *Senior Cafeteria Worker*

***General Services Office***

Mr. Zahi Jadallah, *Assistant to the Director of Administration for General Services*

Miss Jeanette Younes, *Secretary*

Mr. Toni Bou Abdo, *Maintenance Worker*

Mr. Abdo Mghames, *Gardener*

Mr. Dib Haddad, *Gardener*

Mr. Charbel Saadeh, *Driver*

Mr. Refaat Nasr, *Services Worker*

## LIST OF FULL-TIME FACULTY MEMBERS 2010-2011

### Professors

*Alam, Edward*, Ph.D., 1996, *Philosophy*, University of Utah, USA

<sup>1</sup>*Assaf, Walid*, Ph.D., 1965, *Nuclear Engineering*, Iowa State University, USA

*Chedid, Fouad*, Ph.D., 1990, *Computer Science: Parallel & Distributed Computing, Algorithms Theoretical Computer Science.*, Illinois Institute of Technology, USA

<sup>2</sup>*Eid, Assad*, Doctorate, 1986, *Applied Linguistics and TEFL*, Université Saint-Joseph, Lebanon

<sup>2</sup>*Eid, George M.*, Ph.D., 1988, *Mathematics*, Polytechnic University, New York, USA

*Eid, Mansour*, Doctorate, 1985, *Arabic Language and Literature*, Université Saint-Joseph, Lebanon

*Ghais, Chahine*, Ph.D., 1998, *Political Science*, University of Missouri, St. Louis, USA

*Hobeika, Louis*, Ph.D., 1980, *Economics*, University of Pennsylvania, USA

*Kesrouani, Elias (Fr.)*, Diplôme de Docteur, 1989, *Musicologie*, Sorbonne Paris IV, France

<sup>1</sup>*Khoury, Shahwan*, Ph.D., 1965, *Electrical Engineering (Applied Space Science)*, Carnegie Institute of Technology, CMU, USA

<sup>2</sup>*Nehme, Michel*, Ph.D., 1983, *Political Science*, Rutgers University, New Jersey, USA

<sup>2</sup>*Oueijan, Naji*, Ph.D., 1985, *English Literature*, Baylor University, USA

<sup>2</sup>*Rihani, Ameen A.*, Ph.D., 1996, *Bilingual Literature*, Lebanese University, Lebanon

<sup>2</sup>*Yachoui, Elie*, Doctorat d'Etat, 1982, *Economics*, Dauphine, France

### Associate Professors

*Abouchedid, Kamal*, Ph.D., 1997, *Education*, Manchester University, UK

*Ajami, Joseph*, Ph.D., 1987, *Mass Communication*, Ohio University-Athens, USA

*Asmar, Ghazi*, Ph.D., 1998, *Mechanical and Aerospace Engineering*, University of Missouri, USA

<sup>2</sup>*El-Hage, Youssef Kamal*, Ph.D., 1990, *Physics*, Technische Universität München, Germany; M.A., 1985, *Philosophy*, Lebanese University, Lebanon

*El-Hayek, Michel*, Docteur Européen, 1997, *Sciences Appliquées*, Faculté Polytechnique de Mons, Belgium

*Elmurr, Sami*, Ph.D., 1986, *Electrical Engineering*, Mississippi State University, USA

*Fahed, Ziad*, Doctorate, 2001, *Théologie Canonique*, Université Catholique de Lyon, France

*Fakih, Khalid*, Ph.D., 1992, *Journalism*, University of Missouri, USA

*Farhat, Antoine*, Ph.D., 1999, *Nutrition*, McGill University, Canada

*Farhat, Hikmat*, Ph.D., 1998, *Chemical Physics*, McGill University, Canada

*Georges, Semaan*, Ph.D., 2001, *Electrical Engineering*, Ecole de Technologie Supérieure, Canada

*Haddad, John.*, Ph.D., 1992, *Statistics*, University of Waterloo, Canada

*Haddad, Robert*, Master of Fine Arts, 1980, University of Pennsylvania, USA

*Hage, Tanos G.*, Ph.D., 1995, *Plant Biochemistry and Molecular Biology*, Pennsylvania State University, USA

*Hajjar, Roger*, Ph.D., 1997, *Physics and Astronomy*, Université de Montréal, Canada

*Hamad, Mustapha*, Ph.D., 1995, *Electrical Engineering*, University of South Florida, USA

*Hamadeh, Mhamad*, Ph.D., 1998, *Economics*, Syracuse University, USA

*Harb, Jacques*, Ph.D., 1996, *Civil Engineering*, Northeastern University, USA

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<sup>1</sup> Professor Emeritus

<sup>2</sup> Tenure appointment

**Hasham, Elham S.**, Ph.D. 2004, *Educational Leadership, Management and Administration*, Leicester University, United Kingdom.

**Jahshan, Paul**, Ph.D., 2000, *American Studies*, Nottingham University, UK

**Keirouz, Malhab**, Ph.D., 1991, *Mathematics*, Purdue University, USA

**Kfoury, Carol**, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

**Khair, Marie**, Doctorate, 1996, *Computer Science*, Aristotle University of Thessaloniki, Greece

**Khalaf-Keirouz, Leila**, Doctorate, 1995, *Environmental Geology*, Westfälische Wilhelms-Universität, Germany

<sup>3</sup> **Khalil, Antoine**, M.B.A., 1981, *Finance*, Pace University, USA

**Labaki, George**, Doctorate, 1984, *Law*, Université de Paris-I, Pantheon, Sorbonne, France.

**Maalouf, Hoda**, Ph.D., 1998, *Communication Engineering*, Imperial College, University of London, England

**Malek, Amal**, Doctorate, 1<sup>ère</sup> Catégorie, 2000, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

<sup>1</sup> **Matar, Suhail**, C.A.P.E.S., 1969, *Arabic Language and Literature*, Lebanese University, Lebanon

<sup>2</sup> **Mehanna, Rock-Antoine**, Ph.D., 2000, *Business Policy*, Southern University, Baton Rouge, Louisiana, USA

**Naimy, Viviane**, Doctorate, 2001, *Economics and Finance*, Université de Paris XI, France

**Nassar, Elias**, Ph.D., 1997, *Electrical Engineering*, The Ohio State University, USA

**Sabieh, Christine**, Doctorate 1<sup>ère</sup> Catégorie, 1998, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

**Salameh, Doumit**, Ph.D., 1988, *Philosophy*, St. Louis University, USA

**Salem, Naim**, Ph.D., 1992, *International Studies*, University of South Carolina, USA

**Saliba, Holem**, Ph.D., 1997, *Mathematics*, Moscow State University, Russia

**Sensenig-Dabbous, Eugene**, Doktor Der Philosophie, 1985, *Political Science and German Literature*, Paris-Lodron-Universität, Salzburg, Austria

**Yaacoub, Youssef**, Ph.D., 1990, *Education*, Loyola University of Chicago, USA

**Younes, Farid**, Ph.D., 1997, *Aménagement*, Université de Montréal, Québec, Canada

### **Assistant Professors**

**Aad, Pauline**, Ph.D., 2008, *Animal Breeding and Reproduction*, Oklahoma State University, USA

**Abdel-Nour, George**, Ph.D., 1997, *Spanish*, Yale University, USA

**Akar, Bassel**, Ph.D., 2009, *Education*, Institute of Education, University of London, UK

**Akhras, Caroline**, Ph.D., 2007, *Doctor of Education*, University of Leicester, UK

**Antaby, George (Fr.)**, Doctorate, 2008, *Philosophy*, University of Ottawa, Canada

**Atallah, Jad**, Ph.D., 2008, *Electrical & Computer Systems*, Royal Institute of Technology, Sweden

**Azzi, Marwan**, Ph.D., 2008, *Materials Engineering*, McGill University, Canada

**Bassil, Charbel**, Doctorate, 2010, *Economics*, Cergy Pontoise University, France

**Bechara, André**, Master of Arts in Design, 2007, Notre Dame University-Louaize, Lebanon.

**Beyrouthy, Lola**, Doctorate, 2002, *Music*, Université du Saint-Esprit Kaslik, Lebanon

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<sup>1</sup> Tenure appointment

<sup>2</sup> Leave of absence for 2010-2011

<sup>3</sup> Honorary Associate Professor

**Bitar, Nicolas**, Ph.D., 2005, *International Finance and Economics*, University of Wisconsin-Milwaukee, USA

**Bou-Mosleh, Charbel**, Ph.D., 2005, *Mechanical Engineering*, University of Colorado, USA

**Bou-Sanayeh, Marwan**, Dr.-Ing., 2008, *Electrical Engineering*, University of Duisburg-Essen, Germany

**Chakar, Elie**, Doctorate, 1994, *Sciences et Techniques du Bâtiment*, Ecole Nationale des Ponts et Chaussées, France

**Challita, Khalil**, Doctorate, 2005, *Computer Science*, Paul Sabatier University, France

**Chidiac, May**, Doctorate, 2008, *Information Sciences*, Université Pantheon, Assas, Paris II, France

**Choueiri, Linda Selwood**, Master of Science, 2000, *Supervision & Administration in the Visual Arts*, Parsons School of Design / Bank Street College, USA

**Daghfal, Graziella**, Master of Arts in Design, 2002, Middlesex University, UK

**Darouny, Kamal**, M.A., 1986, *Marketing and Advertising*, Sussex College of Technology, UK

**Dib, Robert**, Doctorate, 1998, *Biochemistry*, Université de Nantes, France

**Donerian, Vatche**, M.A., 1987, *Theater and TV Directing*, Yerevan State Institute of Dramatic and Fine Arts, Armenia

**Doumit, Jacqueline**, Doctorate, 1996, *Biomedical Engineering*, Université de Saint-Etienne, France

**El-Asmar, Jean-Pierre**, Ph.D., 2008, *Sustainable Built Environment*, De Monfort University, UK

**El-Berbari, Racha**, Doctorate, 2009, *Image and Signal Processing*, Telecom ParisTech., France

**Doaihi, Jamil**, Ph.D., 1998, *Arabic Literature*, Sydney University, Australia

**El-Hage, Gabriel**, Doctorate, 2011, *Civil Engineering*, INSA-Toulouse University, France

**El-Hajj, Maya**, Doctorate, 2009, *Science of Language: Translation*, Université du Saint-Esprit Kaslik, Lebanon

**El-Hindy, Elie**, Ph.D., 2009, *Governmental & International Relations*, University of Sydney, Australia

**El-Khalidi, Khaldoun**, Doctorate, 1996, *Computer Science*, Université de Franche-Comté, France

**El-Khoury, Akram (Fr.)**, Doctorate, 2006, *Canon Law*, Pontificia Universitas Lateranensis-Rome, Italy

**El-Meouchy, Rita**, Ph.D., 2007, *Education of the English Language*, University Saint-Joseph, Lebanon

**El-Mou Cary, Chady**, Doctorate, 2000, Lab De Génie Electrique de Paris (LGEP), France

**Fayad, Amer**, Ph.D., 2003, *Plant Pathology, Physiology, and Weed Science*, Virginia Polytechnic Institute and State University, USA

**Francis, Francis**, Ph.D., 2003, University of New South Wales, Australia

**1 Frayha, Norma**, M.B.A., 1982, *Accounting*, American University of Beirut, Lebanon

**Ghalayini, Bassem**, Ph.D., 1995, *Applied Mathematics*, University of California-Los Angeles, USA

**Gebran, Marwan**, Doctorate, 2007, *Astrophysics*, University of Montpellier II, France

**Guldemann, Colette**, Ph.D., 2004, *English*, University of London, UK.

**Hamadi, Hassan**, Ph.D., 2005, *Finance*, University of Surrey, UK

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1 Honorary Assistant Professor

**Harb Atef**, Ph.D., 1996, *Economics-Operations Research*, Ecole Polytechnique de Montreal, Canada

**Hassoun, George**, Ph.D., 1996, *Electrical and Electronic Engineering*, University of Adelaide, Australia.

**Hawi, Nazir**, Ed.D., 2008, *Education*, University of Leicester, England.

**Hovivian, Hrair**, M.S., 1984, *Finance and Economics*, Beirut University College, Lebanon

**Gabriel, Nicolas**, Diplôme D'Etudes Supérieur, 2000, *Urbanisme*, Lebanese University, Lebanon

**Jaalouk, Doris**, Ph.D., 1997, *Cell Biology*, Université de Sherbrooke, Canada

**Jajou, Amer F.**, Ph.D., 1987, *Operations Research*, Univerzita Karlova, Czechoslovakia

**Jawad, Dima**, Ph.D., 2003, *Civil Engineering*, Rutgers University, USA

**Kabrita-Bou Serhal, Colette**, Ph.D., 1998, *Circadian Biology*, Northeastern University, Boston, USA

**Kanbar, Nancy**, Ph.D., 2006, *Environmental Science*, George Mason University, USA

**Karam, Clovis**, Doctorate, 1984, *Scholastic Philosophy*, Université Catholique de Lyon, France

**Karam, Savo**, Doctorate, 2008, *English Language and Literature*, Lebanese University, Lebanon

**Kassem, Abdallah**, Ph.D., 2005, *Electrical Engineering*, Ecole Polytechnique de Montreal, Canada

**Keyrouz, Fakherdine**, Dr.-Ing., 2008, *Electrical Engineering*, Munich University of Technology, Germany

**Khoueiri, Roy**, Doctorate, 2003, *Economics*, Université Paris 13, Paris Nord, France

**1 Khoury, Mary**, M.A., 1995, *English Language and Literature*, Lebanese University, Lebanon

**Khoury, Rim**, Ph.D., 2009, *International Finance*, Sogang University, South Korea

**Kopali, Tony**, Doctorate, 2007, *Education*, Université du Saint-Esprit Kaslik, Lebanon

**Kortbawi, John**, Post-Graduate Diploma, 1977, *Advanced Typographic Design*, London College of Printing, UK

**Kraidy, Ghassan**, Doctorate, 2007, *Electronics et Communications de Telecom.*, Ecole Nationale Supérieure, France

**Maalouf, Ramez**, Ph.D., 1994, *Mathematics*, Imperial College, University of London, England

**Matar-Haddad, Dorine**, Ph.D., 2006, *Management*, University of Leicester, UK

**Matta, Alain**, 2004, *Ph.D. Civil Engineering*, Johns Hopkins University, USA

**Matta, Nadim**, Master of Arts, 1999, *Typographic Studies*, London Institute/London College of Printing, UK

**Melki, Habib**, Master of Architecture, 1985, Ball State University, USA

**Mendalek, Nassar**, Ph.D., 2003, *Electrical Engineering*, Ecole de Technologie Supérieure, Canada

**Metni, Najib**, Docteur, 2006, *Automatique et Traitement du Signal et des Images*, Université de Nice-Sophia-Antipolis, France

**Mouchantaf, Maha**, Doctorate, 2009, *Educational Management*, University of Corsica, France

**Moufarij, Mazin**, Ph.D., 2004, *Pharmacology Genetics*, Peter MacCallum Cancer Centre, La Trobe University, Australia

**Rached Ziad**, Ph.D., 2002, *Mathematics*, Queen's University, Canada

**Rahmé, Kamil**, Doctorate, 2008, *Sciences*, Université Paul Sabatier-Toulouse III, France

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<sup>1</sup> Honorary Assistant Professor

**Sabat, Rita**, Ph.D., 2010, *International Relations*, Florida Intl. University, USA  
**Sabiini, Guitta**, Doctorate, 2010, *Mathematics*, University Paul Sabatier Toulouse II, France  
**Sabra, Bassem**, Ph.D., 2000, *Physics*, Ohio University, USA  
**Salem, Talal**, Docteur, 2007, *Civil Engineering*, Institut National des Sciences Appliquées de Lyon, France  
**Sarkis, Walid**, Doctorate, , 2009, *Clinical Psychology*, Lebanese University, Lebanon  
**Samra, Sami**, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon  
**Sattout, Elsa**, Ph.D., 2005, *Agricultural Botany*, University of Reading, UK  
**Tannous, Marie**, Ph.D., 1998, *Clinical Chemistry*, University of Windsor, Canada  
**Tratrat, Christophe**, Doctorate, 1999, *Chemistry*, Univerité de Paris V, France  
**Voss, Jesse**, Ph.D., 2008, *Architecture*, University of Wisconsin-Milwaukee, USA  
**Willis, Mary-Angela**, Ph.D., 2001, *Francophone Literature*, University of Alabama, USA  
**Yazigy, Amal**, Ph.D., 1992, *Applied Linguistics*, Leicester University, UK  
**Youssef-Abdel-Massih, Dalia**, Doctorate, 2007, *Civil Engineering.-Geotechnics*, University of Nantes, France  
**Zaccour, Danielle**, Diplôme d'Etudes Supérieures, 1991 Arts Plastiques, Académie Libanaise des Beaux-Arts, Liban  
**Zgheib, Charbel**, Doctorate, 2005, *Physics of Condensed Matter*, University of Montpellier II, France  
**Zgheib, Hani**, Doctorate, 2001, *Engineering:Living Environmental Studies*, Kyushu University, Japan  
**Zgheib, Youssef**, Ph.D. 2002, *International Hospitality Management*, University of Strathclyde, Scotland, UK

### Visiting Faculty Member

**Akl, Said**, Poet, and Philosopher

### Senior Lecturers

**Abou-Jawdeh, Simon**, D.E.S., 1992, *Clinical Psychology*, Lebanese University, Lebanon  
**Akkari, Juliet**, M.A., 1971, *TEFL*, American University of Beirut, Lebanon  
**Assaf Carole**, M.B.A., 1995, *Tourism and Marketing*, Notre Dame University-Louaize, Lebanon  
**Barakat, Edgard**, M.B.A., 1981, *Marketing*, University of Dayton, USA  
**Baroud, Fawzi**, M.S., 1985, *System Management*, Florida Institute of Technology, USA  
**Karam, Selim**, MBA, 1983, University of Detroit, USA  
**Menassa, Joyce**, M.S., 1994, *Marketing*, Beirut University College, Lebanon  
**Nakhlé, Vivianne**, M.S., 1993, *Business Administration*, Strayer College, Washington D.C.  
**Saadeh, Ban**, M.S., 1978, *Mathematics*, American University of Beirut, Lebanon  
**Samrani, Diana**, M.A., 1990, *Education*, Andrews University of Michigan, USA  
**Shaffu, Raja**, M.B.A., 1970, *Finance*, American University of Beirut, Lebanon  
**Wehbe, Boulos (Fr.)**, M.A., 1981, *Middle Eastern Studies*, American University of Beirut, Lebanon  
**Zakhour, Kamal**, M.B.A., 1982, *Marketing*, University of Pittsburgh, USA

### Lecturers

**Bassil, Janet**, M.B.A., 1996, *International Affairs and Diplomacy*, Notre Dame University-Louaize, Lebanon

**Baroud, Dina**, Master of Architecture, 2007, *Landscape Urbanism*, Notre Dame University-Louaize, Lebanon

**Beyrouthy, Ghassan**, Doctorate (abd), 2008, *Economics*, Université de Québec à Montréal, Canada

**BouJaoude-Khoury, Karen**, MBA, 2006, *Master of Business Administration-MIB*, Notre Dame University, Lebanon

**Chibani, Wissam**, M.A., 2001, *TESOL*, Oklahoma City University, Oklahoma, USA

**Freiji-Bou-Nassif, Claudia**, M.S., 1991, *Applied Statistics*, Ohio State University, USA; M.S., 1998, *Financial Economics*, University of London

**Ghaleb, George**, MBA, 2002, *Management*, Notre Dame University-Louaize, Lebanon

**Gharzouzi, George**, MBA, 1984, University of Tulsa, USA

**Hajj, Michael**, M.A., 1997, *English Literature*, Notre Dame University-Louaize, Lebanon

**Hajjar-Muça, Theresa**, M.P.H., 1994, *Biostatistics*, American University of Beirut, Lebanon

**Khalil, Marina**, *Diplome D'Etudes Superieurur Spécialisé*, 2003, *Interior Design*, Université du Saint-Esprit Kaslik, Lebanon

**Lahoud, Sam**, MA, 2010, *Media Studies: Journalism*, Notre Dame University, Lebanon

**Maroun, Bachir**, M.S., 2001, *Computer Science*, Notre Dame University-Louaize, Lebanon

**Nasr, Noel**, Master of Arts, 2006, *Photography*, University of Kent, UK

**Nassif, Nadim**, *Intl. Master in Management, Law and Humanities of Sport*, 2002, De Monfort University, Leicester, U.K.

**Oueijan, Harvey**, MA, 2006, *English Language and Literature*, Notre Dame University-Louaize, Lebanon

**Samra, Kristine**, *Diplome D'Etudes Superieurur Spécialisé en Urbanisme*, 2003, Lebanese University, Lebanon

**Sleilati, Esther**, Master of Business Administration, 1997, *Marketing*, Notre Dame University-Louaize, Lebanon

**Soghman-Kiwan, Jacqueline**, MA, 2007, *Graphic Design*, Savannah College of Art and Design, USA

**Sawma, Victor**, M.S., 2003, *Computer Science*, University of Ottawa, Canada

**Tannous, Heba**, Master of Commerce 1997, *Information Systems*, the University of Queensland, Australia

**Vanloan, Amira**, MA, 1995, *TESOL*, American University, USA

### **Instructors**

**Kaassamany, Talie**, M.B.A., 2002, *Finance*, American University of Beirut, Lebanon

**Karam, Mirna**, M.A., 2005, *Applied Linguistics*, Notre Dame University-Louaize, Lebanon

# ACADEMIC CALENDAR 2010-2011

## FALL SEMESTER 2010

Sep. 13 -17	M-F	-	Orientation Sessions for New Students - Attendance Obligatory
*Sep. 10-12	F-S	-	Al-Fitr: Holiday
Sep. 22-24	W-F	8:00-2:00	Registration Period
Sep. 30	Th	7:30 a.m.	Classes begin
Oct. 4	M	8:00-12:30/1:30-4:00	Late Registration (Classes are in session)
Oct. 6	W	8:00-12:30/1:30-4:00	Drop and Add (Classes are in session)
-	-	-	Opening ceremony for the academic year 2010 - 2011
*Nov. 15-16	M-T		Al-Adha: Holiday
Nov. 22	M		Independence Day: Holiday
Nov. 29	M	4:00 p.m.	Deadline for Spring and Summer 2010 Incomplete Grades
Dec. 1-15	W-W	8:00a.m.-4:00 p.m.	Advising Period for Spring 2011
*Dec. 7	T		Hijra New Year: Holiday
*Dec. 16	Th	8:00 p.m.	Ashoura: Holiday
Dec. 23	Th	3:00 p.m.	Christmas Mass
Dec. 23	Th	9:00 p.m.	Christmas vacation begins
Jan. 2	Sun.	9:00 p.m.	Christmas vacation ends
Jan. 3	M	7:30 a.m.	Classes resume
Jan. 3-31	M-M	-	Application for Work Study Grant & Sibling Grant
Jan. 6	Th	-	Epiphany and Armenian Christmas: Holiday
Jan. 17	M	-	Saint Anthony's Day: Holiday
Jan. 20-21	Th-F	-	Entrance Examinations for Spring Semester 2011
Jan. 26	W	4:00 p.m.	Deadline for Officially Withdrawing from a Course
Jan. 31	M	9:00 p.m.	End of Classes
Feb. 1	T		Reading Day
Feb. 2-10	W-Th	-	Final Examinations Period
Feb. 9	W		St. Maroun's Day: Holiday

## SPRING SEMESTER 2011

Feb. 11	F	-	Orientation Sessions for New Students - Attendance Obligatory
*Feb. 15	T	-	Prophet's Birthday: Holiday
Feb. 17-18	Th-F	8:00-12:30/ 1:30-4:00	Registration Period
Feb. 22	T	7:30 a.m.	Classes begin
Feb. 24	Th	8:00-12:30/ 1:30-4:00	Late Registration (Classes are in session)
Feb. 28	M	8:00-12:30/ 1:30-4:00	Drop and Add (Classes are in session)
Mar. 18	F	-	Turath Day (Classes are not in session)
Mar. 25	F	-	Feast of the Annunciation: Holiday
Apr. 19	T	4:00 p.m.	Deadline for Fall Semester 2010 Incomplete Grades
Apr. 20	W	3:00 p.m.	Easter Mass
Apr. 20	W	9:00 p.m.	Easter vacation begins ( Eastern & Western)
April 25	M	9:00 p.m.	Easter vacation ends
Apr. 26	T	7:30 a.m.	Classes resume
Apr. 26-June 10	T-F		Application for Work Study Grant & Sibling Grant
Apr. 29-May 12	F-Th		Advising Period for Summer and Fall 2011
May 1	Sun.		Labor Day: Holiday
May 13	F		Founder's Day Main Campus (Classes are not in session)
June 9	Th	4:00 p.m.	Deadline for Officially Withdrawing from a Course
Jun. 14	T	9:00 p.m.	End of Classes (Tuesday classes do not meet: Friday classes meet)
June 15	W		Reading Day
Jun. 16-23	Th-Th	-	Final Examinations Period

**SUMMER SESSION 2011**

Jun. 29-30	W-Th	8:00 a.m.-2:00 p.m.	Registration Period
Jul. 1	F	7:30 a.m.	Classes begin
Jul. 1-2	F-Sat.	-	Entrance Examinations for Fall Semester 2011
Jul. 4	M	8:00 a.m.-2:00 p.m.	Late Registration (Classes are in session)
Jul. 5	T	8:00 a.m.-2:00 p.m.	Drop and Add (Classes are in session)
Jul. 8	F	7:15 p.m.	Commencement: Conferring of Degrees
Aug. 9	T	2:00 p.m.	Deadline for Officially Withdrawing from a Course
Aug. 11	Th	-	End of classes
Aug. 12	F	-	Reading Day
Aug. 15	M	-	Assumption Day: Holiday
Aug. 16-17	T-W	-	Final Examinations Period
Aug. 26-27	Th-F	-	Entrance Examinations for Fall Semester 2011

**\*Tentative dates**

## **UNIVERSITY PROFILE**

### **LOCATION AND CLIMATE**

The Notre Dame University-Louaize Main campus is located in Zouk Mosbeh, a coastal area 15 km north of Beirut. At an altitude of 100 m, the campus overlooks the beautiful bay of Jounieh. It affords easy access to the economic and social life of a growing urban area. Theaters, elegant shops, coastal resorts, all lie within a short driving distance from the University. Also accessible are the Ouyoun As Siman and Fakra winter tourist areas. The climate of Zouk Mosbeh is moderately cold from December to March and moderately hot from June to September. The Fall and Spring seasons are usually sunny and cool. On the average, there are 300 days of sunshine each year, a fact which allows for a variety of outdoor activities.

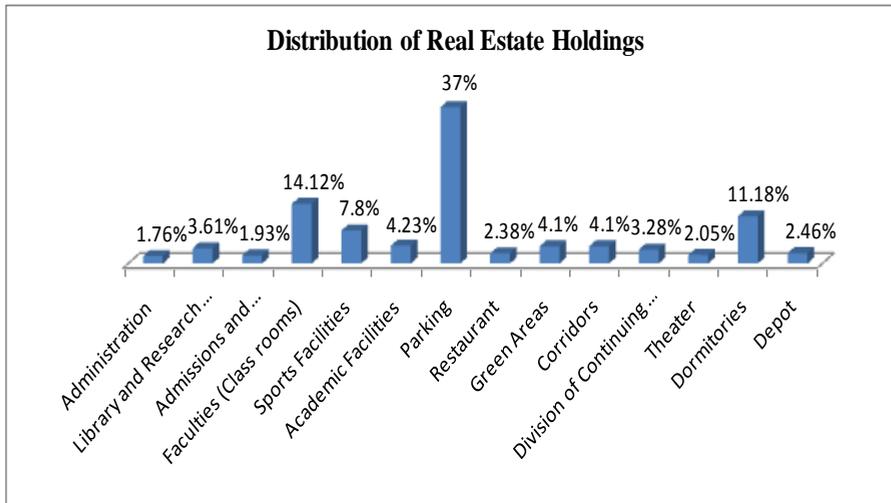
The NDU North Lebanon Campus is located on the green hills of Barsa, a quiet village in Koura, at an altitude of 100 m. The campus overlooks both the beautiful bay of El Mina-Tripoli, and the high mountains of Ehden and Bcharré. Moreover, it lies within a 10-15 minutes driving distance from Tripoli, Zgharta, Chekka, and other villages in Koura. The clean and quiet environment and the moderate climate add to the charm and attraction of the campus. The campus lies on a piece of land of 50,000 square meters donated by the village of Barsa. The first building of the Barsa Campus, totaling 10,000 squaremeters of floor space, was completed in June 1999.

The NDU Shouf Campus is housed within the premises of St. Abda Monastery in Deir El-Kamar. The Monastery, a historic place, is being restored not to its former state but to a standard that would will maintain its traditional and aesthetic appeal. (The campus is expected to accommodate a student population of 3000 or so students.). The visible benefits are everywhere in evidence. Today, rows of oak and pine trees surround the campus. The grassy evergreen slopes are well preserved. Visitors can easily admire the scenic beauty of the place. Beyond the University campus, the surrounding vicinity of Deir El-Kamar harmonizes gracefully with the monastery premises. This historic city is located in the central area of the Shouf region. It is 35 km from Beirut and is just over 900 m above sea level. In general, the region enjoys a moderate climate except for the winter months, when the temperature may drop to 7°C or below.

### **CONSTRUCTION PLAN**

From the earliest days of the University, NDU's administration has taken such great care to develop a physical infrastructure that would accommodate rather adequately its major academic needs.

## Real Estate Holdings in Square Meters: 121,750



Today, NDU takes pride in its three campuses which have become an essential part of its identity and which differentiate it from its peer institutions in Lebanon.

## IDENTITY, MISSION, VISION & VALUES

### Identity

Notre Dame University-Louaize (NDU) is a private, Lebanese non-profit Catholic institution of higher education which adopts the American system of education.

The religious affiliation of the University does not impose any sectarian obligations on faculty members, staff, or students. The cultural and spiritual heritage of the Maronite Order of the Holy Virgin Mary highlights a belief in a unified Lebanon, a belief in education as a means of protection against fanaticism and corruption and a dedication to freedom of thought and expression. The University espouses such values and beliefs irrespective of color, creed, race, or gender and seeks to enhance these values through the liberal education it offers and the career preparation that caters to the real needs of Lebanon and the region.

### Mission Statement

**As a Catholic institution inspired by the cultural and spiritual heritage of the Maronite Order of the Holy Virgin Mary, Notre Dame University-Louaize (NDU) seeks to provide comprehensive quality education that fosters excellence in scholarship, lifelong learning, enlightened citizenship, human solidarity, moral integrity, and belief in God. In designing its curricula, NDU is committed to the philosophy and standards of the American model of liberal arts education. Conceiving itself as an authentic academic community, NDU promotes diversity, respect for human dignity and rights, and concern for the common good. Its profound aspiration is to prepare its students to be future leaders who can exercise reason upon knowledge and shape a world of truth, justice, love and freedom.**

## **Vision**

NDU's vision is to:

Become the choice Catholic University in Lebanon, furnishing students with the finest faculty and comprehensive curriculum in the Maronite tradition.

Provide a highly personalized academic experience to our graduate and undergraduate students.

Integrate a strong, interdisciplinary, liberal arts core with degree-granting programs providing preparation for professional careers and graduate studies.

Excel in selected specialty areas, including signature programs that augment reputation and serve as models for the delivery of educational development at the University.

Foresee the changing needs with time and develop programs and utilize technologies consistent with those needs.

Create and sustain a community in which all aspects of university life are a reflection of its values.

## **Values**

As a Catholic university in the Maronite tradition, NDU is determined to practice those core values that respect humanity and the dignity of the individual, that help students on their life path of learning, and that allow them to discover their talents through cooperation while they look for truth, for individual empowerment and for the enhancement of the world around them. Accordingly, they dedicate themselves to the following core values:

**Faith** – As a Catholic university, NDU highlights a strong belief in spiritual motivation and education as a vehicle for a better and more just society.

**Excellence** – In all activities of University life – teaching, scholarship, service etc. – NDU strives to be a center of quality education.

**Scholarship** – To seek the truth, with a sense of discovery, through informed and rigorous scholarship, will place NDU among the top ranking regional universities.

**Freedom** – Of thought and expression; NDU commits itself to engage and enhance intellectual inquiry in the pursuit of truth through teaching students how to learn, how to think critically, how to conduct responsible research, and how to access and integrate information in preparation for career development and personal growth.

**Integrity** – Teaching, scholarship, and student service within the University community is characterized by intellectual honesty and a sense of personal morality.

**Service** – NDU is committed to serve not only its students, faculty and employees, but also society at large.

**Diversity** – Empathy, tolerance and respect for all people is essential to any University community. NDU encourages students to understand and appreciate the diversity of cultures which exist locally, nationally, and internationally. It also seeks to promote appreciation of diversity through an understanding of the impact of human beings on their environment.

**Learning for Life** – In the tradition of a Catholic liberal arts education, NDU commits itself to lifelong learning, encourages personal responsibility, develops spiritual values, and affirms a philosophy of life which actively supports global economic equity, social justice, and human rights.

# HISTORICAL OVERVIEW AND HERITAGE

## Historical Overview

Notre Dame University-Louaize (NDU) was founded in 1987 by the Maronite Order of the Holy Virgin Mary. NDU first came into being under the name of Louaize Center for Higher Education (LCHE) in 1978 as a joint venture between Beirut University College (BUC), now Lebanese American University (LAU) and the Maronite Order of the Holy Virgin Mary. LCHE's first Director was Archbishop Bechara Rahi from 1978 to 1984. Then after, Abbot Antoine Sfeir was appointed as Director of LCHE from 1984 to 1987.

Later, inspired by a deep apostolic concern and guided by the needs of the community, the Order decided to start a new chapter in its history by founding an independent university. The legal finalization of this project was the promulgation by the President of The Lebanese Republic of the **decree number 4116** on August 14, 1987, granting the Order the right to operate an independent university. Thus, Notre Dame University-Louaize was born, the only Maronite Catholic University adopting the American education system, not only in Lebanon but also in the entire Middle East. Three years later, in June of 1991, the University awarded its first bachelor degree to seventy-two graduates.

Along the lines set by the Vatican II Council, the Order decided to call on prominent persons from the Lebanese society to oversee the operations of the University. Consequently, a Board of Trustees was established to supervise the academic and administrative operations and to help in the planning and development of the University.

In 1990, NDU established an Off Campus Program in North Lebanon, which in 1999 moved to a new campus located in Barsa, Koura, now known as North Lebanon Campus (NLC). The campus lies on a piece of land of 50,000 square meters donated by the village of Barsa. The first building of the Barsa Campus, totaling 10,000 square meters of floor space, was completed in June 1999.

In April 1994, NDU established the Faculty of Engineering and Architecture, and on October 5, 1996, the Lebanese Government issued decree 9278 granting the official recognition of the programs that lead to the Bachelor of Architecture and the Bachelor of Engineering in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering. In Spring 2000, NDU established the Faculty of Architecture, Art and Design, and the Faculty of Political Science, Public Administration and Diplomacy. Accordingly, the Faculty of Engineering and Architecture was named the Faculty of Engineering. Moreover, realizing the need to serve the community, the Faculty of Nursing and Health Sciences was established in 2008.

After establishing itself as one of the leading universities in Lebanon, NDU's administration, guided by the needs of the Shouf region and neighboring communities, decided to start a new chapter in its history by founding a new campus in Deir El-Kamar within the Shouf district. The proposal was approved by the Board of Trustees in its meeting of March 8, 2001. The Shouf Campus was officially inaugurated on October 26, 2001.

The foundation stone for the new campus in Zouk Mikael was laid on November 19, 1994. NDU's current real estate holdings amount to 121,750 Square Meters and will grow significantly with the completion of new campus facilities. True to its commitment of carrying out its historic mission, NDU's community celebrated the University's 20th Anniversary in 2007. This anniversary has provided a unique opportunity for NDU to reflect on its past and to look forward to the road ahead.

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## **Heritage**

The University's heritage and identity are traceable to roots in the Lebanese Synod which took place in the Monastery of Our Lady of Louaize in 1739, the motherhouse of the Maronite Order of the Holy Virgin Mary and the sponsoring society of NDU.

This Synod encouraged the mission of education within the Christian Maronite ethos that believed in Education for all. Accordingly, the Order began to spread education in Lebanon and established schools in many parts of the country.

Capitalizing on its being Catholic in spirit and Maronite in tradition and focusing on the Synod's mission and directives, Notre Dame University-Louaize (NDU) as such has always sought to play its appropriate role in the Middle East.

As a Catholic university, NDU promotes the dynamic discussion of religious ideas. This dialogue strives to include the myriad voices of the Catholic tradition, past and present, as well as the voices of faculty, staff and students of all backgrounds. Such a Catholic undertaking helps the University community understand and celebrate the differences among the various voices, identify what they have in common and engage them in dialogue with the Catholic tradition.

Also, as a Catholic university, NDU is inspired by the Christian message of love of God and love of neighbor. Its administrators, faculty, staff, and students dedicate themselves to the pursuit of academic excellence in an environment of respect, care, dialogue and justice. In addition, NDU is a community which seeks to develop the love of truth and the desire to integrate and affirm the harmony between faith and reason. The University has synthesized the search for truth by offering curricula rooted in the arts and sciences guided by the University's spiritual and Catholic heritage. Students, at NDU, enjoy a transparent and understanding relation with their professors. It is this unique environment that helps professors draw out their students' potentials while respecting their talents.

Drawing on these traditions, NDU seeks to endorse a Catholic presence through its student services, campus ministry, course curriculum and administration, and continues to dwell on how this Catholic heritage brings meaning to its faculty, staff, students and the entire NDU family.

### **Directors of LCHE**

Bishop Bechara Rahi	1978-1984
Abbot Antoine Sfeir	1984-1987

### **Presidents of Notre Dame University-Louaize**

Father Boutros Tarabay	1987-1993
Bishop Francois Eid	1993-1999
Father Boutros Tarabay	1999-2005
Father Walid Moussa	2005 – present

## **CAMPUS MINISTRY**

NDU believes that the spiritual dimension of human development should grow together with all other areas of interest to the University environment. It seeks to instill in the University community a deep concern for the rights and dignity of the human person, especially the poor and most vulnerable. It promotes religious awareness in students and faculty members.

The Campus Ministry is staffed by five full-time campus ministers who celebrate masses and religious services daily at convenient hours in the University Chapel, and cater for the religious, personal and moral concerns of the University community.

The Pastoral Work Group is actively engaged in promoting religious awareness. Throughout the year, it organizes several week-end spiritual retreats conducted by student leaders. It also invites lecturers on spiritual issues, initiates gospel discussions and organizes social activities.

# **ACADEMIC SUPPORT SERVICES**

## **ACADEMIC ADVISORY SERVICES**

Coordination of academic advising at NDU is intended to ensure appropriate advising to students. Following admission to the University, students are referred to faculty advisors who assist them in the selection of appropriate courses. The Faculty Advisory Service also helps students take academic decisions based on their abilities, interests and goals, following up their academic progress throughout their university years and helping them, when needed, reconsider their choices of major. Students are encouraged to seek information and assistance from faculty advisors on all matters relating to their educational plans.

## **THE LIBRARIES**

The NDU Libraries consist of the Mariam and Youssef (Main) Library at the Zouk Mosbeh Campus, the NLC Library at the Barsa Campus, the Shouf Library at the Deir el Kamar Campus and the Division of Continuing Education (DCE) Library at the Old Zouk Mosbeh Campus. The NDU Libraries are also responsible for maintaining and developing the research collections of the Council for Research in Values and Philosophy (CRVP) Library, the Marian Studies Center (MSC) Library and the Lebanese Emigration Research Center (LERC) Library.

Recognizing that the Library is central to fulfilling the mission of the University, the Notre Dame University-Louaize (NDU) Libraries keep up-to date with the latest publications relevant to the major programs of study through purchases and an active local and international gifts and exchange program. The Libraries welcome and encourage donations and institutional exchanges that support the University's academic programs and the scholarly, teaching, and research interests of the NDU community.

The Mariam and Youssef Library provides access to an expanding collection of core reference and circulating materials in print, manuscript, electronic, audio, visual, cartographic, and other appropriate formats. It also provides individual and group study space for more than 300 simultaneous users, an Information Commons with appropriate support and access to information and technology resources, and a classroom for Library instruction. The NLC Library, Shouf Library and DCE Library provide access to a core collection of references, circulating materials, periodicals and electronic resources, in addition to providing space for quiet, individual study.

All NDU Libraries collections, , are searchable via WebView, the NDU Libraries web-enabled online public access catalog (OPAC), which is available from NDU's website (<http://www.ndu.edu.lb>).

The NDU Libraries are open to all users, however only NDU faculty, students, staff and alumni are currently granted borrowing privileges. NDU Libraries guests and visitors are allowed to access and use the library's resources within the confines of the library only. NDU Libraries materials may be requested and borrowed from any campus library, regardless of where they are housed.

The NDU Libraries are founding members of the Lebanese Academic Library Consortium (LALC) and the Lebanese Inter-library loan and Document delivery services Consortium (LIDS).

The University possesses a valuable collection of manuscripts and unique folio editions relating to Eastern Christianity and its history, kept at the five-century old Louaize

Monastery. The Center for Digitization and Preservation (CDP), established in 2003, has digitized all manuscripts owned by the Maronite Order of the Holy Virgin Mary in Lebanon and Rome, Italy, in order to preserve these materials and provide access to this unique collection to scholars around the world. Now the CDP is actively digitizing many other collections owned by other institutions and individuals in Lebanon.

## **DIVISION OF COMPUTING SERVICES**

### **Vision**

The Division of Computing Services is committed to the strategic use of the information technology for the continual improvement of the operation of Notre Dame University.

### **Goals**

We strive to support the essential educational, research and administrative goals of Notre Dame University through the development and delivery of computing and communication services to the university's faculty, students and staff.

### **Goal for Faculty**

Provide stronger links with faculty members in order to promote and facilitate their use of technology to support teaching and learning.

### **Goal for Students**

Ensure that students have the necessary skills to take advantage of Notre Dame University's technology environment.

### **Goal for Staff**

Provide staff members with the necessary technological tools that are current and reliable so they can serve the NDU community effectively.

### **Equipment and Facilities**

The administrative Computer Center is equipped with enterprise servers used for the Registrar, Library and various Business and Administration applications using the latest Data Base technologies.

For academic purposes, SUN and IBM Mini computers, Terminals and X-Stations operating under Unix, are used by Computer Science and Engineering students. A set of servers operating under Unix, control the campus Internet and Intranet networks.

All Faculties have active computers running various platforms such as PC/Windows, PC/Linux, Sun/Solaris, and IBM/AIX. Unix workstations and Windows 2000 operating systems have transparent access to the Servers, and to one another through Network File System and Remote File System access.

The Main Campus Intranet is a fully interconnected, multimedia, multi-protocol infrastructure spanning well over 1 km of area networks and over 800 computers on the network. The new network is a routed, full duplex, fiber based, Gigabyte Ethernet backbone with Gigabyte Ethernet (1000 Mbps) links to all the major buildings. Network connection in offices and rooms are at 100 Mbps switched Ethernet.

A PowerPC and Macintosh network is connected to a variety of peripherals, and are available for Visual Arts students including: color laser printers, scanners and plotters.

Special classrooms are linked to the backbone network via communication lines and have local resources to allow the instructor an indoor on-line demonstration with illustrative materials projected during class hours. Students are required to put into practice the theoretical concepts and gain working knowledge during regular laboratory sessions scheduled individually for each course.

## **FAAD ACADEMIC SUPPORT FACILITIES**

FAAD studios are designed to meet the various needs of Architecture, Art and Design programs. The studios are furnished with professional drafting tables and are appropriately equipped to provide support to all Architecture, Design and Fine Art courses.

### **MAC Computer Laboratory**

Graphic Design and Fashion Design students have access to the up-dated Mac Computer Laboratory and the latest softwares to facilitate their performance.

### **Photography Laboratory**

The photography Laboratory is a place where Architecture, Design, and Art students as well as other disciplines at NDU learn how to capture still images, develop, print, and experiment with the techniques of digital and analog photography. The studios are professionally designed and equipped with the latest technology and darkrooms for experimented analog prints to provide hands-on learning experience and optimal working conditions under the supervision of qualified instructors.

### **Dorothy Salhab Kazemi - Ceramic Atelier**

This Ceramic Atelier is equipped with two kilns and several wheel tables. Students can enjoy manual work with clay (slab, coil building, throwing, etc), and clay enamels powder glazing. The Ceramic Atelier has a terrace with view giving to the pine trees.

### **Metal and Wood Workshop**

The metal and wood workshop has the necessary tools that will help Architecture, Interior Design, Graphic Design and Fashion Design students in the creative process of their works. Its main purpose is to create a tangible approach to the methodologies of teaching between the theoretical and applied.

### **Smart Rooms**

The three smart rooms are fully equipped with computer hardware and softwares, LCD projector, and projection panel.

### **Architecture Computer Workshop**

A computer workshop has been set up for the Architecture and Interior Design students; it is located within the Architecture studios. The workshop is equipped with smart room facilities, including eight computers, an LCD projector and related projection screen. Each computer contains the latest versions of graphic softwares, in addition to Ecotect.

### **Design Computer Workshop**

In close proximity to the studios, one fully equipped computer workshop has been developed, for Graphic Design and Fashion design students. The workshop is equipped with smart room facilities, including 19 G4 Mackintosh computers. Each computer contains the latest versions of graphic softwares.

### **Fashion Design Studio**

Fashion design facilities consists of three studios, one studio with mannequins and large patternmaking tables, adjacent is a sewing studio with professional steam iron and sewing machines. Furthermore, a Mackintosh computer workshop is set -up to ensure a professional studio setting of digital illustration and pattermaking skills and hands -on execution. The students also have access to a cat-walk installation and will produce fashion shows of their creations.

## **WRITING CENTER**

The Writing Center is a resource at the disposal of both undergraduate and graduate students to develop their writing skills to that of near-native fluency. The center is organized to provide opportunities for students who feel that their written work for their university courses could be improved by offering one on one or small group tutoring in a positive atmosphere. Personnel at the center believe that all students have the potential to acquire sufficient skills to function in an English language environment. It is located in HA 114.

## **AUDIO VISUAL FACILITIES**

The Audio Visual Facilities (AVF) at NDU is a department that handles all academic and technical audio-video matters related to students majoring in communication arts, advertising and music in order for them to execute their projects assisted by their academic instructors and professionals from the field.

The Audio Visual Facilities include:

1. The R/TV Studio
2. The Acting Studio
3. Computer / Music Lab
4. The Theater
5. Issam Fares Conference Hall
6. Pierre Abou Khater Auditorium
7. The Friends Hall
8. The Exhibition Hall
9. The Exam Halls
10. The NDU Choir Recording Unit

All facilities are “high tech” fully equipped and are at the service of students, staff and faculty members.

Besides handling all the students’ matters, this department is responsible for all the activities that take place at NDU: conferences, lectures, exhibitions, public and special events. All activities are taped and archived.

### **Smart Rooms**

The AVF has four smart rooms that are fully equipped with computer hardware and software, LCD projector, DVD and VHS players and surround sound systems for film screenings.

### **DVD Library**

The DVD Library includes more than 1500 DVD’s, fiction films, documentaries, series and others. All members of the NDU community may check out these films.

## **ENGINEERING LABORATORIES**

Engineering programs are supported by state-of-the-art laboratories that are open to all engineering students. These laboratories and workshops are managed by qualified and dedicated staff.

The Department of Civil and Environmental Engineering offers seven laboratory courses to cover the main topics in the fields of concrete and pavement design, environmental engineering, mechanics of materials, soil mechanics, hydraulics, field surveying and engineering graphics.

The lab equipment is continuously upgraded and updated to ensure that our students are exposed to the most recent and advanced systems. The department also ensures highly

accurate and professional testing facilities such as spectrophotometry, strain gauging, triaxial testing, open and closed channel flow measurements, and total station application. Most of the lab facilities are connected to a data acquisition system. In addition, field equipments are available for in-situ testing, such as soil investigation, groundwater and surface water testing, and concrete quality control. Professional commercial testing as well as community services are also performed on a regular basis in the above areas.

The Electrical, Computer, and Communication Engineering Department has several laboratories which support teaching in the areas of communication systems, electronic circuit design including microprocessors and programmable logic controllers, instrumentation, electric machines, power electronics, control systems, and digital signal processing. The laboratories are also used by students for executing their engineering project designs. The equipment is regularly updated to ensure that students are exposed to the best possible laboratory experience.

State of the art laboratory equipments are being used in the Mechanical Engineering Department for training purposes. The list includes: Large wind tunnel for various aerodynamics testing, Energy testing (solar system, combustion, etc...), Turbomachines testing (centrifugal pumps, fans, Pelton wheel, Francis turbine, etc...), Air-conditioning testing (heating, cooling, refrigeration, etc...), Mechanical vibration testing and Mechanical components and systems.

## **SCIENCE LABORATORIES**

### **Biology Lab**

The biology laboratory is equipped with many facilities, which support teaching and research across the biology curriculum. Disciplines supported include:

- Microbiology: Culture and analysis of viral, bacterial and parasitic species.
- Molecular biology: DNA purification, analysis, and manipulation, with preliminary PCR facilities for DNA amplification. Other available equipment, such as an electroporator, promote research studies that require electrotransformation or transfection of cells.
- Cell culture: Preparation, culture and cryopreservation of animal cells.
- Plant biology: Plant cell culture and analysis.
- Histology: Histological assessment and histopathological examination of tissue samples.

Available equipment include microscopes and photomicrographic systems, biological safety cabinets, incubators, liquid nitrogen containers, diurnal growth chamber, autoclave, centrifuges, ovens, microtome, paraffin histoembedder, electrophoresis and blotting apparatus, thermal cycler (PCR), chromatography systems.

### **Chemistry Lab**

The chemistry laboratory provides a wide variety of facilities to support chemistry students and faculty members' research and teaching. Students are introduced to the fundamental quantitative, organic, and food analysis experimental methods through experiments in:

- Chromatographic analysis of alcohol content in beverages
- Determination of nutrients, vitamins, and minerals in foods
- Properties of enzymes
- Browning reactions in foods
- Spectrophotometric determination of analytes in different sample types
- Water analysis

- Precipitation and complexation titrations

The laboratory is equipped with a modern gas chromatograph, UV-visible spectrophotometers, digestion-distillation unit for nitrogen determination, solvent extraction apparatus, digital densimeter, electronic refractometer, *pH* meters, ion-selective electrodes, etc.

### **Geology Lab**

Geology lab courses are held in the Sciences lab building and are supported by a varied collection of rock forming minerals including silicates, carbonates, sulfates, fluorides and oxides, as well as a core collection of igneous, sedimentary and metamorphic rocks. Additional teaching support of sample specimens is provided by the Stone Wing Museum which houses a rich collection of minerals and archaeological items from Lebanon.

## STUDENT AFFAIRS OFFICE

The Student Affairs Office at the University is a service-oriented unit. It provides a number of activities and services to complement the academic work of students and help them actualize their full potential. The office creates healthy physical, social, personal, moral and cultural environments to ensure that students can make the most of their university experience. The SAO office coordinates all other activities involving students on campus.

- Undergraduate Financial Aid
- Clearance - National Social Security Funds
- Health Services
- Student Life Office
- Student facilities Office
- Athletic Services
- Clubs and Societies
- Community Service Office
- Student Union

## UNDERGRADUATE FINANCIAL AID

### Objectives

It is the philosophy of Notre Dame University that students should not be denied the opportunity of furthering their university education because of limited financial resources. The Student Financial Aid Program was established to meet the goal of this philosophy by providing qualified students with financial aid regardless of color, race, gender, religion, nationality, or political affiliation.

The following is a brief description of the various financial aid programs for undergraduate students.

### Work-Study Grants (WSG)

The work-study grant is designed to assist full-time students with proven financial need to cover part of the cost of their education. Students who qualify as assistants are assigned to various departments or offices in the University.

Students will have to set a schedule for their working hours. The schedule should not conflict with their class schedule and should be signed by the Supervisor and the Financial Aid Officer.

The hourly rate for students on WSG is 4.5% of the actual rate per credit of each major. Students may receive up to 40% of his/her tuition fees through WSG.

Students eligible for a WSG will have the added benefit of developing their working skills as well as gaining a deeper sense of personal responsibility and accomplishment.

### *Eligibility*

To be eligible for work-study grant, a student must:

- demonstrate financial need.
- have completed 12 credits at NDU (remedial credits not included).
- have demonstrated academic potential (cumulative GPA, minimum 2.3/4.0)
- be enrolled as a full-time student with a minimum of 12 credits each semester and a minimum of 9 credits during the last semester at NDU. Only Interior and Graphic Design students are eligible for WSG in their last academic year, since they are required to take 10 credits in their last two semesters of enrollment. This must be confirmed by the Chairperson of the Visual Arts Department.

### ***Conditions***

Any student who has been granted a WSG will be covered for a full academic year (exclusive of summer session) unless:

- his /her GPA drops below 2.3/4.0 during the first semester.
- he/she receives a scholarship from another institution exceeding 50% of tuition.
- he/she benefits from the sibling grant or the scholarship.
- he/she registers for less than 12 credits during each semester and less than 9 credits during the last semester at NDU.
- he/she does not fulfill the job requirements assigned by the Financial Aid Officer.
- he/she does not abide by the rules and regulations of the assignment.
- it is revealed later that the information submitted is forged.

### ***Procedures***

Undergraduate students may apply for financial aid by filling out an application form which can be obtained from the Financial Aid Office.

Upon taking this application, the student should schedule an interview with the Financial Aid Officer and submit the complete form with the appropriate documents before the official deadline. Every semester, dates and deadlines for obtaining and submitting applications will be updated and posted on the Financial Aid bulletin boards and on the NDU Website, and scheduled in the academic year calendar.

WSG applications must be submitted one semester in advance (for a Fall semester WSG, the application must be received by the Financial Aid Office during the previous Spring semester).

Students applying for WSG may receive a home visit from the Financial Aid Officer. After the procedure is completed, the Financial Aid Committee will review each application carefully and give the appropriate decision.

For more information, consult the Financial Aid Officer.

### **Student Employment**

Full-time students proving to have special skills which none of the WSG students possess may be employed for the duration of one semester upon the request of Faculty Deans for academic reasons. The Financial Aid Committee will determine the working hours and the hourly rate.

### **Grants**

#### **a. Grant for Excellence**

Students demonstrating excellence in sports, artistic, cultural, and social activities and representing the university in national and international contests could benefit from a grant ranging from 10 to 15% of tuition as determined by the Financial Aid Committee upon the recommendation of the Director of the Student Affairs Office.

To be eligible for a sports grant, the student has to:

- join a sports team at NDU
- complete 12 credits at NDU (remedial credits are not included).
- be enrolled in 12 credits each semester, and in at least 9 credits during the last semester
- maintain a minimum cumulative GPA of 2.00

## b. Sibling Grant

### Conditions

- If eligible, two siblings enrolled at the same time in the university will benefit from a 15% discount each; three or more siblings will be entitled to a 25% discount each .
- In case of financial need eligible siblings will have the possibility to raise the percentage given to a maximum of 40% by applying to the Work Study Grant during the dates scheduled in the academic calendar.
- A 50% scholarship will limit the percentage of Sibling Grant to 10% and a 75% scholarship will totally eliminate the Sibling Grant discount.

### Eligibility

To be eligible for a sibling grant, a student must:

- Be enrolled as full-time student with a minimum of 12 credits except during the last semester before graduation when the number of credits may drop to 9 credits;
- Maintain a minimum cumulative GPA of 2.00.
- Be a sophomore, junior, or senior student (Intensive, Freshman, and Masters students are not eligible)

If one of the siblings does not fulfill the above criteria, the other(s) may benefit if his/her sibling is enrolled in 9 credits minimum for the undergraduate students and in 6 credits minimum for the graduate student.

### Procedure

- The students must submit the Sibling Grant form and attach it to a copy of their Family Identity Card. The form is available at the Financial Aid Office during the first week of each semester.
- The siblings will benefit from the discount as long as they are eligible. They do not have to renew their application unless another sibling is enrolled for the first time with them.

## CLEARANCE - NATIONAL SOCIAL SECURITY FUNDS (NSSF)

### Returning Students

Returning students under the age of 30 who are sophomores, juniors, seniors, graduate and who

a. benefit from any of those governmental health plans:

- صندوق تعاونية موظفي الدولة
- صندوق تعاضد القضاة
- صندوق تعاضد الهيئة التعليمية في الجامعة اللبنانية
- البلديات
- الصندوق الوطني للضمان الاجتماعي

must:

- fill out Form **B** (تصريح استفادة)
- attach an original statement from the local office they (or their parents) belong to (إفادة من مركز التبعية الرسمي), which certifies their benefit.
- attach a photocopy of their Family Status Record ( إخراج قيد عائلي ) not older than one year.

b. benefit from

انظمة القوى الامنية (الجيش, الامن الداخلي, الأمن العام, امن الدولة, والجمارك)

must:

- fill the Form **B** (تصريح استفادة)
- attach a photocopy of their benefit card; (صورة عن البطاقة الصحية المجددة)
- Attach a photocopy of their Family Status Record (إخراج قيد عائلي) not older than one year.

**N.B: procedure is repeated at the beginning of every academic year.**

c. have stopped benefiting from a governmental health plan (mentioned above) while at NDU must:

- fill out Form **A<sub>1</sub>** (تصريح عن طالب جامعي) and Form **A<sub>2</sub>** (تعهد عدم استفادة);
- attach a photocopy of the Family Status Record (إخراج قيد عائلي) not older than one year;
- attach an original statement from the governmental health plan certifying that they are not benefiting; or a photocopy of the benefit card (Military services).

d. do not benefit from any governmental health plan (mentioned above) while at NDU and are enrolled for the second or more consecutive year at NDU must:

- Verify their cleared status through the SIS program prior to payment at the Bank and the registration procedure accomplishment.

Filling out Form C (اعلام عن طالب مسجل) is the responsibility of the Social Security Office – SAO.

Thus, students who are registered at the National Social Security Funds as NDU students and who did not report any change of status, are not required to pass by the SAO. Their coverage by NDU will be automatically renewed for a fee of L.L. 90.000 payable along with their tuition fee at the bank.

However, if any change of status takes place (new work, new National Social Security Funds coverage...) students are required to inform the SAO. Students who did not complete this step are totally held responsible for any problem that might arise due to an incomplete NSSF file.

- Returning students who reach the age of 30 years old are exempted from presenting any official document and have to fill Form **B** (تصريح استفادة);

*Students will not be able to register if they do not submit the required documents at the Social Security Office at the SAO.*

*Students can pick up their appropriate forms from the Social Security Office at the SAO or from the Internet (www.ndu.edu.lb).*

### **New students**

New students who:

a. do not benefit from any governmental health plan

must:

- fill out Form **A<sub>1</sub>** (تصريح عن طالب جامعي) and Form **A<sub>2</sub>** (تعهد عدم استفادة);
- attach a photocopy of the Family Status Record (إخراج قيد عائلي) not older than one year.

b. benefit from any governmental health plan

must:

- fill out Form **B** (تصريح استفادة)
- attach an original statement from the local office they (or their parents) belong to (إفادة من مركز التبعية الرسمي), which certifies the benefit;

- attach a photocopy of the Family Status Record (إخراج قيد عائلي) not older than one year.

New students accepted as **Intensive English or Freshman (Arts, Sciences)** are exempted from NSSF benefit obligations.

After fulfillment of any of these two levels' requirements (Intensive or Freshman) and before registration of their regular courses, students are requested to pass by the Social Security Office – SAO to present documents required for Clearance like any other regular NDU student.

New students accepted as Foreigners (non-Lebanese students) are exempted from NSSF benefit obligations.

New students (transferred) who benefit from the NSSF through the former University for one or more consecutive years must:

- 1- fill out the Form C (إعلام عن طالب مسجل) ;
- 2- attach **Receipts** (per Academic year) or **Administrative Statement** in Arabic from the former University;
- 3- attach a **photocopy** of their Family Status Record (إخراج قيد عائلي) not older than one year;
- 4- attach a **photocopy** of their NSSF card.

New students (transferred) willing to register for the Spring Semester and had NSSF clearance as beneficiary from the previous University for the Fall Semester of the current Academic year must:

- 1- fill out the Form B (تصريح إستفادة) ;
- 2- attach a Receipt or Administrative Statement in Arabic from the former University;
- 3- attach a copy of their Family Status Record (إخراج قيد عائلي) not older than one year;
- 4- attach a copy of their NSSF card.

Students can pick up their appropriate Forms from the Social Security Office – SAO or from the Internet (www.ndu.edu.lb).

On forms **A<sub>1</sub>, A<sub>2</sub>, B, C**, the statement, and the photocopy of the Family Status Record (إخراج قيد عائلي) students must write on the top :

- 1- I.D. number as it appears on the letter of acceptance ;
- 2- major;
- 3- date of birth (D.O.B.) as it appears on the I.D. (الهوية)

**The Social Security Fund covers 80% of the medication, radiology and 90% of the hospitalization. Besides, it is a Governmental requirement from every student.**

The **governmental health plans** approved by the National Social Security Fund (NSSF) are limited to the following ONLY:

- |  |   |  |
|--|---|--|
| (إفادة من مركز التبعية الرسمي و ليس من مركز العمل) | } | <ul style="list-style-type: none"> <li>• صندوق تعاونية موظفي الدولة</li> <li>• تعاضد القضاة</li> <li>• اساتذة الجامعة اللبنانية</li> <li>• البلديات صندوق الوطني للضمان الاجتماعي</li> <li>• الجمارك</li> <li>• السلك العسكري</li> </ul> |
| Exception  | → | (صورة عن البطاقة المجددة) →  |

For more information please contact phone #: 09/208805 or ext.: 2114 or [nssf@ndu.edu.lb](mailto:nssf@ndu.edu.lb)

## HEALTH SERVICES

NDU will provide all NDU students with a variety of health services at the new NDU Infirmary located at the Student Affairs Office in collaboration with “Centre de Biologie Moleculaire et Polyvalente – BMP” in Adonis.

a. The following tests are obligatory for all new students before registration:

- Blood cell count
- Blood grouping
- P.P.D.
- Serology HIV
- Hepatitis B
- Hepatitis C
- Chest X-ray

All these tests will be administered at the NDU Infirmary for a fee of L.L. 165,000, to be paid in advance at Byblos Bank and Bank of Beirut. This fee will also allow students to benefit from other services provided at the Infirmary. Any student who is readmitted to NDU after 2 semesters of absentia will have to undergo this procedure again.

- b. In addition to the chest X ray, the NDU Infirmary offers radiology X-ray services for emergency fractures. Students pay 80% of the medical expenses upon receiving the services, which is equivalent to what they claim from the NSSF.
- c. The “Centre de Biologie Moleculaire et Polyvalente – BMP” provides technicians to administer the various tests and examinations between 8:00 and 16:00 daily at the NDU Infirmary.
- d. NDU reserves the right to request random blood-tests from any student to test for drug use or for any other medical reason.

The University physician is available twice a week from 12:00 to 14:00 at the Infirmary and is on call for any help and for free consultations 24/7 free of charge.

The University nurse is available on a daily basis from 8:00 to 16:00.

Serious cases are sent to the nearest hospital.

All students with medical ailments have to contact the NDU physician for validation within 48 hours of their sickness/injury. No medical excuses will be accepted at NDU unless validated by the NDU physician.

### Counseling Services

The wellbeing of individuals is not limited to physical health but includes physical, mental, and emotional health. At NDU, counselors are available to serve and help the entire NDU community (students, faculty, and staff). This service is rendered with care, respect, and confidentiality.

Assistance is available for a variety of concerns which include, but are not limited to, the following:

- overall stress and anxiety
- crisis intervention for individuals facing traumatic stress

- problems related to eating disorders
- concerns related to addiction (drugs, alcohol, etc.)
- personal issues
- relationship problems
- chronic illness
- sadness and depression
- difficulty adjusting to new situations
- grief and bereavement counseling

Find out more about this service at the Infirmary or by contacting ext.: 2049 or [infirmary@ndu.edu.lb](mailto:infirmary@ndu.edu.lb)

### **Insurance Policy**

NDU students who have an accident when practicing any kind of activity inside or outside the university premises are insured up to \$1000. Students should pass by the Infirmary during regular working hours in order to fill out the appropriate form.

If the accident occurs outside working hours, students should go to the Infirmary at a later date to complete the procedure.

This insurance service is in addition to the NSSF coverage.

For more information please contact ext.: 2049 or [infirmary@ndu.edu.lb](mailto:infirmary@ndu.edu.lb) or pass by the Infirmary.

## **STUDENT LIFE OFFICE**

### **Attendance Policy**

Students should attend all classes and laboratory sessions on time. Absences, whether authorized or not, even if below the maximum number (specified below), may alter one's grade substantially. The SAO alone authorizes absences. No absence absolves a student from responsibility regarding the material presented during his/her absence. **The maximum number of absences permitted in classes that meet on MWF is six; the maximum number of absences permitted in classes that meet on TTH and in the summer is four.** Any student whose absences exceed the maximum limit shall automatically be considered as having failed the course unless the student withdraws.

Students who miss classes or exams should contact the University physician, Dr. Elias Chemaly, within 48 hours of their sickness. The NDU physician should examine each student before deciding whether a medical report should be given or not. The SAO will not issue any excuse without the approval of the NDU physician.

Dr. Elias Chemaly, M.D. (Tel. # 03.725559) is available from 11:00 am until 1:00 pm at the Infirmary, SAO.

### **International Student Services**

The international Student Services provides support for international students at NDU and assistance in whatever they may need. It also helps them to integrate into the NDU community, specifically with other students. International students are urged to pass by the Student Affairs Office upon arrival and on a regular basis.

### **Lost and Found**

The Lost and Found Office is operated from the Student Affairs Office. Articles found are to be turned in to the SAO. Persons looking for lost items may inquire at the office or call ext.: 2045. To claim an item, the person must clearly identify it. To help in recovering lost

or stolen items, it is suggested that students put their names on their valuables. Items not claimed after sixty days will be considered abandoned.

## **STUDENT FACILITIES OFFICE**

### **Identification Card (ID)**

The NDU Smart ID card identifies the cardholder as a current member of the university community. It is required for all administrators, faculty, staff and currently enrolled students at the University. It must be carried at all times. The ID card is the property of Notre Dame University; it must be presented upon the request of an appropriate University official, and may be revoked at any time by the University.

Cardholders may use the card to access various privileges and services throughout the campus such as parking, dormitories, Library, etc.

Lost or stolen cards must be reported immediately to ID Card Services, SAO ext: 2306 or [studentfacilities@ndu.edu.lb](mailto:studentfacilities@ndu.edu.lb)

### **Campus Parking**

Parking permits are obtained from Parking Services, SAO at the beginning of every semester. Parking permits must be displayed correctly at all times (lower left side of the windshield). All vehicles are subject to university parking regulations while on campus. Any vehicle parked in violation of parking regulations is subject to being removed and impounded at the owner's expense. The university assumes no responsibility for damage or loss of private property. Students are required to abide by and respect the directions of the NDU security personnel.

### **Student Housing**

Arrangements for on-campus housing are made through the Student Facilities Office at the SAO. To reserve a room, students are asked to pass by the SAO with their parents to visit the dormitories and to be informed about the rules and regulations. Email: [studenthousing@ndu.edu.lb](mailto:studenthousing@ndu.edu.lb)

## **ATHLETIC SERVICES**

NDU's athletics programs are designed to offer students the opportunity to fully develop their physical potential and competitive spirit while engaging in a sports activity for fun and for health reasons.

NDU's Sports Office provides a wide range of sports activities including: basketball, volleyball, Judo, Taekwondo, Aikido, physical fitness, body building, tennis, swimming, soccer, handball, rugby, track and field, water-polo, table tennis, chess, etc.

NDU's athletic teams are trained by qualified coaches and participate in local, regional, and overseas tournaments earning recognition for themselves and the University.

A multipurpose gym for fitness, martial arts, body building, and dancing is situated under the Tennis courts.

For more information please contact ext.: 2043/2044 or [sportdep@ndu.edu.lb](mailto:sportdep@ndu.edu.lb)

## **STUDENT ACTIVITIES OFFICE**

One way for students to be more involved in life on campus is through participation in extra curricular activities by being active members in clubs and societies. For a club to be recognized, its purpose must be consistent with the stated University By-laws and must

have a full-time faculty member as an advisor. The Student Student Activities Office also assists students and clubs in organizing public events on Campus.

The following student clubs and societies have been established for the academic year 2009-2010 to provide recreational and co-curricular activities:

### **Clubs**

- Accounting
- Advertising
- Architecture
- Astronomy
- Computer Graphics and Animation
- Computer Science
- Debate
- Discovery
- Electroholic
- Hospitality and Tourism
  
- International Relations
- Music
- Naharashabab
- Nutrition and Health
- Photography
- Sartarabad
- Social
- American Society for heating Refrigerating and Airconditioning Engineers
- American Society of Mechanical Engineers
- Institute of Electrical and Electronic Engineers
- Society of Civil Engineers
- Radio TV / Film
- Skiing

### **Community Service Office**

The goal of the Community Service Office is to encourage the students to get involved in volunteer work in order to benefit the community, mainly through its non-profit institutions.

The CSO aims to help the students in optimizing their potentials and instilling in them a spirit of responsibility and moral awareness.

Through this, the students will be able to transmit their shared experience to their communities, families and country.

### **Student Union (SU)**

The Student Union is the elected body representing students. Its purpose is to speak on behalf of the students, defend their rights within the framework of the University Rules and Regulations in compliance with the SU By-laws, and organize events that cater to the student body at large.

# **SPONSORED RESEARCH AND DEVELOPMENT**

## **THE OFFICE OF SPONSORED RESEARCH AND DEVELOPMENT**

This office coordinates and supervises all activities related to research projects and development endeavors. It issues calls for research proposals for evaluation and follow-up. It carries a plan for book publications covering old manuscripts and contemporary writings in the different disciplines related to the programs offered by the University. It has established the archives of research projects and seminar or conference presentations locally and overseas, prepared by NDU faculty and staff members. The Office coordinates with the following Research Centers, and offices namely:

### **CENTER FOR APPLIED RESEARCH IN EDUCATION (CARE)**

The Center was established on October 1st, 2006. The CARE objectives are: to promote multi-disciplinary research in education; to establish and utilize personal contacts with international academic institutions; to conduct analytical studies on curricula development and policy-making studies in higher educational institutions in Lebanon and Arab countries; to organize academic international conferences in the Arab countries; in order to promote excellence in education.

### **LEBANESE CENTER FOR SOCIETAL RESEARCH (LCSR)**

The University established a center for research, studies and documentation in the framework of a university research policy that aimed at developing the role of scientific research in the treatment of social, economic, political, educational, ethnical and human issues in society and, further, at activating the contribution of spiritual and civil institutions in this treatment.

### **LEBANESE EMIGRATION RESEARCH CENTER (LERC)**

The political, economic and social conditions in Lebanon and the Middle East were direct reasons for increasing the Lebanese Emigration. However, little is known about it and its impact on the Lebanese social, political, economic and cultural structures. Lebanon feels the basic and immediate need for research studies on the subject, where the LERC can play a significant role in collecting information and conducting the necessary and proper research on this vital issue to Lebanon.

### **THE MARIAN STUDIES CENTER (MSC)**

The Center was established by NDU to act as a center for the “International Pontifical Marian Academy” in Lebanon and the Middle East. The Center was officially inaugurated in November 2003, and was baptized as The Marian Studies Center.

### **WATER, ENERGY AND ENVIRONMENT RESEARCH CENTER (WEERC)**

The WEERC aims at investigating water energy resources, and the state of the environment in Lebanon and the MENA region under its multi-facial aspect. The role of the Center is to develop appropriate strategies and provide training for the proper optimization and integrated management of water and energy use for a prosperous environment.

## **CENTER FOR DIGITIZATION AND PRESERVATION (CDP)**

The Center aims to assist mainly scholars, clergy, and governments in the preserving, imaging, and distribution of ancient writings. It offers important services, such as:

1. the preservation of significant philosophical and theological manuscripts by photography and/or electronic scanning;
2. the digitization and incorporation of selected manuscripts into searchable electronic databases at minimal cost;
3. the translation and publication of selected ancient and medieval texts;
4. the preservation and digitization of any material the University may deem appropriate.

## **NDU PRESS**

NDU Press comprises the following units:

1. Translation Office
2. Design Office
3. Editing Office

Three major steps have been taken by NDU Press to revive book-publishing activities on a professional level:

- all published books, as of October 2000, carry an ISBN number, which ensures recognition for NDU Press in Lebanon, Europe and the USA as a professional university publishing house;
- all books are reviewed with a recommendation to the President before a final decision for publication is made. Specialized scholars are consulted to support such recommendations and decisions;
- an agreement with a distribution agency has been worked out by which all books by NDU Press are distributed to major bookshops in Lebanon and overseas.

## **AMERICAN FRIENDS OF NDU (AFNDU)**

The development responsibilities are to keep strong relationships with the NDU-USA Organization established in February 2001 with three Chapters: Washington DC, Detroit and Connecticut.

The objectives of the *American Friends Association* are:

1. to establish a strong cultural link with graduates, friends, former students, faculty and staff of NDU residing in the USA;
2. to build relationships with the American/Lebanese communities;
3. to establish exchange programs with American Universities and other institutions of higher education;
4. to seek the cooperation of public libraries, university libraries and university press offices for exchanges of publications with NDU;
5. to create direct relations with American Publishers especially for textbook orders and library references;
6. to provide financial assistance.

## **WASHINGTON DC OFFICE**

The University's Office in the USA was founded in 2003 and is located in Washington DC. Its role has been outlined as follows:

1. to promote the educational values and goals of NDU;
2. to assist the AFNDU Organization with their activities;
3. to liaise with alumni, friends, former faculty and staff of NDU;
4. to help recruit faculty members;
5. to help children of American-Lebanese and friends of NDU-Lebanon residing in the US to visit the NDU campus;
6. to help develop cooperative relationships with American institutions of higher education;
7. to assist NDU libraries develop.
8. in coordination with the concerned offices at NDU, to provide administrative services to NDU graduates residing in the US.

## **UNIVERSITY INTERNATIONAL AFFAIRS OFFICE**

This Office initiates contacts and follow-up programs with overseas universities and development agencies related to higher education.

The purpose of these programs is to support cocurricular activities and collaborative projects that lead to innovative institutional partnerships and exchange plans of action.

Memoranda of Cooperation and/or Understanding:

- Assumption University in Bangkok, Thailand
- Brigham Young University, Utah (Digitization of manuscripts)
- Central Connecticut State University, USA
- Centro Libanès, Mexico City
- El-Camino University
- El-Colegio de Mexico, A.C.
- ESC Bordeaux, France
- Italian Cultural Institute in Lebanon
- Madonna University (presidential scholarships for students of both institutions), USA
- Mexican Lebanese Cultural Institute
- Middlesex University, England
- Núcleo de Estudos Libaneses (NEL) of Universidade Federal de Santa Maria/Brasil (UFSM)
- Politecnico Di Milano
- St. Louis University, Missouri, USA
- Swiss Hotel Management School, Switzerland
- TAFE Commission of New South Wales, Australia
- Ulm University, Faculty of Engineering, Germany
- Universidad Iberoamericana Ciudad de Mexico
- Universidad Libre, Columbia
- Universidad Nacional Autonoma de Mexico
- Universita degli Studi di Firenze, Facolta di Architettura, Italy
- University of Alcalá, Spain
- University of Concordia, Canada
- University of Cyprus
- University of Dallas, USA
- University of Dayton, Ohio
- University of Leicester, UK

- Université Catholique de Louvain, Belgium
- University of Malta, Malta
- University of Michigan – Flint, Michigan, USA
- University of Ottawa, Canada
- University of Petra, Jordan
- University of Poitiers, France
- University of the Arts - Bremen, Germany
- University of Western Sydney, Australia
- Vaxjo University, Faculty of Engineering, Sweden
- Wayne State University, College of Engineering, USA

### **INTERNATIONAL MEMBERSHIPS**

- International Association of Universities (IAU), France
- Association of Catholic Colleges and Universities (ACCU), USA
- Association of International Educators (NAFSA), USA
- Comunita delle Universita Mediterranee (CUM), Italy
- Council of Independent Colleges (CIC), USA
- Fédération Internationale des Universités Catholiques (FIUC), France
- Fédération des Universités Catholiques Européennes (FUCE), France.
- Association of Arab Universities (AARU), Jordan
- The College Board, USA
- The American Association of Collegiate Registrars and Admissions Officers (ACRAO), USA
- The Arab Association of Collegiate Registrars and Admissions Officers (AACRAO), Jordan
- The European Association of International Education (EAIE),
- Action Chrétienne en Orient, France
- Euromed Permanent University Forum (EPUF), Spain
- International Association of University Presidents (IAUP), Thailand
- Réseau Méditerranéen des Ecoles d'Ingénieurs (RMEI), Italy

## **PUBLIC RELATIONS OFFICE**

By definition, "Public relations is the strategic management of relationships between an organization and its diverse publics, through the use of communication, to achieve mutual understanding, realize organizational goals, and serve the public interest."

Fully embracing this definition, the Public Relations Office at Notre Dame University believes that, in today's fast changing conditions, maintaining healthy relations with stakeholders and building networks can be in the interest of all sides. Therefore, the main function of the Public Relations Office is to improve channels of communication and to institute new ways of setting up a two-way flow of information, developing and fostering mutually beneficial relationships between the University and its environment.

Thus, on behalf of Notre Dame University, its campuses and centers, staff and students, the Public Relations Office presents and communicates all programs and policies. It provides and develops communications strategies, consultation, event-planning services university-wide and works proactively with media outlets.

In order to establish, create and maintain the positive public image of the institution on the local, regional and international levels, the Public Relations Office coordinates, organizes and hosts special cultural, academic and intellectual events and conferences during the academic year. These activities aim at promoting and stressing the role of the University as a major player in building a cultured and knowledgeable community. Furthermore, the Office offers its expertise in this field and contributes to almost all the events held by the different departments.

The Office is also responsible for communicating and delivering updated information about the University to the external audience. Therefore, program brochures, material promoting special events (programs, leaflets, posters and invitations) and handbooks are periodically prepared and issued.

The Public Relations Office has built up strong local media contacts to maintain good relations with its community by regularly publishing announcements about the University news and upcoming events as well as writing and distributing press releases and statements for publication in various reputable magazines and newspapers. The role of public relations office becomes pertinent in crisis situations; in the case of any fallacious news being published about NDU, the Public Relations Office, after consulting with the President's Office, issues necessary clarifications.

The Public Relations Office is the link between the University and the local government and legislators. It coordinates with the Ministry of Education and Higher Education in order to obtain decrees and advanced information of decisions.

The Office also represents the University by attending and participating in various exhibitions, fairs and conferences and also represents the University at the meetings of the League of Lebanese Universities and the Association of Arab Universities. In addition, it is also an active member of the Coordination Council for Catholic Universities in Lebanon (CCUCL) and the Association of Collegiate Registrars & Admissions Officers (Arab – ACRAO) for the universities of the Arab countries.

The Public Relations Office works in collaboration with its two Offices in the North Campus and the Shouf Campus, coordinating all activities and social events that take place during the academic year.

### **PRESS OFFICE**

The purpose of the Press Office is to communicate NDU achievements, activities and progress, to ensure proper coverage of relevant issues in the local press and to publish notices of upcoming events. It also links the press to faculty experts for opinions and analysis, and assists in the production of a variety of publications such as NDU Spirit. The office's press attaché archives press clippings published in the press and posts them on the NDU website.

### **PLACEMENT OFFICE**

The Placement Office is an integral part of the Public Relations Office. It is supervised by the Director General of the Public Relations and entrusted to a placement officer.

This office provides employment opportunities for NDU graduates by acting as a liaison between local and international companies, NDU and NDU graduates and Alumni. It also guides students in their search for jobs and schedules on-campus job interviews.

Moreover, it arranges human potential seminars for prospective employers and organizes an annual Job Fair.

### **INTERNSHIP OFFICE**

The Internship Office provides students with practical experience in their major before graduation. For this purpose, the Internship Office is building a contact database with leading reputable institutions, companies, embassies, banks, etc. in and outside Lebanon.

The internships offered are intended to provide real-life experience that compliments the curriculums taught in the classroom. Personal and professional growth is fostered through the proper balance of guidance, independence and the acceptance of responsibility.

The internship will frequently open the door to future employment and will confirm career plans; and in certain cases, it may prompt students to consider other career options.

### **MUSEUM**

The Stone Wing, inaugurated on March 9, 2005, is also supervised by the Director General of Public Relations. It is entrusted to a Curator who receives and guides visitors (students from different schools and universities, staff, deans, and national and international guests of NDU) by informing them about the museum and its various and valuable collections.

The duties of the Curator encompass the preservation and conservation of the collections, archiving and cataloguing of new acquisitions, scheduling and coordinating visits, and keeping records of all visitors.

## ALUMNI AFFAIRS OFFICE

Graduation from Notre Dame University is NOT the end of the student's affiliation with the University. Instead, it is the beginning of a new phase of the relationship with the University. The Alumni Affairs Office (AAO) is responsible for maintaining the links of alumni with the University.

The **Alumni Affairs Office** aims to:

- Serve the needs of Alumni, enduring and permanent constituencies of NDU.
- Foster a life-long relationship between the University and its Alumni.
- Build an information management system that updates and utilises "NDU Alumni" data.
- Coordinate with NDU Alumni Association.
- Organize professional, cultural, networking and social activities for NDU Alumni.
- Communicate Alumni views, needs and interests back to the University.
- Expand Alumni participation in promoting the strengths of NDU to the world at large through supporting the University's mission.

The Alumni Affairs Office serves as a focal point for all alumni activities and communications. It assists in planning or sponsoring alumni activities such as Campus Tour, Alumni E-newsletter, Alumni Annual Awards, Fundraising, Mentor Program, Class reunions, Alumni Day, Alumni House, Alumni Gala Dinners, ect.

Core Values: Partnership, Service, Innovative, Excellence

Motto: Building Bonds: *Get Connected / Stay Tuned*

## NDU ALUMNI ASSOCIATION

It is an association established in 1992, by a group of graduates who wanted to remain connected to and involved with their alma mater. Its aim is reuniting all NDU graduates under a common goal: Commitment, Unity and Prosperity to both Notre Dame University and the welfare of its graduates.

Through its cooperation with NDU Alumni Affairs Office, the association seeks to provide alumni with a lasting bond to the University.

## **DIVISION OF CONTINUING EDUCATION**

The Division of Continuing Education provides learning opportunities for individuals who want to develop their knowledge and skills without enrolling in regular academic programs.

The courses given by the DCE are administered in the afternoon, each for a period of six weeks.

The following are the various programs offered by the DCE:

### **BUSINESS CERTIFICATES**

Business Management  
Business Marketing  
Business Accounting  
Banking & Finance  
Human Resources Management  
Entrepreneurship

### **COMPUTER CERTIFICATES**

Computer Applications & Office System  
Computer Engineering & Architectural Production  
Desktop Publishing  
Website Design  
Multimedia Production  
TV-Production & Motion Graphics

### **ENGLISH LANGUAGE**

Proficiency in English  
English for Bankers  
English for Business  
Spoken English  
Public Speaking

### **OTHER PROGRAMS**

#### **Certification Programs**

CMA: Certified Management Accountant  
CPA: Certified Public Accountant  
CFA: Chartered Financial Accountant

#### **Executive Training Program**

LMI: Leadership Management International  
AIF: Applied Investment Finance

#### **Arts and Crafts**

Drawing and Painting  
Lace Embroidery  
Cooking and Decoration  
Ceramics

#### **University Preparatory Programs**

SAT I; SAT II; TOEFL; EET; GMAT

## ADMISSIONS OFFICE

Notre Dame University (NDU) is a Lebanese non-profit Catholic institution of higher education that adopts the American system of liberal arts education. NDU stresses the cultural and spiritual heritage of the Maronite Mariamite Order, a pioneer in education as a means of promoting human dignity since its foundation in 1695. The religious affiliation of the University does not entail any sectarian obligation: applicants are granted equal opportunity irrespective of color, religion, gender, creed, disability or national origin. **By promoting its academic and administrative facets and by recruiting students from local, regional and international provenance, the Admissions Office aims at enhancing the universal image of NDU, an institution where all can explore the horizons of positive plurality within a rich human spectrum.** At present, the seven Faculties at NDU are attracting students from over 40 countries worldwide and are catering for the market demands of Lebanon and its surroundings.

## UNDERGRADUATE ADMISSION

Applications may be downloaded from the NDU Home Page ([www.ndu.edu.lb](http://www.ndu.edu.lb)). Applicants must complete the application form and return it with a non-refundable fee of 100,000 L.L. to the Admissions Office. NDU Examination fees are 150,000L.L.: [75,000L.L. (English); 75,000L.L. (other)].

The following documents must be submitted with each application form:

- A Secondary School Record and a Letter of Conduct from the school principal.
- A Letter of Recommendation from the school principal (or from the university administration, if any).
- A photocopy of the Identity Card or Passport.
- Two recent passport-size photos.
- Certified copies of all official certificates or diplomas.
- Scores of exams taken outside NDU (TOEFL, SAT I and SAT II).

Freshman applicants must additionally submit:

- An official school document attesting that they have completed and passed their High School requirements.
- A written authorization from the Equivalence Committee.
- Scores of both SAT I & SAT II.

**Documents must be original. All documents submitted to complete a file become the property of NDU. Whether accepted or rejected, applicants may not claim any of the documents.**

Following is a table of the deadlines for submitting applications and the exam dates.

Semester	Application Deadline	Examination Dates
Spring Semester, 2011	November 1-November 30, 2010	January 20 & 21, 2011
Fall Semester, 2011	May 2-May 31, 2011	July 1 & 2, 2011
Fall Semester, 2011	July 1-July 29, 2011	August 26 & 27, 2011

Applicants may check their status on the website. This status, however, is not final until the applicant receives an official letter of admission from the Admissions Office along with all documents for registration. These include the orientation schedule, methods of payment

from the Business Office as well as social security clearance and medical exams from the Student Affairs Office.

## **FRESHMAN ADMISSION REQUIREMENTS**

Non-Lebanese or students who have followed a High School program for at least three years may apply to the Freshman Class. They must hold a Secondary School Certificate (Grade 12) recognized by the Lebanese Ministry of Education. Applicants to the Freshman Class are required to take both the Scholastic Aptitude Tests SAT I & SAT II prior to registration as required by the Lebanese Ministry of Education for the equivalence of the Baccalaureate Part II. These tests will be specified according to either the Freshman Sciences or Arts stream. SAT I includes Verbal Reasoning, Mathematical Reasoning and Writing. SAT II (Arts) includes Math 1C plus two SAT II Subject Tests. SAT II (Sciences) includes Math 2C plus two of the following science subjects (Biology, Chemistry, Physics). The required minimum score for the combined SAT I & SAT II is 2750 for Freshman Arts and 2850 for Freshman Sciences.

In addition to the SAT I & SAT II, all applicants must satisfy an acknowledged level of English proficiency in order to be admitted. Notre Dame University recognizes one of the following instruments to measure this level: EET (English Entrance Test) administered by NDU, or TOEFL (Test of English as Foreign Language) administered by Amideast or the writing section of the SAT I.

Moreover, applicants to the Freshman Class must obtain a written authorization from the Equivalence Committee of the Lebanese Ministry of Education. This document will allow students to pursue their higher education on the basis of a foreign program.

**Note:** Freshman students must successfully complete at least 30 credits in order to receive an equivalence. Students may not be promoted to a Sophomore (or any other) class before they complete all Freshman requirements.

## **SOPHOMORE AND FIRST YEAR ADMISSION REQUIREMENTS**

Applicants must hold the Lebanese Baccalaureate Part II or its equivalent, as determined by the Lebanese Ministry of Education, in order to be eligible for the Sophomore or First Year Class. The strand of the Lebanese Baccalaureate Part II (General Sciences, Literature and Humanities, Social Sciences and Economics, Life Sciences) must correspond to the requirements of the desired program of study of the respective Faculties at NDU. **Applicants must accumulate a certain score required by these Faculties in order to be admitted in their offered majors. This score is calculated by allocating 55% weight to the school grades (second and third secondary years) and 45% to SAT I (or NDU Entrance Test).**

## **TRANSFER ADMISSION REQUIREMENTS**

Applicants who have completed at least 12 credits at the Sophomore level and/or First Year level outside NDU with a cumulative GPA of at least 2.0/4.0 beyond their secondary school education, and have been accepted by NDU's Admissions Office to register for a full-time load during the Fall or Spring semester, are considered transfer students. Courses earned at other institutions recognized by NDU, graded C or higher, and matching courses offered at NDU, are considered transferable.

Only courses completed at NDU will be computed in the student's GPA. Transfer students to the FAAD (excluding BA in Graphic Design) and FE must complete at least 45 credits at NDU with a cumulative GPA of 2.0/4.0 and meet all other graduation requirements for that degree. Transfer students to the FBAE, FH, FNAS and FPSPAD must complete at least 30

credits at NDU with a cumulative GPA of 2.0/4.0 and meet all other graduation requirements for that degree.

Transfer applicants must submit official transcripts of records as well as a catalog from the previous college or university along with an application for admission to NDU. The conditions for acceptance are specified by the University Admissions Committee, and applicants will be notified of these conditions prior to registration.

### **ADMISSION REQUIREMENTS FOR INTERNATIONAL STUDENTS**

International applicants must complete an application form and submit it to the Admissions Office along with the appropriate documents. The form can be downloaded from NDU home page ([www.ndu.edu.lb](http://www.ndu.edu.lb)). International students must fulfill the requirements specified by the Admissions Office in accordance with the rules and regulations set by the Ministry of Education.

### **ADMISSION REQUIREMENTS FOR SPECIAL STUDENTS**

Students who are not working toward a degree are considered Special Students. Applicants must complete an application form and submit it to the Admissions Office along with the appropriate documents. Admission requirements for such applicants are the English Entrance Test (EET), if they are from non- English institutions, and the Baccalaureate Part II or its equivalence. The Admissions Committee will study any other special case. Special status is granted for one academic semester. Thereafter, if a student petitions for a 'Regular Student Status', he/she must fulfill all admission requirements, including passing the required entrance exams, before the procedure of his/her admission to the 'Regular Student Status' can be started.

### **ADMISSION REQUIREMENTS FOR AUDITORS**

Students applying as Auditors are not entitled to a degree or credits or grades for the courses that they attend. An application form must be completed and submitted to the Admissions Office along with the appropriate documents. Admission requirements for such applicants are the English Entrance Test (EET) if they are from non- English institutions. In general, applicants must be university level students. If not, their files are considered on an individual basis.

### **ADMISSION REQUIREMENTS FOR A SECOND DEGREE**

Students who already have a university degree can apply for a second degree. The number of credits required for graduation are determined by the concerned Faculty. However, the minimum residency requirements are 30 credits.

### **ADMISSION REQUIREMENTS FOR TEACHING DIPLOMA/CERTIFICATE**

Applicants who hold a Bachelor Degree can apply for the Teaching Diploma in the same area of specialization. Applicants who have the Baccalaureate Part II, or a Bachelor Degree in a different area of specialization, may apply for a Teaching Certificate. Applicants who have been out of school for five years or more are required to fulfil NDU admission requirements.

## ADMISSION REQUIREMENTS FOR SUMMER ARABIC PROGRAM

Anyone who is interested in attending the Summer Arabic Program offered by NDU must submit an Undergraduate or Graduate Application Form (to be downloaded from [www.ndu.edu.lb](http://www.ndu.edu.lb) under Admissions Office) along with the Application Form as it appears in the Summer Arabic Program brochure. In addition, an official transcript of the most recent academic year is required. The questionnaire of purpose (see the brochure) must be completed and submitted along with a recommendation from an Arabic language teacher (where applicable). A writing sample from an Arabic course, test or homework is also required. The non-refundable application fee is US\$30 (check or money order made to Notre Dame University, Lebanon).

## ADMISSION REQUIREMENTS FOR UNIVERSITY EMPLOYEES

Notre Dame University employees who request admission to a program of study must meet the admission requirements of the respective Faculty. Employees are considered regular applicants and must abide by the University policy. The Director of Admissions will issue a letter of admission to identify the academic status of the applicant.

## ENGLISH PROFICIENCY REQUIREMENTS

All applicants must satisfy an acknowledged level of English proficiency in order to be admitted. Notre Dame University recognizes one of the following instruments to measure this level:

**EET (English Entrance Test)** administered by NDU.

OR

**TOEFL (Test of English as Foreign Language)** administered by Amideast.

OR

**The writing section of the SAT I.**

A student has to pass the EET with a minimum score of 650 in order to be admitted without remedial English courses, and a minimum score of 350 in order to be admitted with remedial English courses. Following are the required remedial English courses along with their corresponding EET score ranges.

<b>EET Score Ranges</b>	<b>Accepted/Rejected</b>	<b>Corresponding Remedials</b>
650 and above	Accepted	No remedials (ENL 213)
600-649	Accepted	ENL 110
500-599	Accepted	ENL 105 <sup>1</sup> (5credits)
350-499	Accepted	ENL 002 <sup>2</sup> (12 credits)
0-349	Rejected	

A student must pass the TOEFL with a minimum score of 243 (computer-based), [590-593] (paper-based) or [96-97] (internet-based, or iB), in order to be admitted without remedial English courses, and a minimum score of 180 (computer-based), [507-510] (paper-based) or 64 (internet-based), in order to be admitted with remedial English courses (including intensive).

Following are the required remedial English courses along with their corresponding internet-based TOEFL score ranges.

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<sup>1</sup> Any student enrolled in ENL 105 who scores a B or above will be automatically passed to ENL 213.

<sup>2</sup> Students are permitted to take a Math remedial in addition to this course. Any student enrolled in ENL 002 who scores a B or above will be automatically passed to ENL 110

iB-TOEFL Score Ranges	Accepted/Rejected	Corresponding Remedials
96-97	Accepted	No remedials
[(88-89)-(94-95)] <sup>1</sup>	Accepted	ENL 110
[71-(86-87)] <sup>2</sup>	Accepted	ENL 105
[64-(69-70)] <sup>3</sup>	Accepted	ENL 002
Below 64	Rejected	

## FACULTY ADMISSION REQUIREMENTS

### Faculty of Architecture, Art and Design (FAAD)

Applicants must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education.

The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or the NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FAAD in order to admit students in its majors.

### Faculty of Business Administration and Economics (FBAE)

Applicants must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education.

The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FBAE in order to admit students in its majors.

### Faculty of Engineering (FE)

Applicants must pass the Lebanese Baccalaureate Part II in the General Sciences strand or the Life Sciences strand, or its equivalent as identified by the Lebanese Ministry of Education.

The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FE in order to admit students in its majors. This composite score can be used for a maximum of one year.

<sup>1</sup> This corresponds to 230-240 range computer-based.

<sup>2</sup> This corresponds to 197-227 range computer-based.

<sup>3</sup> This corresponds to 180-193 range computer-based.

Students who hold the Lebanese Baccalaureate II in the Sociology and Economics strand or the Literature and Humanities strand cannot be accepted directly as new students in the Faculty of Engineering. However, they can transfer to any Engineering major after having completed the following requirements in other majors at NDU:

A minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a total GPA of 2.5 minimum in addition to all other university requirements for transfer between majors.

Students accepted at NDU in non-engineering majors can use their composite score to gain admission to engineering majors up to one year from the date of the entrance exam given that they are on good academic standing as defined in the NDU catalog.

### **Faculty of Humanities (FH)**

Applicants must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education.

The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FH in order to admit students in its majors.

Applicants for the degrees of Arts in Arabic Language and Literature are also required to sit for an additional placement test in Arabic. Moreover, applicants to Translation and Interpretership are required to sit for placement tests in Arabic and French.

### **Faculty of Natural and Applied Sciences (FNAS)**

Applicants to the FNAS majors in Biology, Environmental Sciences and Business Computing must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education. Applicants to the remaining majors offered by the FNAS must pass the Lebanese Baccalaureate Part II in one of the strands of General Sciences, Life Sciences or Social Sciences & Economics, or its equivalent as identified by the Lebanese Ministry of Education.

The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FNAS in order to admit students in its majors.

### **Faculty of Nursing and Health Sciences (FNHS)**

Applicants to the FNHS must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education. The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FNHS in order to admit students in its majors.

### **Faculty of Political Science, Public Administration and Diplomacy (FPSPAD)**

Applicants must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education. The selection depends on the following assessment model:

1. TOEFL, or Writing Section of SAT I, or EET (for NDU English proficiency requirements)
2. SAT I or NDU Entrance Test
3. Secondary School Grades

School grades (second and third secondary years) are weighted 55% and SAT I (or NDU Entrance Test) 45% for calculating the composite score required by the FPSPAD in order to admit students in its majors.

### **Remedial Math Courses**

In some selected majors, a student may be required to take one remedial course in Mathematics (besides the English remedial course(s); see above) if, upon evaluating his/her application, he/she did not accumulate the minimum composite score required by the Faculty for admission in these majors.

Following are the selected majors along with their corresponding remedial Math courses and the minimum passing grade in each.

<b>Faculty</b>	<b>Majors</b>	<b>Possible Set of Remedial Math Courses</b>	<b>Minimum Passing Grade for Math Remedial Courses</b>
Natural and Applied Sciences	Business Computing, Biology, and Environmental Science	MAT 105	D
Natural and Applied Sciences	Other majors	MAT 112	D
Engineering	All majors	MAT 112	C
Business Administration And Economics	All majors	MAT 105	D
Architecture, Art and Design	Architecture	MAT 112	D
Faculty of Nursing and Health Sciences	Nutrition & Dietetics, Medical Lab Technology	MAT 105	D

# GRADUATE ADMISSION

## STATEMENT OF PURPOSE

The Graduate Studies Program at NDU aims to promote humanitarian, ethical and spiritual values, to enhance intellectual inquiry and to intensify the awareness of human integrity and solidarity. In addition, the Program seeks to develop the mental, physical and spiritual potential of its student body. NDU also seeks to enhance these values through the liberal education it offers and the career preparation that caters to the real needs of Lebanon and the region.

### Admission Procedures

To be eligible for admission to a graduate program, an applicant must hold a Bachelor degree or its equivalent from an accredited institution of higher education preceded by a secondary school certificate recognized by the Lebanese Ministry of Education as equivalent to the Lebanese Baccalaureate Part II.

Admission to a graduate program at NDU is made on a semester basis and follows the same deadlines as specified for Undergraduate Applicants.

Only complete files will be studied.

Applications for Graduate Admission are available in the Admissions Office; they may also be downloaded from the NDU Home Page ([www.ndu.edu.lb](http://www.ndu.edu.lb)). The application should include the required documents indicated on the form with a non-refundable fee of 150,000 LL and submitted to the Admissions Office. Admission requirements to graduate study are established and monitored by the concerned departments and faculties.

The Admissions Office will process applications, review credentials and issue letters of notification. The Admissions Office informs applicants in writing as soon as final decision is taken. Applicants may check their admission status on the website; the status is not final until the applicant receives the letter from the Admissions Office.

### Required Documents

Applicants whose undergraduate degree is from NDU must submit:

- A graduate application form.
- A copy of the Bachelor degree.
- An official transcript of their undergraduate record.
- Two recent photographs.
- Two letters of recommendation.

Applicants from NDU are not required to take an English Test. Applicants who must sit for the EET at NDU should abide by the Examination Dates as they are specified for Undergraduate Applicants in The Admissions Guide.

Applicants whose undergraduate degree is not from NDU should submit the following documents:

- A graduate application form.
- A copy of the Bachelor degree or its equivalent certified from the Ministry of Higher Education.
- Official transcript(s) of records from the University (ies) attended during the last three years, and the corresponding course descriptions.
- Copy of the secondary school certificate or official equivalence.
- Two recent photographs.
- Two letters of recommendation.

English is the medium of instruction at NDU; applicants for graduate study should be able to demonstrate proficiency in the English language. Applicants from institutions where English is not the language of instruction will be required to sit for either the NDU English Entrance Test (EET) or the Test of English As a Foreign Language (TOEFL); the minimum score must be 600 for the EET and 96-97 for the iBT.

*All documents become part of the permanent records of NDU and will not be returned.*

### **Other Requirements**

Individual Faculties retain the right to request further requirements for admission to graduate programs such as the Graduate Management Admission Test (GMAT) and the Graduate Record Examination (GRE). Other requirements may include recommendations from employer(s), auditions, interviews, and samples of the student's work or personal statements. These other admission requirements will be stated in the letters of conditional admission authorized by the concerned Faculty.

## **TYPES OF ADMISSION**

### **Regular Admission**

Regular Admission is granted to those applicants who have fulfilled all the undergraduate admission requirements. The minimum required cumulative Grade Point Average (GPA) is 3.0/4.0.

### **Conditional Admission**

Applicants whose cumulative GPA at the undergraduate level ranges between 2.7/4.0 and 2.99/4.0 may be considered for conditional admission; this is determined by the concerned Faculties. Applicants must maintain a level of academic excellence expected of all graduate students and meet the graduate admission requirements. These applicants may be required to take at least 9 credit hours of undergraduate courses in the areas of identified deficiencies, and earn a minimum GPA of 3.0/4.0 in these courses to be eligible to pursue their graduate studies.

### **Prospective Applicants**

Candidates qualify for this category if they apply to a major other than the undergraduate degree from NDU or an equivalent degree from any other recognized institution of higher education with a cumulative GPA of at least 2.7/4.0. The respective Faculty shall study the file of prospective graduate students. They may recommend supplementary undergraduate courses that the applicant must complete with a minimum cumulative GPA of 3.0/4.0 prior to consideration for admission to graduate study. Credits earned for undergraduate courses will not be counted toward the graduation requirements for the relative Masters degree.

### **Transfer Applicants**

Applicants wishing to transfer and complete their graduate study at NDU must meet the graduate admission requirements of NDU. A complete record of all courses completed with course description must be submitted. Concerned Faculties shall evaluate and determine the transferability of academic credits in addition to the applicant's eligibility for graduate-level study at NDU.

Normally, a maximum of 9 transfer credits from previous work completed at another accredited institution of higher education is permitted upon the discretion of the Faculty Evaluation Committee. The course content and quality must correspond to the NDU course description as required for the requested major. The minimum score of each course must be "B" or its equivalent. Transfer credits are not computed in the Cumulative GPA but marked "Transfer".

**International Applicants**

Transcripts and degrees from foreign institutions require special evaluation and must be certified by the concerned offices. Consequently, prospective international students are advised to submit their application forms, test scores, and all other required documents at least one semester before the beginning of the semester for which they are applying.

**Nondegree Applicants**

Individuals seeking graduate coursework without the desire of candidacy for an advanced degree may apply and meet all requirements for admission to a graduate program as a non-degree (graduate) student.

**READMISSION**

Applicants who are issued a letter of acceptance to graduate study and fail to join their respective programs for two successive semesters, must reapply for admission.

# ACADEMIC RULES AND REGULATIONS (UNDERGRADUATE)

## STUDENT CLASSES

Students attending NDU who are not yet considered as being at the university level are classified as follows:

a.1.	<b>Class</b>	
	<b>Remedial/Intensive</b>	0 credit
a.2.	<b>Class</b>	Number of Credits Completed (on courses of 100 level and below 200 level)
	<b>Freshman</b>	1–30 credits

b. Undergraduate students in the Faculties of FAAD and FE are classified as being in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> or 5<sup>th</sup> year class according to the number of credits completed as specified in their respective suggested programs.

c. Undergraduate students in the Faculties of FBAE, FH, FNAS and FPSPAD are classified as follows:

<b>Class</b>	<b>Number of Credits Completed (on courses of 200 level or higher)</b>
<b>Sophomore</b>	31–60 credits
<b>Junior</b>	61–90 credits
<b>Senior</b>	91 and more

## FULL-TIME STUDENTS

Full time undergraduate degree students are those who register for at least 12 credits during the Fall or Spring semesters.

## PART-TIME STUDENTS

Part time undergraduate degree students are those who register for less than 12 credits during the Fall or Spring semesters. A part-time student does not qualify for financial assistance.

## SPECIAL STUDENTS OR NON-DEGREE STUDENTS

Undergraduate students who are taking courses at NDU for credits but not working toward a degree are considered Special Students or Non-Degree Students. Non-degree students shall be accepted on a semester-to-semester basis. Initial applications shall be made through the Office of Admissions and thereafter through the Office of the Registrar. Such students shall meet the academic standards required of degree students and shall neither be permitted to audit courses nor be qualified for any kind of financial aid.

## TRANSFER STUDENTS

Only, transfer applications for students at the Sophomore level or above are considered for acceptance. These students must have completed at least 12 credits with a cumulative GPA of 2.0/4.0 beyond their secondary school education. Courses on which students scored C and above will be counted towards their degree, provided they are equivalent in quality to

the courses given at NDU. Nonetheless, only courses taken at NDU will be computed in the GPA.

Transfer students holding a BA/BS/BBA from another institution of Higher Education recognized by the Lebanese Ministry of Education to the Faculties of FNAS, FBAE, FH or FPSPAD are required to complete at least 30 credits at NDU with a cumulative GPA of 2.0/4.0, and must satisfy all other graduation requirements for the degree. At the same time, transfer students to the Faculties of FAAD or FE are required to complete at least 45 credits at NDU with a cumulative GPA of 2.0/4.0 and must satisfy all other graduation requirements for the degree.

Freshman students are considered ineligible for transfer.

## **AUDITORS**

An auditor is an individual who has been admitted to course(s) while satisfying the requirements for admission to this course as deemed appropriate. He/she is required to pay 75% of the course(s) tuition. Once an auditor is registered, he/she cannot change his/her status back to credit. Grades and credits will not be given for auditing course(s) and hence cannot be counted for enrollment certification, and for financial aid purposes.

## **HOURS OF CLASSES**

Usually, classes are held Monday-Friday. However, some classes may be held on Saturday. During semesters, classes start at 8:00 a.m. However, some four-credit courses may start at 7:30 a.m. For summer sessions classes start at 7:30 am.

## **ATTENDANCE POLICY**

Students should attend all classes on time. A pattern of absences, whether authorized or not, may affect a student's grade substantially. Only the Student Affairs Office validates absences. The student is, nonetheless, responsible for the material presented during his/her absence. The maximum number of absences for classes that meet on MWF is six and for those that meet on TTH and in the summer is four, (or two hours per credit course). Any student whose absences exceed the maximum limits shall automatically be unofficially withdrawn from the course, unless he or she withdraws.

## **EXAMINATIONS AND QUIZZES**

All courses normally have written final examinations. Such examinations are not required in seminars, field work, internship programs, studio courses and senior projects, but the instructor concerned may choose to give one.

As to quizzes and progress tests, instructors shall give a minimum of two per course. If, for a legitimate reason acceptable to the instructor of the course, a student misses a quiz, he/she should arrange for a make-up with the instructor of the course within a maximum period of two weeks from the date assigned for that quiz.

Final examinations shall count for a maximum of 40% of the final grade. Those exams should be comprehensive by nature. The remaining 60% account for quizzes, progress projects, tests, term papers and other requirements as specified by the respective department. A minimum of 40% of the course evaluation should be known by students prior to the official withdrawal deadline.

Different sections of the same course must be given a common departmental final examination.

## **FINAL EXAMINATION MAKE-UP**

If a student misses a final examination for a legitimate reason, he/she should make arrangements for a make-up examination with the instructor of the course and the chairperson of the department. If permission is granted, the student shall pay the University a make-up final examination fee of 200,000 L.L. Consequently, the final examination make-up shall be taken no later than the 8<sup>th</sup> week of the next academic semester if a grade of incomplete “I” is submitted to the registrar. In the case where a change of grade is not received by the Registrar’s Office within the set period, a grade of “F” shall be given for that course.

## **GRADED FINAL EXAMINATION PAPER**

The graded final examination papers of a course offered during a given semester or the summer session must be submitted to the Department Chairperson concerned within 72 hours from the scheduled date of the final examination of that course. These papers must be kept at the department concerned for at least one semester along with a copy of the course syllabus, final examination and its solution.

## **FINAL GRADES**

A course’s final grades should be submitted to the Office of the Registrar 72 hours after the scheduled date of the examination for that course. The grades should first be approved by the Department Chairperson and Faculty Dean.

## **RECORD BOOK OR BLUE BOOK**

The original record/blue book of the courses taught by a faculty member during a given semester or the summer session must be submitted to the concerned Department Chairperson within 72 hours from the latest scheduled date of the final examination of his/her courses. This book shall be kept at the concerned department for at least one academic year, with a copy of it signed by both the concerned faculty member and his/her Department Chairperson shall be submitted to the Office of the concerned Faculty Dean.

## **TRANSCRIPTS**

Upon request, students can obtain an official transcript or a student copy transcript from the Office of the Registrar within two working days. Transcripts cannot be issued to students who have a financial account pending with the University.

## **CHANGE OF GRADE**

Once a student’s grade for a course for which he/she is enrolled during a given semester or the summer session, is approved by the Faculty and processed by the Office of the Registrar, it shall be final in the absence of justified circumstances such as evidence of human error in calculation, recording, visual oversight, or confusion in the names of students or course sections.

Under justifiable circumstances, the student may petition the Faculty Dean concerned for a change of grade within 5 working days from the processing of the final grades of the course by the Office of the Registrar. Only under **force majeure** would a student’s case be considered beyond those five days.

To change a grade, the instructor of the course should fill in and sign an official change-of-grade form, which can be obtained from the Registrar’s Office. All supporting documents including the instructor’s record book should be attached to the form. Once the new grade

is approved by the department's Chairperson, it is forwarded to the Faculty Dean for final action and then resubmitted to the Office of the Registrar.

## **CHANGE OF PROVISIONAL GRADE**

Changes made to the provisional grade I and PR should be done within an allotted period otherwise the Office of the Registrar will directly convert the grades to F. The *I grade* must be changed by the end of the 8<sup>th</sup> week of the following semester and the *PR grade* must be changed by the end of the following semester.

## **GRADES FOR REPEATED COURSES**

Students must repeat courses for which they got a grade of *F*, *UW* or those courses for which they did not get the required passing grade set by the Department or Faculty concerned, in the case where these courses are required in the major. Students must repeat these courses immediately the next time they are offered. Students may also repeat a course for which they got a grade below *C*.

For a repeated course, only the last grade, whether higher or lower, will be computed into the GPA. The other grades are kept on the student's transcript. A course may be repeated only twice. A student who fails to pass a course for the third time will have to comply with the instructions of the Dean concerned. The letter *R* will be placed on the student's transcript next to the course being repeated.

## **GRADES UPON CHANGE OF MAJOR**

1. Upon approval of change of major, all grades on transferable or non-transferable courses taken by a student in his/her old major/area of concentration remain part of his/her official transcripts. Unlike the transferable grades, the non-transferable ones are not computed in the student's grade-point-average for the new major and are not counted toward the total number of credits required for graduation for the new major. A student cannot ask for a non transferable course to be computed back in his/her G.P.A.
2. The students who benefited from the above rule (#1) cannot return to their old major, and cannot request to have their major changed again to any major which requires a non transferable course grade, which was deleted from his/her G.P.A.

## **SYSTEM OF GRADES**

The University uses the following system of grades. This system consists of letter grades with their corresponding numerical ranges (*i.e.* percentage equivalent, and the 4.0 point maximum).

<b>Grade</b>	<b>Description</b>	<b>Quality Point Value</b>	<b>Percentage Equivalent</b>
<i>A</i> <sup>+</sup>	Outstanding	4.0	97-100
<i>A</i>	Excellent	4.0	93 - 96
<i>A</i> <sup>-</sup>	Very Good	3.7	89 - 92
<i>B</i> <sup>+</sup>	Good	3.3	85 - 88
<i>B</i>	Good	3.0	80 - 84
<i>B</i> <sup>-</sup>	Good	2.7	77 - 79
<i>C</i> <sup>+</sup>	Satisfactory	2.3	73 - 76
<i>C</i>	Satisfactory	2.0	70 - 72
<i>C</i> <sup>-</sup>	Passing	1.7	66 - 69
<i>D</i> <sup>+</sup>	Passing	1.3	63 - 65
<i>D</i>	Lowest Passing	1.0	60 - 62
<i>F</i>	Failure	0.0	0 - 59
<i>UW</i>	Unofficial Withdrawal	0.0	
		The grade " <i>UW</i> " is assigned by the instructor when a registered student has never attended a class or has ceased attending and has not submitted an official course withdrawal request to the Office of the Registrar. This grade is computed as an <i>F</i> grade in the grade-point average.	
<i>W</i>	Official Withdrawal	The grade " <i>W</i> " indicates withdrawal without academic penalty. This grade is issued by the Office of the Registrar only to students submitting an official course withdrawal form by the scheduled deadline. The grade " <i>W</i> " is not computed in the student's grade-point average and may not be changed to any other grade under any circumstances.	
<i>PR</i>	Progress, Re-enroll	The grade " <i>PR</i> " is a provisional grade, and hence it is not computed in the student's grade-point-average. It is used to reflect progress on continuing research efforts for the senior study or the senior research or design project until it is completed. If this provisional grade is unresolved by the end of the following semester, the Office of the Registrar will automatically convert it to the grade of " <i>F</i> " and it will be computed in the student's grade-point-average.	
<i>U</i>	Audit	The grade " <i>U</i> " indicates that the individual was an auditor or listener in the course. This does not have any quality point value, and hence it is not computed in the student's grade-point-average. Neither the credits nor a written statement can be given for a class audited, and no instructor is authorized to admit anyone as an auditor to any of his/her classes unless the individual has registered as such.	

<i>I</i>	Incomplete	The grade “ <i>I</i> ” is a provisional grade, and hence it is not computed in the student’s grade-point average. It indicates that the student has for good and justified reasons not completed all course requirements, but there is a reasonable expectation that he/she will successfully complete it. If this provisional grade is unresolved by the end of the 8 <sup>th</sup> week of the following semester, the Office of the Registrar will automatically convert it to the grade of “ <i>F</i> ”, and will then be computed in the student’s grade-point average. However, students, who are out of attendance in the semester following the one in which the course was taken, have one year to complete the work. Degree candidates should be aware that an “ <i>I</i> ” grade received during the last semester in any of the courses required for graduation will automatically result in the postponement of graduation.
<i>P</i>	Pass	<i>P</i> indicates a passing performance in a course taken in a Pass/No Pass. The credits if any will be added to the number of credits passed, but will not be included in the average. It has no quality points.
<i>NP</i>	No Pass	<i>NP</i> indicates a failing performance in courses taken on a Pass/No Pass basis. No credits will be added to the student’s record, nor will the average will be affected. It has no quality.

## GRADE-POINT AVERAGE

The grade-point-average (GPA) or index is the ratio of the total quality point values divided by the number of the credit hours attempted by the student, as shown below.

Course Number & Designation	Grade Earned	Credit Hours Attempted	Quality Point Values	Total Quality Point Values
ARB 211	<i>B</i> <sup>+</sup>	3	× 3.3 =	9.9
BAD 425	<i>A</i>	4	× 4 =	16
HUT 305	<i>D</i>	3	× 1 =	3
MAT 215	<i>F</i>	3	× 0 =	0
CSC 200	<i>C</i>	1	× 1.7 =	1.7
		14		30.6

The GPA of the five courses would then be

$$\frac{30.6}{14} \cong 2.19$$

which is equivalent to a grade of *C*. Students are expected to know how to compute their own GPA. Courses with a grade of *W*, *U*, *PR* or *I* are not counted in computing the cumulative GPA. The same applies to all transfer courses. Hence, grades for work done at institutions other than NDU are not included in the GPA. Only courses and credits may be transferred. Thus, the cumulative GPA is an average of all the credit hours attempted by the student at NDU.

## ACADEMIC STANDING

There are 4 kinds of academic standing for an undergraduate student at NDU:

### Good Academic Standing

An undergraduate sophomore student is deemed in good academic standing if his/her cumulative GPA satisfies any of the following cases:

Cumulative GPA	# of Undergraduate Credits
At least 1.5/4.0	1 cr. – 12 cr.
At least 1.75/4.0	13 cr. – 24 cr.
At least 2.0/4.0	25 cr. or more

### Academic Probation

An undergraduate student will be on academic probation if his/her cumulative GPA satisfies any of the following cases:

Cumulative GPA	# of Undergraduate Credits
Less than 1.5/4.0	1 cr. – 12 cr.
Less than 1.75/4.0	13 cr. – 24 cr.
Less than 2.0/4.0	25 cr. or more

### Academic Suspension

An undergraduate student placed on academic probation for three consecutive semesters will be placed on academic suspension (i.e. third probation is the suspension) irrespective of whether she/he is registered or not. If the third semester of probation happens to be the first (ie Fall) or second (ie Spring) semester of the academic year, the student is granted one more semester for the removal of suspension.

Students placed on suspension may consider the following options:

1. The student may register, upon the written approval of his/her academic advisor, in a number of courses at other accredited institutions of higher education. The credits for the courses completed with a grade of “C” or better may be transferred, as appropriate, towards the requirements of his/her degree at NDU. The grades and GPA for these courses, however, shall not be transferred.

**OR**

2. The student may petition the University Academic Standards Committee to reconsider the suspension decision. The Committee will, then, determine the final status of the student in the light of the GPA obtained:
  - If the Cum. GPA is 1.79 or lower the student will be placed on academic suspension in his/her faculty but may, nonetheless, register in another faculty at NDU following due procedure.
  - The suspension may be withheld if the Cum GPA is 1.8-1.99. The student is given another chance to obtain good standing.

### Academic Dismissal

An undergraduate student is dismissed from the University if he/she fails to maintain good academic standing either during the semester immediately following reinstatement from academic suspension or after the student had been granted permission from the Faculty Dean to have the suspension removed but failed to do so.

If the student's semester GPA is at least 1.5/4.0, 1.7/4.0 or 2.0/4.0, and his cumulative GPA is still below 2.0/4.0, the student is granted another extra semester. If at the end of this semester the student still fails to be in good academic standing (cumulative GPA), he/she will be dismissed.

## ACADEMIC RECOGNITION

There are two kinds of academic recognition:

### 1) Dean's Honor List:

Full time students who obtain a semester GPA of 3.20/4.00 or higher with no incomplete grades, during a given semester are placed on the Dean's List for that semester. These students are invited to attend the Dean's Luncheon held in their honor.

### 2) Graduation with Distinction:

An undergraduate student with high academic achievement will graduate with:

- *Cum Laude* (Distinction), if the cumulative GPA falls between 3.20/4.0 and 3.49/4.0.
- *Magna Cum Laude* (High Distinction), if the cumulative GPA falls between 3.50/4.0 and 3.79/4.0.
- *Summa Cum Laude* (Highest Distinction), if the cumulative GPA is 3.80/4.0 or above.

Such distinctions appear on the student's transcript and degree. A transfer undergraduate student is only eligible for these distinctions if he/she has completed at least 60 credits at NDU.

## ACADEMIC INTEGRITY

Students are expected and encouraged to be honest and to maintain the highest standards of academic integrity in their academic work and assignments at the University. They shall refrain from any academic dishonesty or misconduct including; but not limited to:

- Plagiarism; that is, the presentation of someone else's ideas, words or artistic, scientific, or technical work as one's own creation. Also, paraphrasing, summarizing, as well as direct quotations are considered as plagiarism, if the original source is not properly cited.
- Cheating.
- Assisting in cheating.
- Substituting a student in the taking of an examination.
- Substituting examination booklets.
- Submitting the same work for more than one course and the like.
- Submitting papers written by others.
- Receiving or providing unauthorized help or assistance in any academic work or assignment.
- Intentional violation of program and degree requirements and regulation as established by the University.
- Dishonest reporting of computational, statistical, experimental, research, results, or the like.

### Penalties of Academic Dishonesty

Committing any academic dishonesty or misconduct will definitely subject the student(s) to serious academic penalties including; but not limited to:

- Failure in an assignment or a course.
- Suspension from the University for the remainder of the semester. The student will receive from the Registrar, a notice forbidding him/her, for the specified semester to occupy any portion of the University premises, and denying him/her

all University privileges, including class attendance. Suspension becomes effective immediately upon receipt of the notice. There is no refund of fees for the semester in which the action is taken, but any fees paid in advance for a subsequent semester are refunded. Following the expiration of the term of suspension, the student shall be enrolled under probation for one regular semester or Summer session.

- Suspension for additional period. The total duration of the suspension should not exceed one academic year.
- Dismissal from the University. The student will receive from the Registrar a written notice which permanently terminates his/her student status. The same policy will be followed regarding notification and the refund of fees as in the case of suspension.

### **Reporting Academic Dishonesty**

If an instructor has reason to believe that a student has committed an act of academic dishonesty, he/she must inform the student and discuss the circumstances of the matter with him/her. The instructor shall also consult with his/her Chairperson and take the appropriate action. The Chairperson shall inform the student's advisor in writing about the accident and the action taken. The student will receive a copy of that letter. If the Chairperson believes the misconduct deserves suspension or dismissal from the University, he/she should forward the case to the Dean. If the student wants to challenge the action, he/she can appeal by petitioning to the the University Student Affairs Committee through the Registrar.

## **CHANGE OF MAJOR**

### **1. Within a Faculty**

To be eligible for a change of major within the same faculty, the student must meet the requirements for admission to the new major. He/She must submit a petition for change of major provided by the office of the Registrar. The request for the student's admission is considered by the new department and by the dean concerned. After approval, the petition is sent to the office of the Registrar for implementation.

### **2. From a Faculty to a Faculty**

A student moving into another Faculty within the university is considered as a new student by the new Faculty. The student is required to fill in a petition form for a change of major provided by the Office of the Registrar and signed by the Business Office and by his/her advisor. The form is to be submitted to the Office of the Registrar, which in turn will send the form to the University Admission Committee.

### **3. By University Action**

A student will be asked to change his/her major for any of the following reasons:

- If he/she is on probation and fails at the end of a semester or summer session in two or more of his/her major and/or core courses.
- If he/she fails to pass a major course after having repeated it twice.

## **DEADLINE FOR SUBMISSION OF CHANGE OF MAJOR**

The deadline for submission of the petition for change of major for both categories is:

- The last Friday of December month for the Spring semester.
- The last Friday of June month for the Fall semester.

## **GRADUATION REQUIREMENTS**

### **Degree Requirements**

Students are required to fulfill the following requirements in order to be eligible for a bachelor degree.

- a. Completing all required credits for the degree.
- b. Fulfilling satisfactorily all course requirements for the degree as well as remedial/intensive courses given upon admission.
- c. Fulfilling all other admission requirements.
- d. Maintaining at least a 2.0/4.0 cumulative GPA for the degree.
- e. Satisfying the residency requirements for the degree.
- f. Maintaining the required minimum cumulative GPA for the major and core courses required for the degree, as specified by the concerned Department.
- g. Maintaining good academic discipline.
- h. Settling all accounts with the University.

These conditions must be met together with the degree requirements in effect during the semester of the student's first registration at NDU. This shall also apply to reinstated students. However, readmitted students must meet the degree requirements in effect during the semester of their readmission, unless their readmission letter states otherwise.

Students who do not have the required cumulative GPA of 2.0/4.0 for the degree and/or the required cumulative GPA for the major and core courses required for the degree, but yet have completed all other requirements, may repeat up to 5 courses, as approved by the Academic Advisor, to meet the required numerical level(s).

### **Second Degree Requirements**

A student with a bachelor degree may register for another degree at NDU after being accepted by the University. Such a student must:

- Satisfy all the requirements for the new degree in accordance with the statements of section I of this policy.
- Have a residency of at least two full semesters.
- Complete at least 30 credits in the new degree over and above the credits already used to satisfy the first degree with a minimum cumulative GPA of 2.0/4.0.

### **TEACHING DIPLOMA REQUIREMENTS**

A holder of the official Lebanese Baccalaureate Part II or its equivalent will be eligible for a Teaching Diploma upon completing satisfactorily at least 18 credits beyond his/her bachelor degree with a cumulative GPA of at least 2.0/4.0.

### **TEACHING CERTIFICATE REQUIREMENTS**

A holder of the official Lebanese Baccalaureate Part II or its equivalent will be eligible for a Teaching Certificate upon completing satisfactorily 18 credits with a cumulative GPA of at least 2.0/4.0.

### **GRADUATION CHECK LIST**

Two semesters prior to graduation, the Office of the Registrar must submit to the concerned Academic Advisors and students a graduation list of potential candidates for graduation for verification. This list must include the following:

- The already completed requirements for the degree
- The requirements, which remain to be completed for graduation
- The cumulative GPA for the degree
- The major courses and the core courses average

Once the checking process is completed, the checked list must be returned to the Office of the Registrar to finalize the tentative graduation list and hence send it back to the Faculty for voting at the end of the student last semester.

## **CONFERRING OF DEGREES**

Degrees are conferred three times a year at the end of the:

- Fall semester
- Spring semester
- Summer session

Students expecting to graduate must apply for graduation at the Office of the Registrar by the following deadlines:

- November 15 for the graduates of the Fall and Spring semesters
- March 15 for the graduates of the Summer session

Any delay in applying may delay graduation. The formal conferring of degrees by the President occurs annually at the Commencement on the second Friday of each July.

Potential Summer graduates can not participate in the ceremony of the conferring of degrees.

## **RESIDENCY REQUIREMENTS**

### **Residency Requirements for Bachelor of Art, Bachelor of Science, Bachelor of Business Administration and Bachelor of Hotel Management.**

There are 2 kinds of Government Regulations for the B.A., B.S., B.B.A., B.H.M. and the like:

1. **Minimum Residency:** A minimum of 8 semesters of residency is required, beginning with the Freshman Class, or 6 semesters, beginning with the Sophomore Class. Two Summer sessions will be considered as equivalent to one regular semester. This period of time must be spent at a recognized and accredited institution of higher education; however, at least 30 credits requirement must be completed at NDU with a cumulative GPA of 2.0/4.0, in addition to all other graduation requirements for the degree.
2. **Maximum Residency:** A maximum of 16 semesters of residency is allowed, beginning with the Freshman Class, and 12 semesters, beginning with the Sophomore Class.

### **Residency Requirements for Bachelor of Engineering**

1. A minimum of 10 semesters and a maximum of 20 semesters.
2. At least the last 45 credits must be completed at NDU, in addition to all other graduation requirements for the degree.

### **Residency Requirements for Bachelor of Architecture**

1. A minimum of 10 semesters and a maximum of 20 semesters.
2. At least the last 45 credits must be completed at NDU, in addition to all other graduation requirements for the degree.

## **PARTICIPATION IN COMMENCEMENT EXERCISES**

The University encourages June graduates to participate in the Commencement exercises. Summer and Fall graduates may participate in the following Commencement exercises provided they notify the Registrar's Office of their intent by mid-June at the latest by submitting the online form.

## **COURSE DESIGNATION**

### **A. Designation and Belonging**

The letters preceding the course number indicate the area or subject of study to which the course belongs. The following is a designation list grouped by Departments and Faculties' affiliations.

### **Faculty of Architecture, Art and Design**

#### **Department of Architecture**

ARP	-	Architecture
MLU	-	Landscape Urbanism

#### **Department of Design**

IDP	-	Interior Design
GDP	-	Graphic Design
FTP	-	Fashion Design
PDP	-	Photography
MAD	-	Design

#### **Department of Music**

MUA	-	Arab Musicology
MUE	-	Music Education
MUJ	-	Jazz Music
MUM	-	Musimedialogy
MUS	-	Musicology

#### **Fine Arts Programs**

FAC	-	Arts and Crafts
FAP	-	Studio Arts
FDP	-	Studio Arts
FPA	-	Performing Arts
MAA	-	Fine Arts

### **Faculty of Business Administration and Economics**

#### **Department of Accounting, Finance and Economic**

ACO	-	Accounting
BAF	-	Banking and Finance
ECN	-	Economics
ENR	-	Energy Economics
FEN	-	Financial Engineering

#### **Department of Management and Marketing**

BAD	-	Business Administration
BAM	-	Business Management and Marketing
BRM	-	Business Research Method
HCM	-	Health Care Management
HRM	-	Human Resource Management
IBL	-	International Business Law
MRK	-	Marketing
MGT	-	Human Resource Management
POM	-	Project and Operations Management

#### **Department of Hospitality and Tourism Management**

EPM	-	Management of Event Production
FBM	-	Food and Beverage Management
TTM	-	Hotel Management and Tourism
HSM	-	Hotel Management and Tourism
HVM	-	Hospitality Events Management

### **Faculty of Engineering**

ENG - Engineering  
**Department of Civil and Environmental Engineering**  
 CEN - Civil Engineering  
**Departments of Electrical and Computer and Communication Engineering**  
 EEN - Electrical Engineering  
**Department of Mechanical Engineering**  
 MEN - Mechanical Engineering

**Faculty of Humanities**

**Department of English, Translation and Education**

CHI - Chinese  
 EDU - Education  
 ENL - English  
 FRC - French  
 GEM - German  
 INT - Interpretation  
 ITL - Italian  
 LIR - Literature  
 LTN - Latin  
 PES - Physical Education and Sports  
 SPA - Spanish  
 SYR - Syriac  
 TRA - Translation

**Department of Mass Communication**

ADM - Advertising  
 COA - Communication  
 JOU - Journalism

**Department of Social and Behavioral Sciences**

ARB - Arabic  
 HUT - Human Thought  
 PHL - Philosophy  
 PSL - Psychology  
 REG - Religion  
 SOL - Sociology

## **Faculty of Natural and Applied Sciences**

### **Department of Computer Science**

CSC	-	Computer Science
GIS	-	Geographic Information Systems

### **Department of Mathematics and Statistics**

ACS	-	Actuarial Science & Insurance
FMA	-	Financial Mathematics
MAT	-	Mathematics
STA	-	Statistics

### **Department of Sciences**

AST	-	Astronomy
BIO	-	Biology
CHM	-	Chemistry
ENS	-	Environmental Science
GEO	-	Geology
PHS	-	Physics

## **Faculty of Nursing and Health Sciences**

NUR	-	Nursing
HEA	-	Health
MLT	-	Medical Laboratory Technology
NTR	-	Nutrition and Dietetics

## **Faculty of Political Science, Public Administration and Diplomacy**

### **Department of International Affairs and Diplomacy**

IAF	-	International Affairs and Diplomacy
INL	-	International Law

### **Department of Public Administration**

CJS	-	Criminal Law
PAD	-	Public Administration

### **Department of Political Science**

AMS	-	American Studies
EMS	-	Euro-Mediterranean Studies
CPL	-	Comparative Law
HIT	-	History
NGO	-	Non-Governmental Organization
POS	-	Political Science

## B- Digits of a Course Number

The following digits are used as follows:

<b>First Digit</b>			
		<b>FNAS, FNHS, FBAE &amp; FH</b>	<b>ENG, RCT, VIA</b>
	0	Non Credit Remedial Courses	Year 0
	1	Freshman Course	Year 1
	2	Sophomore Course	Year 2
	3	Junior Course	Year 3
	4	Senior Course (Undergraduate Only)	Year 4
	5	Courses that are considered preparatory for graduate studies. When passed, their credits should not be counted in the total of credits required for graduation and they should be completed during the first academic year.	Year 5
	6 or higher	Graduate Course	Year 6
<b>Second Digit for Undergraduate and Possibly Graduate Courses</b>			
	0	Basic Level Course	
	1	Elementary Level Course	
	2-4	Intermediate Level Course.	
	5	Advanced Level Course.	
	6	Special Topics or Practicum I	
	7	Laboratory Workshop, or Practicum II	
	8	Seminar or Internship.	
	9	Senior Study; Senior Project, Thesis or Research Project.	
<b>Third Digit: Any digit ranging from 0 to 9.</b>			

## C- Course Number, Title and Credits

<b>MAT 215</b>	<b>Linear Algebra I</b>	<b>(3.0)</b>	<b>3 cr.</b>
Official Course Code (Number Abbreviation)	Official Course Title	The first component of the above ordered pair designates the number of lecture hours/week. The second component is the number of laboratory hours/week.	Number of credits (cr) earned if course is successfully completed.

**Lecture hours/week** is a period of 50 minutes duration.

**Credits** are based upon the number of 50 minute periods scheduled weekly during one semester or summer session. One credit signifies a minimum of either a 50-minute period of class work, or 2-3 hours of laboratory over a period of 15 weeks or its equivalent.

## D- Course Prerequisite and Corequisite

A **prerequisite** is a course which must have been completed before registering for the subject course.

A **corequisite** is a course which must be completed before registering for the subject course, or a course which may be taken concurrently.

# UNDERGRADUATE REGISTRATION

## ACADEMIC ADVISING

Upon admission and prior to registration, each student shall be assigned an Academic Advisor by his/her Department Chairperson, upon the approval of the Faculty Dean. The Academic Advisor shall:

- a. Advise his/her advisees to observe the basis of admissions as set in his/her letter of acceptance.
- b. Make himself/herself available to his/her advisees during office hours, and when necessary by appointment, throughout the academic year.
- c. Assist his/her advisees to properly fulfill all requirements of the degree enrolled in.
- d. Study and update the files of his/her advisees throughout his/her residency at NDU.
- e. Make his/her advisees aware of and familiar with the University academic rules, regulations and policies.
- f. Explain clearly the:
  - Registration process
  - Course offerings
  - Course substitution
  - Course prerequisite
  - Course selection
  - Full-time / part-time credit load
  - Degree planning

and other related matters. Hence, students are encouraged to consult with their Academic Advisors on a regular basis all throughout their residency at NDU.

## REGISTRATION ELIGIBILITY

An undergraduate student will be eligible for registration upon settling all previous pending issues (academic, financial, disciplinary, administrative, etc... ) with the University at the concerned offices. Otherwise, he/she cannot proceed any further toward his/her registration.

## REGISTRATION

The registration date for undergraduate students is assigned by the Office of the Registrar. To register, a student should

- a. Receive tuition statement from the Business Office.
- b. Pay the appropriate tuition and fees to the allotted bank(s).
- c. Prepare his/ her course schedule
- d. Register for courses; off campus (internet) or on campus (intranet): Advisor or Division of Computing Services

New students should register at the Advisor's Office

## REGISTRATION BY ABSTENTIA

An NDU undergraduate student is allowed to register in abstentia (or by proxy) by some legally recognized individuals (*i.e.*, parent, sister, or the like) under justifiable reasons such as illness, being abroad, and the like. Such a student shall be entirely responsible for discrepancies in his/her proxy registration, if any.

## **LATE REGISTRATION**

After the third day of classes in either the Fall semester or the Spring semester or the second day of the Summer session the late registration period shall be scheduled and its fees shall be determined. No student may be registered beyond this day for the current semester or the Summer session. During the late registration day, a student shall follow the steps of the registration, as described in section IV of this policy. Further, it shall be understood that students registering during the late registration day shall be responsible for all work assigned from the beginning of the semester or the session. They shall be also subject to the requirements of the attendance policy as of the first day of classes.

## **CROSS-REGISTRATION**

1. An NDU undergraduate student may be allowed to cross-register a course at another institution if:
  - a. The course is not offered at NDU during the semester in which the student is expected to graduate.
  - b. The course in which the student intends to cross-register is equivalent to his/her required course at NDU.
  - c. The course does not conflict with his/her course schedule at NDU.
  - d. The student has the Cross-Registration and Registration Forms signed by his/her Department Chairperson, and Academic Advisor as well as the Office of the Registrar and the Business Office.
  - e. The student returns the appropriate Cross-Registration form(s) to NDU Registrar's Office after officially registering at the other institution.
  - f. The student has to submit an official transcript of records for his/her cross-registered course to the Office of the Registrar at NDU.
2. A non-NDU undergraduate student may be allowed to cross-register a course at NDU upon submission of a written authorization from his/her institution allowing him/her to register for this course at NDU in accordance with NDU undergraduate registration policy.

## **IMPROPER REGISTRATION**

Only officially enrolled students in a class are allowed to attend the class. The instructor of the class should inform any non-officially enrolled student of his/her improper registration and should immediately report it, in writing, to the Office of the Registrar, and should also ask the student to immediately proceed to the Office of the Registrar for a settlement.

## **CHANGES IN REGISTRATION**

Changes in registration become effective and official on the date the approved completed form is submitted to the Office of the Registrar, and accepted and processed, and the financial obligations resulting from these changes are settled with the Business Office.

### **Adding and/or Dropping Courses**

A student may add or drop a course or change a section in his/her registration schedule during the add/drop day only. This can be done by:

1. Dropping or Adding by himself/herself at the Division of Computing Services or in the Advisor's Office.
2. In the Drop/Add period, two modifications are allowed by the student.
3. In case a section is closed, or a student wishes to waive prerequisites/co-requisites and the like, only during Drop/Add period he/she has to fill in a Drop/Add form to secure the concerned Dean's signature.

4. Receive his/her modified tuition statement from the Business Office.

### **Withdrawal From Courses**

a) In accordance with the University Refund Policy, students may officially withdraw from courses without academic penalty by the late registration day. In this case no grades will be inscribed on their record. They may also withdraw any time prior to the 14<sup>th</sup> week of the Fall or Spring semesters and before the 28<sup>th</sup> day of the Summer session.. Then a grade of “W” will be inscribed on their records.

b) Withdrawal after the deadline will result in an “F” or “UW” grade on the dropped course. No withdrawal is allowed beyond this period unless the student petitions to the Dean concerned, due to urgent reasons. Once the petition is approved, the Registrar will then be instructed by the PVP for Academic Affairs to assign the grade “W” on the dropped course(s). No credit is given for.

### **Attendance after Withdrawing**

Once a student has withdrawn from a course, he/she cannot continue to attend or audit this course during *the same* semester.

### **Student Reinstatement**

Upon return, a student with leave of absence shall petition the Office of the Registrar for reinstatement. Those students on probation who have been approved for leave of absence will remain on probation upon reinstatement.

### **Dropping a Course while on Probation**

A student on probation may drop any course during the probation period.

### **Registration in a Course with an ‘F’ Grade**

Students may not register in a course if he/she has an incomplete grade in its prerequisite(s).

## **STUDENT ACADEMIC LOAD**

### **Full-Time and Part-Time Loads**

Registration in at least 12 credits for the Fall or Spring semester constitutes a full-time load for an undergraduate student. Otherwise, it constitutes a part-time load.

### **Maximum Load for Registration per Semester**

The maximum load for registration during the Fall or Spring semester by any undergraduate student is either 16 credits or the number of credits specified in his/her suggested program for that particular semester. However, student on good academic standing can take up to 19 credits per semester provided that this number of credits does not contradict any residency requirements. Student with a cumulative GPA of 3.50 and above, may petition to register for one additional three credits course over and above the regular load. This additional load, may be approved provided the residency requirements are met.

### **Maximum Load for Registration in the Summer Session**

The maximum load for registration by any undergraduate student in the Summer session is 9 credits or less as determined by the concerned Faculty.

### **Maximum Load for Students on Probation**

Students who are on probation may register for a maximum of 13 credits per semester of which at least 9 credits for courses that must be repeated, if any.

### Maximum Load for Students with Incomplete(s)

Students who have two or more incomplete grades from a previous semester or the Summer session may register for a maximum of 13 credits per semester unless these courses are senior projects or the like.

### Maximum Load for Students with Cross-Registration

The combined load for students with both registration at NDU and cross-registration in another institution must not exceed the maximum load stated above.

## TUITION AND FEES

Notre Dame University is a non-profit institution. Tuition and fees paid by students represent a small percentage of the full cost of a student's education. The deficit is covered by income from gifts, grants and donations from foundations, alumni and friends of the University. The fees cover applications, membership in National Social Security Fund (NSSF), activities, Yearbook and Student Association, and Insurance. Membership of Lebanese students in the NSSF is mandatory by law. Thus prior to registration, students are urged to follow the instructions given by the Students Affairs Office concerning the clearance for NSSF.

### Tuition

Tuition/Credit Hour (Engineering or Architecture)	L.L.	435,000
Tuition /Credit Hour (All Others)	L.L.	370,000
Tuition /Credit Hour (Auditing)	L.L.	75% of credit tuition

### Fees

Admission Application	L.L.	100,000
Entrance Examination	L.L.	75,000 per exam
Late Registration	L.L.	100,000
Petition	L.L.	5,000
Change of Major	L.L.	100,000
Make-up Final Examination Fee/Incomplete	L.L.	200,000
Transcript (Official Copy)	L.L.	10,000
Transcript (Student Copy)	L.L.	5,000
Library Fee/Book /Day (Late Returns)	L.L.	1,500
Graduation	L.L.	50,000
Medical Insurance	L.L.	35,000
Academic Fees	L.L.	145,000
Smart ID Card (when applicable)	L.L.	15,000.
NSSF Fees (when applicable)	L.L.	150,000

Because of the rising cost of higher education, universities are facing severe financial problems. NDU reserves the right to change tuition, fees and expenses at any time without prior notice.

A student may not complete registration, graduate or receive any transcripts of records until all dues are paid.

### Refund Policy

Contracts with faculty members and provisions for education are made by the University in advance for the entire year. Accordingly, if a student withdraws for justifiable reasons after final registration, refund of tuition will be made according to the following schedule of withdrawals:

- During drop/add period, 75% of the tuition is refunded.
- During the first week of classes, 50% of the tuition is refunded.
- Tuition is not refunded after the first week of classes.
- Refund policy does not apply during summer session. No refund of tuition is made for any withdrawal during summer session.

**Financial Support for Re-enrolled courses**

Students who re-enroll, for any reason, in any course, shall not benefit from any financial support for the enrolled courses.

# **UNDERGRADUATE ACADEMIC MINORS**

## **RATIONALE**

The Objective of establishing undergraduate academic minors, hereinafter called minors, at NDU is to offer a wide, versatile, and creative spectrum of basic knowledge for students in areas other their major programs of study, an objective that is in line with the American liberal arts model of higher education. Additionally, establishing minor enhances the attractiveness of the departments and Faculties in terms of allowing them to offer relatively quick training or specialization programs to intrested students.

The establishment of undergraduate academic minors is a matter that is totally internal to the university and is outside the scope of governmental licensing and recognition.

The following rules and regulations do not allow students to enroll in the university for the sole purpose of pursuing minor studies.

## **GENERAL RULES AND REGULATIONS FOR MINORS AT NDU**

### **Number of Credits for Minors**

A minor shall consist of 15cr to 18cr. A minor may not include more than two courses (6 credits) which are counted in the student's "Major Requirements" category .

### **Eligibility for Minors**

Only enrolled students at NDU and in junior standing and above can declare minors.

### **Declaring Minors**

A student wishing to declare a minor should do so through an appropriate request form submitted to the concerned department or Faculty offering the minor. Approval by the latter is required prior to registration.

### **Contract Sheets and Advisors for Minors**

Each minor shall have a separate contract sheet specified and supplied by the department or Faculty offering the minor. Students declaring a minor have to follow the corresponding contract sheet with the assistance of an academic advisor, preferably the same person advising the student in his/her major. The student and his advisor are recommended to closely liaise with an advisor from the chosen minor. All academic advisors in the university should be aware of the different minors offered across the university so that they can assist their advisees towards a specific minor.

### **Pursuing More than One Minor**

Students are allowed to satisfy the requirements for a maximum of two minors, provided that they do not pursue more than one minor at a time. Accordingly, declaring an additional minor is conditional to either the successful satisfaction of the requirements of an already declared minor or to the official withdrawal from a current minor.

### **Withdrawing from Minors**

A student is allowed to officially withdraw from a declared minor no more than twice.

**Students on Probation**

Students on probation cannot declare minors .

**Passing Grades and GPA's for Minors**

The passing grade for a minor shall be specified by the department or Faculty offering the minor, provided that the acceptable overall GPA for any successfully completed minor is not below 2.

**Overall GPA**

A student, with or without a declared minor, shall have one and only one overall GPA including every course taken. A separately calculated GPA for the minor shall be considered by the registrar for the sole aim of judging the successful fulfillment of the requirements for that minor.

**Minor Courses and Graduate Studies**

If any, a student applying for graduate studies is allowed to use earned minor credits as remedial credits upon the approval of the concerned faculty .

**Graduation and Minors**

A registered student pursuing a minor degree with a declared minor is allowed to graduate when the requirements of the major degree are satisfied, even if the requirements of the minor are not. In this case, the minor can be independently completed and acknowledged after graduation.

**Recognition of Minors by the University**

The university shall recognize only a *completed* minor, and solely by a specific acknowledgement of the completion of a minor on the student's transcript of records and, upon though student's request, by an official statement from the registrar. The university does not issue any diploma or certificate recognizing the completion of a minor.

**Additional Requirements**

Within the previously mentioned rules that give the general guidelines for all minors, departments and faculties have the right to state additional requirements for their minors as they deem necessary .

# ACADEMIC RULES AND REGULATIONS (GRADUATE)

## CROSS-REGISTRATION

Students enrolled at Notre Dame University may take courses at other recognized institutions of higher education.

A student registered at NDU may be permitted to cross-register if:

1. He/She expects to graduate at the end of that particular semester and the said course is not offered at NDU but is a graduation requirement.
2. The course to be taken carries the same content as that offered at NDU.
3. The student's academic advisor sends a written statement to the NDU Admissions and Registrar's Offices who in turn contact their counterparts of the concerned university to confirm the above-mentioned conditions.

*Students enrolled at other recognized institutions of higher education may take courses at Notre Dame University.*

Students studying at other universities and who wish to take courses at NDU must secure the following to facilitate cross-registration:

1. Written permission by the academic advisor to take specified courses at NDU (if any of the above mentioned conditions apply to the incoming student)
2. The permission of the concerned Faculty at NDU.
3. The above documents are submitted to the NDU Admissions and Registrar's Offices by their counterparts.
4. Finalize registration according to cross-registration procedures at NDU.

## AUDITING

Provided that they have satisfied the admission requirements, candidates that are interested in auditing graduate courses will be issued letters of acceptance as auditors.

## TUTORIALS

To meet graduation requirements, students may take courses on a tutorial basis. Registration for a tutorial course can only happen after the consent of the concerned professor and the approval of the respective faculty.

## COURSE/PROGRAM CHANGES

Any change from one graduate degree to another requires students to reapply and meet the admission requirements of the requested graduate program. Required courses may be substituted upon the recommendation of the student's graduate advisor and the approval of the respective Faculty. A maximum of 9 substitute credits will be considered.

## SUPERVISION

Upon admission, students will be assigned an academic advisor who will guide and assist the student in planning a course of study. When applicable, a thesis advisor will be assigned. After consultation with the Faculty Dean, every faculty will set its own guidelines for thesis defense. Candidates are required to give a public presentation. Thereafter, the Thesis Committee will notify the Dean and schedule the final defense.

## **COURSES AND GRADES**

Courses taken as part of a student's graduate study program fall in one of two categories, graduate or remedial, with different grading systems.

### **Graduate Level Courses**

These are normally numbered 600 and above. The minimum passing grade for a graduate course is B. Students in graduate study are required to maintain a cumulative average of at least B in all courses taken for graduate credit. According to the NDU Attendance Policy, a student who is absent without excuse from more than one third of the number of sessions in any one course, or who fails to sit for scheduled examinations, or fails to fulfill required written or oral work, will be given F. Results of tutorial courses, projects, or theses will be reported as Pass (P) or Fail (F).

### **Remedial Courses**

These are usually undergraduate courses, taken to make up for any particular deficiencies. They do not carry graduate credit. The minimum passing grade for a remedial course is B; however, a department or program may set a higher minimum passing grade.

## **PROBATION AND DISMISSAL**

Graduate students may be placed on academic probation by the faculty graduate committee if they:

1. Fail any course taken for graduate credits,
2. Do not maintain a cumulative average of *B*.

Even though an adequate cumulative average is attained, the probation of graduate students may be removed only by action from the appropriate faculty graduate committee if:

1. Students have completed a minimum of 9 credits of graduate level courses within two consecutive semesters after being placed on probation, have passed all courses, and have obtained a cumulative average of *B*. If students fail to meet any of these conditions, they will be dismissed from the program.
2. The department or program in which students are studying recommends the removal of the probation.

The faculty graduate committee may discontinue a student from graduate study if:

1. The probation status is not removed within a period of two semesters,
2. In the opinion of the department or program, and irrespective of the grades obtained, the work of the student is deemed unsatisfactory,
3. The student fails the comprehensive examination twice, or fails the thesis defense twice.

## **COMPREHENSIVE EXAMINATION**

Where applicable, a student must pass a comprehensive examination after completion of most of the course requirements for the degree. The concerned department will schedule the examination. The purpose of the examination is to ascertain the student's knowledge of the field of specialization and related areas. A student who does not pass the comprehensive examination may repeat it only once after a time lapse of at least three months but only with the approval of the concerned graduate committee.

## **THESIS**

In partial fulfillment of the requirements for the master's degree, a student must submit a thesis, when applicable, based on results of original and independent research. Except in

departments or programs in which the medium of instruction is not English, the thesis must be in English.

An abstract not exceeding 350 words must be submitted with the thesis. If the thesis is in a language other than English, the abstract must be written both in that language and in English.

The concerned Department must ensure the availability of a copy of the *Thesis Manual*, which provides instructions on the preparation of theses. Its application is mandatory and theses not conforming to its requirements will not be accepted. For all matters not discussed in the manual, theses must follow the form and style described in the latest edition of K. L. Turabian, *Manual for Writers of Term Papers, Theses and Dissertations* (University of Chicago Press), or any other form specified by the department or program provided this conforms to the manual.

Copies of the thesis, unbound but ready for binding, should be submitted to the members of the thesis committee at least two weeks before the defense. Copies may be obtained by any legible and durable form of reproduction. Additional copies may be required, as specified by the concerned department or program.

### **Thesis Committee**

The master's thesis committee should be composed of at least three members recommended by the department or program and approved by the faculty graduate committee. The proposal of the thesis topic and the selection of the advisor and the members of the thesis committee for candidates for the master's degree should have been approved by the faculty or school graduate committee at least four months before the student defends the thesis. It is advisable that the thesis committee includes one external member. This member may be from an institution other than NDU. All committee members should hold professorial ranks. The thesis committee approves the thesis topic and research program and conducts the thesis defense examination.

### **Thesis Defense**

The thesis defense may be open to the public and must be carried out no later than June 10, October 30, or March 1, for students who wish to graduate at the end of the summer session, the fall, or the spring semester respectively.

Pass or Fail is reported for the combined thesis and thesis defense. If fail is reported, the student may resubmit the thesis and defend it after a period of at least three months. Failure on the second attempt results in discontinuation from graduate work.

***Students must be registered for the thesis or at least one course in the session in which they expect to graduate in order to present their defense.***

### **Deposit of the Thesis in the Library**

After passing the thesis defense examination, the student is required to deposit at the library two copies of the thesis. A library receipt of these copies must be delivered to the Office of the Registrar before the student is awarded the degree. The student should sign a release form indicating whether or not the library is authorized to supply copies of the thesis to other libraries or individuals. The non-authorization option is valid for a period of two years only, after which copies of the thesis will be supplied on request.

## Deadlines

	For Graduation in		
	Fall	Spring	Summer
Deadline for approval of Thesis topic & committee	June 20	Oct. 20	Feb. 1
Deadline for thesis defense	Oct. 30	March 1	June 10
Deadline for deposit of Thesis at library	Nov. 10	March 10	June 20

## PROVISIONS FOR THE MASTER DEGREE

In addition to satisfying the general requirements set in the preceding sections, students working towards a master's degree must fulfill the requirements described below:

### Course Requirements

Two types of Master degree programs are available:

1. A thesis based on independent research work. Students following this program are required to take a minimum of 24 graduate credit hours; a maximum of 9 credits may be in tutorial courses.
2. A non-thesis program where students are required to take a minimum of 33 graduate credit hours and should follow a course of study approved by the department or program and by the graduate committee of the faculty.

### Language Requirements

Aside from English proficiency requirements, there are no special university language requirements for the master's degree. However, individual departments and programs may set their own language requirements either as a general rule or in specific cases. The faculty graduate committee will determine examination procedures.

### Residency Requirements

To meet the minimum residency requirements for the master's degree, students must register and be in residence, as graduate students, for at least two semesters, one semester and two summers, or four summers.

All requirements for the master's degree must be completed within a period of four years after admission to graduate study. Students attending summer sessions only must complete all requirements within a period of six summers after admission to graduate study. Extension beyond the maximum period of study requires the approval of the graduate committee of the faculty.

## GRADING SYSTEM

The University uses the following grading system for the graduate programs:

Grade	Description	Quality Points/Credits	Interval
A <sup>+</sup>	Outstanding	4.0	100-97
A	Excellent	4.0	96-93
A-	Skillful	3.7	92-89
B+	Very Good	3.3	88-85
B	Good	3.0	84-81
B-	Reasonably Good	2.7	80-77
C+	Satisfactory	2.3	76-73
C	Passing, but not satisfactory	2.0	72-70
F	Failure	0.0	69-0
UW	Unofficial Withdrawal	0.0	
W	Official Withdrawal		
I	Incomplete		
P	Passing		
R	Repeat		
PR	Progress, re-enroll		
UP	Unsatisfactory Progress		
U	Audit		

**I** This grade is given by an instructor only when there is reasonable expectation that a student will successfully complete course requirements. If this grade is unresolved by the eighth week of the following semester, the office of the Registrar will automatically convert it to the grade of *F*. Degree candidates should be aware that an *I* grade received during the last semester in any of the courses required for graduation will result in the delay of graduation.

**PR** This grade is used to indicate progress on research for the Master's thesis or project up to time of completion, when the appropriate letter grade is entered on the transcript.

**UP** This grade is used to reflect that unsatisfactory progress is being made in a Master's research project or thesis.

**W** The grade *W* indicates withdrawal without academic penalty. This grade is issued by the Registrar's office to students filling in an official course withdrawal form by the scheduled deadline. The grade *W* is not counted in the grade point average and may not be changed to any other grade under any circumstances.

**UW** The *UW* is assigned by the instructor when a student has never attended a class or has ceased attending and has not submitted an official course withdrawal to the Office of the Registrar. This grade is counted as an *F* in the grade point average.

**U** Students have the option of auditing courses instead of receiving credits and grades for them. A *U* will appear on the student's permanent record.

## **ATTENDANCE POLICY**

Classes are held from Monday to Friday. Graduate courses are offered in the afternoon as of 4:00 P.M..

Students are expected to attend all classes and laboratory sessions. Absence, whether excused or not, does not absolve a student from the responsibility for the work done or from conforming to any announcement made during his/her absence.

Instructors are responsible for clearly informing the students in writing of the attendance requirement for each course and the consequences of poor attendance.

For legitimate reasons a student is allowed to be absent for a maximum of 6 hours per three-credit course.

## **ACADEMIC ADVISOR**

Students are responsible for the proper completion of their academic programs. They must be familiar with the rules and regulations of Graduate Studies, as well as the general academic regulations promulgated by individual Faculties and departments. The offices of the deans and department chairpersons, in cooperation with student advisors and faculty members, endeavor to follow each student's academic progress, and students are encouraged to seek counsel whenever there is a need. If advisors are unable to satisfactorily resolve problems, they will refer students as is deemed appropriate and necessary.

## **ACADEMIC HONESTY POLICY**

It is the expressed policy of the University that every aspect of graduate academic life, related in whatever fashion to the University, should be conducted in an absolutely and uncompromisingly honest manner by graduate students.

The University Disciplinary Committee will deal with apparent and alleged breaches of this policy.

## **ACADEMIC STANDARDS**

Continuation in the graduate programs requires satisfactory progress toward a graduate degree. Evidence of such progress includes maintaining a 3.0/4.0 cumulative average throughout the course of graduate study. Furthermore, in order to graduate, a student must have at least a 3.0/4.0 cumulative grade point average.

Failure to obtain a G.P.A. of 3.0/4.0 for the first twelve credit hours will result in notification of probationary status. Any student who did not remove his/her probation in two semesters will be suspended from the university.

A graduate student will also be suspended if he/she obtains two Fs.

## **WITHDRAWAL POLICIES**

### **Leave of Absence**

Graduate students may request a leave of absence from a program through written appeal to their advisors. The advisor will forward the request along with a recommendation to the Dean of the Faculty who will answer on behalf of the University. A student who does not register for courses for more than one calendar year must reapply for admission to the University and to the graduate degree program.

## **Withdrawal from courses**

After the date of dropping and/or adding courses, students are allowed until the end of the 14th week as of the beginning of a semester to withdraw from courses. W will be inscribed on their records. No withdrawal is allowed beyond this period.

Withdrawal must be made by the deadline set for dropping a course. Late withdrawal may be accepted only in case of illness or circumstances beyond control.

## **APPLICATION FOR GRADUATION**

Students who expect to graduate must complete and submit the Application for Graduation to the Office of the Registrar.

Degrees earned during any semester or summer will be awarded only at the following commencement exercises. Commencement is held once a year.

## **PARTICIPATION IN COMMENCEMENT EXERCISES**

The University requires June graduates to participate in the Commencement exercises. Summer and fall graduates may participate provided they notify the Registrar's Office of their intent by mid-June at the latest by submitting the online form.

## **SUMMER SESSION**

The University may offer the opportunity to pursue graduate studies during the summer. Although graduate-level courses are offered during the summer session, the University does not guarantee that any particular course will be offered. A student may register for a maximum of six credit hours in the summer.

## **GRADUATE RESEARCH ASSISTANTSHIP POLICY**

### **I. Preamble**

In accordance with the mission, vision, core values, and strategic goals of Notre Dame University–Louaize (NDU), the present *Student Research Assistantship Policy* is set to provide NDU students at the graduate level with research opportunities that help them develop critical thinking, scholarly competence, cultural maturity, and professional experience.

### **II. Definition of a Student Research Assistantship Appointment**

A Student Research Assistantship Appointment (SRAA) is a research assignment compensated in the form of remuneration and/or tuition waiver and granted to a graduate student for his/her contribution to research activities related to his/her academic specialty and/or professional development.

### **III. Types of SRAA**

Students who qualify for a SRAA are of two types:

- *Research Assistant*: A Research Assistant is a student who is assigned research work under the supervision of a full-time faculty member from a University Faculty.
- *Research Affiliate*: A Research Affiliate is a student who is assigned research work in one of the University research centers, University libraries, or University technical units.

#### **IV. Duration of a SRAA**

- During the Fall or Spring semester, a SRAA is granted for the duration of the semester and is renewable upon need and as long as the eligibility requirements are met.
- During the summer term, a SRAA is granted for the duration of the term and is renewable upon need and as long as the eligibility requirements are met.
- A summer SRAA may exceed the duration of the summer session upon approval by the concerned Faculty Dean of a written request with justification from the research supervising body, taking into consideration the student's academic progress and the anticipated completion date of his/her degree.

#### **V. Eligibility Requirements**

The eligibility requirements for a SRAA are the following:

- The applicant is a graduate student with a minimum GPA of 3.2 after completing 6 credits; or with a GPA of 3.5 when admitted to the Graduate Program. Exceptions to this requirement must be approved by the candidate's Department Chairperson and Faculty Dean.
- In the semester/term during which the SRAA is to be effective, the applicant must be enrolled for at least six (6) credit hours and at most nine (9) credit hours during the Fall and Spring semesters, and for at least three (3) credits during the summer term. Exceptions to this requirement must be approved by the applicant's Faculty Dean upon a written request with justification from the research supervising body, taking into consideration the applicant's academic progress and the anticipated completion date of his/her degree.
- The research in which the applicant is involved must be relevant to his/her academic program.

#### **VI. Research Workload**

- The workload for a student receiving a SRAA may vary in duration and scope depending on the requirements of the research project. A SRAA, however, shall not exceed 20 hours per week.
- The workload for a student who holds an outside employment, or who benefits from another kind of assistantship, for instance teaching assistantship, shall have a restricted research workload commensurate with his/her other obligations.

#### **VII. Appointment Procedure**

- Upon announcement of SRAA availability, applications shall be submitted to the corresponding Faculty Dean by students qualifying as research students, and to the corresponding Director of a Research Center, the Director of the University Libraries, or the head officer of a technical unit, by students qualifying as research affiliates.
- Applications shall be evaluated by the concerned body supervising the research project.
- All applicants, whether appointed or not, shall be notified of the final decision.
- A SRAA form shall be prepared for the selected research student by the supervising research body. The SRAA shall detail the nature and purpose of the research project, its expected duration, the type of the appointment, the workload of the research student, and the amount of his/her remuneration. The SRAA form shall be completed prior to the effective date of appointment and submitted to the concerned Dean for final approval.

- Upon approval, the Dean shall offer to the student, on behalf of the University, a SRAA per official letter for final signature.
- The appointment procedure is completed when the SRAA is signed by the student and ratified by the signature of the President on behalf of the University.

#### **VIII. Reconsideration of a SRAA**

- A SRAA may be unilaterally revoked at any time by the supervising research body for a compelling cause, such as the unsatisfactory performance by the student of assigned duties, insubordination, poor academic performance, felony, or for any other cause of similar magnitude.
- If the supervising research body cancels a proposed research project for any reason before the end of its stated duration, the student shall receive full compensation as agreed upon in the SRAA.
- If the research student willingly terminates a SRAA, or if she/he is dismissed for cause before the end of its stated duration, the assistantship shall be cancelled automatically.
- If the research project is completed before the end of the stated duration, the remuneration shall end on the date of completion.

#### **IX. Compensation for a SRAA**

- The compensation formalities are processed through the concerned Dean and the Director of Finance for students qualifying as Research Assistants, and through the Vice-President for Sponsored Research & Development and the Director of Finance for students qualifying as Research Affiliates.
- The remuneration of research students is made on a credit-cost basis.
- The compensation for a SRAA may range between 20% and 60% of the cost of the credits.
- The compensation for a SRAA in the form of remuneration shall usually be paid in four equal installments during the Fall and Spring semesters, and in two installments during the summer term.
- The compensation for a SRAA in the form of tuition waiver shall be deducted from the student's tuition.

# **GRADUATE REGISTRATION**

## **REGISTRATION PROCESS**

A registration guide is distributed to every graduate student before the period assigned for registration. Students are advised to read the registration guide and this section of the catalog carefully. Registration involves the following steps:

### **Payment of Fees**

The first step in registration is the payment of fees. Every registrant must pay the fees in full, or make arrangement for payment two weeks before the beginning of registration. Regardless of the manner of payment, every student must clear his/her registration with the Business Office. Outstanding balances must be settled in full before a student is allowed to register. Those who fail to honor the terms of the arrangement of payment of fees will be denied the privilege of future arrangements.

### **Consultation with Academic Advisors**

Each student is assigned an academic advisor. With a proposed semester course schedule, the student proceeds to his/her advisor for consultation and the finalization of the selected courses. Students should consult with their academic advisors in the places assigned them for registration. The selection of courses is initially undertaken by the registrant himself/herself. Registration in absentia or by proxy is not permitted. Continuing students should check the course requirements as prescribed for every major, and compare them with the ones they have already completed. In the light of this comparison, they should check the course offerings for the given semester and then fill in their semester course schedules. New students must make sure that all required documents, particularly those mentioned in the letter of admission, are submitted to the Registrar's Office. They should also have in hand their letters of admission and identity cards or passports to present them to their advisors. Students should follow the steps indicated in the registration guide.

## **COURSE LOAD**

A full-time graduate student must register for twelve credits per semester. Students registered for less than twelve credits per semester are considered part-time graduate students. Graduate students cannot register for more than six credits in the Summer session.

## **AUDITING**

Students may register for courses on an auditing basis. Courses in which a student is so enrolled carry no credit but are listed in the student's transcript as audit. The fee charged by the university shall be 75% of the fee paid by regular students. Student auditors should fulfill the same admission conditions as any other regular student.

## **DISCLOSURE OF STUDENTS' RECORDS**

The University does not disclose information and academic records of any student except with his/her prior consent. Exceptions to this principle are made only in compliance with judicial orders and health or safety emergency.

## **TUITION AND FEES**

Notre Dame University is a non-profit institution. Tuition and fees paid by students represent a small percentage of the full cost of a student's education. The deficit is covered by income from gifts, grants and donations from foundations, alumni and friends of the

University. The fees cover applications, membership in National Social Security Fund (NSSF), activities, Yearbook and Student Association, and Insurance. Membership of Lebanese students in the NSSF is mandatory by law. Thus prior to registration, students are urged to follow the instructions given by the Students Affairs Office concerning the clearance for NSSF.

### **Tuition**

Tuition per Credit Hour	L.L.	515,000
Tuition/Credit Hour (Remedial)	L.L.	455,000
Auditing per Credit Hour per Semester	L.L.	75% of credit tuition

### **Fees**

Admission Application	L.L.	150,000
Entrance Examination (when applicable)	L.L.	75,000
Late Registration	L.L.	100,000
Petition	L.L.	5,000
Change of Major	L.L.	100,000
Make-up Final Examination Fee/Incomplete	L.L.	200,000
Transcript (Official Copy)	L.L.	10,000
Transcript (Student Copy)	L.L.	5,000
Library Fee/Book /Day (Late Returns)	L.L.	1,500
Graduation	L.L.	50,000
Medical Insurance	L.L.	35,000
Academic Fees	L.L.	145,000
Smart ID Card (when applicable)	L.L.	15,000.
NSSF Fees (when applicable)	L.L.	150,000

Because of the rising cost of higher education, universities are facing severe financial problems. NDU reserves the right to change tuition fees and expenses at any time without prior notice.

A student may not complete registration, graduate or receive a transcript of record until all fees are paid.

### **REFUND POLICY**

Contracts with faculty members and provisions for education are made by the University in advance for the entire year. Accordingly, if a student withdraws for justifiable reasons after final registration, refund of tuition fees will be made according to the following schedule of withdrawals:

- During drop/add period, 75% of the tuition is refunded.
- During the first week of classes, 50% of the tuition is refunded.
- Tuition is not refunded after the first week of classes.
- Refund policy does not apply during summer session. No refund of tuition is made for any withdrawal during summer session.

### **FINANCIAL SUPPORT FOR RE-ENROLLED COURSES**

Students who re-enroll, for any reason, in any course, shall not benefit from any financial support for the-enrolled courses .

## THE FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS OFFERS JOINTLY AN MBA-MIB PROGRAM WITH BORDEAUX MANAGEMENT SCHOOL.

- The program total cost amounts to USD/13,000/ paid in 14 installments according to the deadlines specified by NDU.
- The preparatory course, when applicable, costs \$500 paid according to the deadlines specified by NDU.
- Additional fees cover LBP 25,000 Smart ID Card and LBP 150,000 for membership in National Social Security Fund, which is mandatory by law for Lebanese students.

## DOCTOR OF EDUCATION (ED.D.) TUITION AND FEES

Notre Dame University offers an Ed.D. in collaboration with Saint Louis University, USA. The program is made up of 44 credit hours including two obligatory pre-requisite courses. There are two components to the settlement of tuition fees: - Saint Louis University (SLU) tuition and Notre Dame University (NDU) tuition

- SLU tuition fees will be paid directly by the student to Saint Louis University according to the deadlines specified by SLU.
- NDU tuition fees will be paid directly by the students to Notre Dame University according to the deadlines specified by NDU.

### Tuition

Tuition per Credit Hour	L.L.	565,000
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## GER, FRESHMAN PROGRAM AND DEGREES

### GENERAL EDUCATION REQUIREMENTS (GER)

A set of 27 – 33 credits in interdisciplinary courses, called General Education Requirements (GER), as a foundation for a liberal arts and basic science education. These GER shall be distributed as follows:

#### A. *Communication Skills in English and Arabic*

**9 cr.**

*English (6 cr.)*

ENL 213: Sophomore English Rhetoric

**And**

ENL 223: Communication Arts

**Or**

ENL 230: English in the Workplace

*Arabic (3 cr.) One course from:*

ARB 211: Appreciation for Arabic Literature

ARB 212: Advanced Arabic Grammar

ARB 224: Arabic Literature and Human Thought

ARB 231: Technical Arabic

ARB 317: Themes of Modern Arabic Literature in Lebanon (20th century)

**B. Philosophy and Religion**

**6 cr.**

*Religion (3 cr.)*

- REG 213: Catholicism
- REG 212: Religion and Social Issues
- REG 314: Marriage and Family in the Catholic Church
- REG 313: The Maronites: Faith and Cultural Heritage

*Philosophy + Ethics*

- PHL 211: Logic and the Scientific Method
- PHL 311: Ethics and the Modern World
- POS 345: Ethics and Leadership
- ENS 205: Environment, Society and Ethics

**C. Cultural Studies and Social Sciences**

**6 cr.**

*Cultural Studies*

- HUT 305: Human Thought to 1500
- HUT 306: Human Thought from 1500 to the Present
- MUS 210: Music Appreciation
- FAP 215: Art and Culture
- ARP 215: Cultural Themes in Lebanese Ach.
- COA 359: Media and Society
- COA 315: World Cinema Survey
- LIR 214: Introduction to Literary Genres
- NTR 215: Foods and Nutrition of World Cultures

*Social Sciences*

- PSL 201: Introduction to Psychology
- SOL 201: Introduction to Sociology
- SOL 301: Introduction to Anthropology
- BAD 201: Fundamentals of Management
- ECN 200: Survey of Economics
- ECN 211: Principles of Micro Economics
- ECN 212: Principles of Macro Economics

**D. Citizenship**

**6 cr.**

Two courses from the following pool:

- HIT 211: History of Lebanon and the Middle East
- POS 201: Introduction to Political Science
- POS 210: Government and Politics in Lebanon
- POS 240: Law and Society
- POS 319: Democracy and Human Rights
- POS 337: Dialogue of Civilizations
- IAF 301: Modern Political Ideologies

**E. Science and Technology**

**6 cr.**

*Mathematics/Statistics/Computer Science (3 cr.)*

- CSC 201: Computer and Their Use
- MAT 201: Fundamentals of Mathematics
- MAT 202: Mathematics for Arts
- MAT 204: Mathematics for Business & Eco. I
- MAT 211: Discrete Mathematics
- STA 202: Statistics for Humanities
- STA 210: Statistics for Business & Eco.

*Natural Sciences (3 cr.)*

PHS 211: Principles of Physics  
PHS 207: Development of Science and Technology  
AST 201: Discovering Astronomy  
CHM 211: Principles of Chemistry  
ENS 201: Introduction to Environmental Science  
ENS 202: Environment and Sustainable Development  
ENS 206: Ecotourism  
BIO 202: Mystery of Life  
BIO 203: Discover Biology  
HEA 201: Health Awareness  
NTR 201: Basic Human Nutrition

***F. Study and Learning Skills***

***0 cr.***

## FRESHMAN PROGRAM

1. A student entering the Freshman Program at NDU as Freshman is required to complete a minimum of 30 credits. He/She has to follow either the Arts or the Science program.
2. The Freshman Program includes courses from the following areas: (Arts and Science)
  - Humanities and Social Sciences 9crs.  
(a minimum of 3crs. in each area)
  - Natural Sciences and Mathematics 6crs.  
(a minimum of 3 crs. in Natural Sciences)
  - Freshman students cannot be considered sophomore students unless they have completed 30 crs. of Freshman courses successfully.
  - In exceptional cases, the Equivalency Committee in the Lebanese Ministry of Education will give the permission to the freshman student who misses one course or 5 credits from the freshman requirements, to register in sophomore courses, on condition he/she registers for the missing freshman course and passes it successfully
  - Freshman students cannot register in sophomore courses without having this prior authorization.
  - According to the regulations of the Lebanese Ministry of Education the above mentioned areas include the following subjects:
    - a. Humanities: Languages/Literature/Philosophy/History
    - b. Social Sciences: Psychology-Sociology-Anthropology-Economics-Geography-Business Administration-Management-Political Studies.
    - c. Natural Sciences: Biology-Chemistry-Physics-Geology-Astronomy Nutrition.
    - d. Mathematics
    - e. Computer Science
    - f. Arts: Art-Music-Drama (not to exceed 3 credits)

## DEGREES OFFERED

### Faculty of Architecture, Art and Design (FAAD)

Bachelor of Architecture .....	182 credits
Bachelor of Arts in Interior Design .....	136 credits
Bachelor of Arts in Graphic Design.....	102 credits
Bachelor of Arts in Fashion Design.....	102 credits
Bachelor of Arts in Photography .....	102 credits
Bachelor of Arts in Fine Arts.....	102 credits
Bachelor of Arts in Performing Arts.....	102 credits
Bachelor of Arts in Decorative Arts & Crafts.....	102 credits
Bachelor of Arts in Music.....	99 credits
with the following emphasis:	
<i>Musicology</i> .....	99 credits
<i>Music Education</i> .....	99 credits
<i>Musimediology</i> .....	99 credits
<i>Arabic Musicology</i> .....	99 credits
<i>Jazz Music</i> .....	99 credits
Master of Architecture in Landscape Urbanism .....	36 credits
Master of Arts in Design.....	36 credits
Master of Arts in Music .....	36 credits
Master of Arts in Fine Arts .....	36 credits

### Faculty of Business Administration and Economics (FBAE)

Bachelor of Business Administration .....	106 credits
Bachelor of Business Administration - <i>Accounting</i> .....	106 credits
Bachelor of Business Administration - <i>Banking &amp; Finance</i> .....	106 credits
Bachelor of Business Administration - <i>Economics</i> .....	106 credits
Bachelor of Business Administration - <i>Int'l Business Management</i> .....	107 credits
Bachelor of Business Administration - <i>Marketing</i> .....	106 credits
Bachelor of Business Administration .....	
With the following emphasis:	
<i>Distribution and Logistics Management</i> .....	106 credits
<i>Energy Economics</i> .....	106 credits
<i>Financial Engineering</i> .....	106 credits
<i>Health Care Management</i> .....	106 credits
<i>Human Resources Management</i> .....	106 credits
<i>Management</i> .....	106 credits
Bachelor of Hotel Management and Tourism.....	103 credits
Bachelor of Hotel Management and Tourism.....	
With the following emphasis:	
<i>Food &amp; Beverage</i> .....	103 credits
<i>Hospitality Management</i> .....	103 credits
<i>Travel &amp; Tourism Management</i> .....	103 credits
<i>Hospitality Events Management</i> .....	103 credits
Master of Business Administration (M.B.A.).....	39 credits
Master of Business Administration (M.B.A.) .....	
With the following emphasis:	
<i>Finance &amp; Economics</i> .....	39 credits
<i>Human Resources Management</i> .....	39 credits
<i>Management &amp; Marketing</i> .....	39 credits

<i>Project &amp; Operations Management</i> .....	39 credits
Master of Science in International Business (MBA-MIB) with Bordeaux Business School.....	
<b>Faculty of Engineering (FE)</b>	
Bachelor of Engineering in Civil Engineering .....	150 credits
Bachelor of Engineering in Computer and Communication Engineering .....	150 credits
Bachelor of Engineering in Electrical Engineering .....	150 credits
Bachelor of Engineering in Mechanical Engineering .....	150 credits
<b>Faculty of Humanities (FH)</b>	
Bachelor of Arts in Education .....	
With the following emphasis:	
<i>Early Childhood</i> .....	105 credits
<i>Learning Disabilities</i> .....	105 credits
<i>Education of the Gifted</i> .....	105 credits
Bachelor of Arts in Communication Arts .....	
With the following emphasis:	
<i>Radio/TV</i> .....	103 credits
<i>Journalism</i> .....	102 credits
Bachelor of Arts in Advertising & Marketing .....	102 credits
Bachelor of Arts in Psychology .....	97 credits
Bachelor of Arts in Psychology .....	
With the following emphasis:	
<i>Clinical</i> .....	97 credits
<i>Educational</i> .....	97 credits
<i>Industrial</i> .....	97 credits
Bachelor of Arts in English Language.....	102 credits
Bachelor of Arts in Translation & Interpretation.....	108 credits
With the following emphasis:	
<i>Translation</i> .....	108 credits
<i>Interpretation</i> .....	108 credits
Bachelor of Arts in Arabic Language & Literature .....	103 credits
Bachelor of Arts in Physical Education & Sport 99 credits + TD=120 credits	
Teaching Diploma in English Language .....	18 credits
Teaching Diploma in Mathematics .....	18 credits
Teaching Diploma in Elementary Education .....	21 credits
Teaching Diploma in Biology .....	18 credits
Teaching Diploma in Physical Education .....	21 credits
Teaching Diploma in Arabic Language and Literature.....	18 credits
Teaching Certificate .....	18 credits
Master of Arts in English Language & Literature .....	36 credits
With the following emphasis:	
<i>Applied Linguistics and TEFL</i> .....	36 credits
<i>Literature</i> .....	36 credits
Master of Arts in Arabic Language & Literature .....	30 credits
Master of Arts in Translation.....	36 credits
Master of Arts in Media Studies .....	39 credits
Master of Arts in Media Studies .....	
With the following emphasis:	
<i>Electronic Media</i> .....	39 credits

<i>Journalism</i> .....	39 credits
<i>Advertising</i> .....	39 credits
Master of Arts in Education .....	33 credits
Master of Arts in Education .....	
With the following emphasis:	
<i>School Leader's Options</i> .....	33 credits
Master of Arts in Psychology – Educational Psychology .....	36 credits

**Faculty of Natural and Applied Sciences (FNAS)**

Bachelor of Science in Computer Science .....	104 credits
Bachelor of Science in Computer Science	
With the following emphasis:	
<i>Computer Information Systems</i> .....	102 credits
<i>Computer Graphics and Animation</i> .....	108 credits
Bachelor of Science in Actuarial Science & Insurance .....	112 credits
Bachelor of Science in Mathematics .....	103 credits
Bachelor of Science in Biology .....	102 credits
Bachelor of Science in Environmental Science .....	104 credits
Bachelor of Science in Chemistry .....	98 credits
Bachelor of Science in Applied Statistics .....	90 credits
Bachelor of Science in Business Computing .....	91 credits
Bachelor of Science in Geographic Information Systems .....	90 credits
Bachelor of Science in Physics .....	95 credits
Master of Science in Computer Science .....	30 credits
Master of Science in Computer Science	
With the following emphasis:	
<i>Computer Information Systems</i> .....	30 credits
Master of Science in Mathematics .....	33 credits
Master of Science in Astrophysics .....	36 credits

**Faculty of Nursing and Health Sciences (FNHS)**

Bachelor of Science in Medical Laboratory Technology .....	103 credits
Bachelor of Nursing .....	105 credits
Bachelor of Science in Nutrition and Dietetics .....	94 credits

**Faculty of Political Science, Public Administration, and Diplomacy (FPSPAD)**

Bachelor of Arts in Political Science .....	105 credits
Bachelor of Arts in Political Science	
With the following emphasis:	
<i>NGOs</i> .....	105 credits
Bachelor of Arts in Political Science - <i>American Studies</i> .....	105 credits
Bachelor of Arts in Political Science - <i>Euro-Mediterranean Studies</i> .....	105 credits
Bachelor of Arts in International Affairs & Diplomacy .....	105 credits
Bachelor of Arts in Public Administration .....	105 credits
Bachelor of Arts in Public Administration	
With the following emphasis:	
<i>Criminal Justice</i> .....	105 credits
Master of Arts in Political Science .....	36 credits
Master of Arts in Political Science	
With the following emphasis:	
<i>NGOs</i> .....	36 credits
<i>Comparative Law</i> .....	36 credits

Master of Arts in International Affairs & Diplomacy .....	36 credits
Master of Arts in International Affairs & Diplomacy	
With the following emphasis:	
<i>International Law</i> .....	36 credits
Master of Arts in Public Administration .....	36 credits

**FACULTY OF  
ARCHITECTURE, ART  
AND DESIGN  
(FAAD)**

Mr. Habib Melki, *Acting Dean*

**DEPARTMENT OF ARCHITECTURE**

Dr. Jean-Pierre El Asmar, *Chairperson*

**DEPARTMENT OF DESIGN**

Mr. Nadim Matta, *Chairperson*

**DEPARTMENT OF MUSIC**

Fr. Elias Kesrouani, *Chairperson*

**DEPARTMENT OF ARTS**

Ms. Danielle Zaccour, *Coordinator*

## FACULTY DIRECTORY

### **Office of the Dean**

Yellow Building, 3rd Floor, Room HB 311  
Tel: 09–218–950/51/52 Extension 2073  
e-mail: hmelki@ndu.edu.lb  
faad@ndu.edu.lb

### **Department of Architecture**

Yellow Building, 3rd Floor, Room HB 303  
Tel: 09–218–950/51/52 Extension 2065  
e-mail: jasmar @ndu.edu.lb

### **Department of Design**

Yellow Building, 3rd Floor, Room HB 301  
Tel: 09–218–950/51/52 Extension 2064  
e-mail: nmatta@ndu.edu.lb

### **Department of Music**

Yellow Building, 3rd Floor, Room HB 346  
Tel: 09–218950/51/52 Extension 2190  
e-mail: ekesrouani@ndu.edu.lb

### **Department of Arts**

Yellow Building, 2nd Floor, Room HB 209  
Tel: 09–218–950/51/52 Extension 2058  
e-mail: dzaccour@ndu.edu.lb

# FACULTY OF ARCHITECTURE, ART AND DESIGN (FAAD)

## LIST OF FULL-TIME FACULTY MEMBERS

### Professor

*Kesrouani, Elias (Fr.)*, Diplôme de Docteur, 1989, *Musicologie*, Sorbonne Paris IV, France

### Associate Professors

*Haddad, Robert*, Master of Fine Arts, 1980, University of Pennsylvania, USA

*Younes, Farid*, Ph.D., 1997, *Aménagement*, Université de Montréal, Québec, Canada

### Assistant Professors

*El Asmar, Jean-Pierre*, Ph.D., 2008, *Sustainable Built Environment*, De Monfort University, UK

*Beyrouti, Lola*, Doctorate, 2002, *Musicology*, Université Saint-Esprit, Kaslik, Lebanon.

*Bechara, André*, Master of Arts, 2007, *Design*, Notre Dame University-Louaize, Lebanon.

*Daghfal, Graziella*, Master of Arts, 2002, *Design*, Middlesex University, UK

*Korbhawi, John*, Post-Graduate Diploma, 1977, *Advanced Typographic Design*, London College of Printing, UK

*El-Hage, Gabriel*, Doctorate, 2011, *Civil Engineering*, INSA-Toulouse University, France

*Gabriel, Nicolas*, Diplôme D'Etudes Supérieur Spécialisé, 2000, *Urbanism*, Université Libanaise, Lebanon

*Matta, Nadim*, Master of Arts, 1999, *Typographic Studies*, London Institute/London College of Printing, UK

*Melki, Habib*, Master of Architecture, 1985, Ball State University, USA

*Selwood-Choueiri, Linda*, Master of Science, 2000, *Supervision & Administration in the Visual Arts*, Parsons School of Design / Bank Street College, USA

*Voss, Jesse*, Ph D., 2008, *Architecture, Environmental-Behavior Studies*, University of Wisconsin, Milwaukee

*Zaccour, Danielle*, Diplôme d'Etudes Supérieures, 1991, *Arts Plastiques*, Académie Libanaise des Beaux-Arts, Lebanon

*Zgheib, Hani*, Doctorate of Engineeringin, *Living Environmental Studies*, 2001, Kyushu University, Japan,

### Lecturers

*Bou Jaoudeh Khoury, Karen*, Masters in Business Administration, 2006, Notre Dame University-Louaize

*Baroud, Dina*, Master of Architecture, 2007, *Landscape Urbanism*, Notre Dame University-Louaize, Lebanon

*Nasr, Noel*, Master of Arts, 2006, *Photography*, University of Kent, UK

*Khalil, Marina*, DESS Interior Design, 2003, Université Saint Esprit, Kaslik

*Samra, Kristine*, DESS, 2003, *Urban Planning*, Lebanese University

*Soghman, Jacqueline*, Master of Arts, 2007, *Graphic Design*, Savannah College of Arts & Design, Savannah, USA

### Co-Academics

*Bteich, Chady*, Master of Architecture, 2007, *Landscape Urbanism*, Notre Dame University-Louaize, Lebanon

*Majdalani, Roula*, Diplome d'Etudes Superieures, 1985, *Arts Plastiques*, Académie Libanaise des Beaux-Arts, Lebanon

*Akl, Charbel*, , B.A., 2005, *Architecture*, Notre Dame University-Louaize, Lebanon

**Staff Members**

**Younes, Janane**, Licence, 1988, *Gestion d'Entreprise*, Université Libanaise, Lebanon, *Administrative Assistant*

**Dib, Adelle**, Lauréate Technique, 1988, *Secrétaire administrative*, Collège et Lycée Technique de l'Annonciation, Lebanon, *Music Department Secretary*

**Girgis, Elsie**, B.A., 1999, *Interior Design*, Notre Dame University-Louaize, Lebanon, *Design Department Secretary*

**Sarkis, Diane**, *Secretariat*, 1976, Computer and Management College, Lebanon, *Architecture Department Secretary*

**Staff Assistants**

**El-Haddad, Nicolas**, *English Language and Computer Science Studies*, 1989, Institut de l'Essor, Sin El Fil, Lebanon, and 1997, American Lebanese Language Center, Sin El Fil, Lebanon, *Faculty Technician*

**Haddad, Liliane**, Specialization Degree, 1983, *System Analyst*, The Lebanese Establishment for Commercial Sciences, Lebanon, *Photography Lab Assistant*.

**Bassil, Edward**, *Workshop Assistant*

# FACULTY OF ARCHITECTURE, ART AND DESIGN (FAAD)

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**Acting Dean:** *Mr. Habib Melki*

**Administrative Assistant:** *Mrs. Janane Younes*

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## HISTORICAL OVERVIEW

In September 1987, NDU started its 'Visual Arts' programs with the Faculty of Humanities. During the years 1995-1998, the only two degrees in Visual Arts which we offered then; Graphic Design and Interior Design, were redesigned to provide for an international and professional (vocational) education.

Consequently, the number of enrolled students multiplied from eighty five students in the year 1995 to two hundred seventy five in 1998.

In September 1999, the Faculty of Architecture, Art and Design (FAAD) was founded. FAAD has evolved from two different Departments, Visual Arts and Architecture; and from two different Faculties, Humanities and Engineering, into a unique, growing and independent Faculty housing four Departments with their respective and varied undergraduate and graduate majors.

Today, the Faculty awards a variety of degrees along with a range of disciplines at both the undergraduate and graduate levels. Currently, the Faculty handbook lists thirteen different titles at the undergraduate and four at the graduate in addition of four minors offered in different fields. Of these, only seven bachelor degrees and two master degrees have been offered.

As a matter of fact, FAAD now comprises four departments with an enrollment of 638 students divided into:

618 undergraduates and  
20 graduates.

Also, the Faculty has employed 80 faculty members consisting of two groups: full time and part-time faculty members as well as co-academic and staff members.

Currently the Faculty is equipped with academic resources such as Smart Rooms, Design Studios, Computer Workshop (Pc and Mac Labs), Wood/Metal Workshop, Exhibition Rooms, Conference Rooms, Projects Store Room, Photography Lab, Dark Rooms, Textile and Ceramics Labs.

## Deans of the Faculty of Architecture, Art and Design

Dr. Nadim Karam 2000-2003

Dr. Shehwan Khoury (Acting Dean) 2003-2004

Dr. Assaad Eid 2004-2007

Mr. Habib Melki (Acting Dean) 2007-present

## MISSION, VISION AND VALUES

### Mission

The Faculty is committed to the ambitions of students wishing to study Architecture, Art, or Design. It seeks to attract a diverse range of students from Lebanon or the region by providing intellectually challenging the region and underpinned by scholarship, research and professional activity.

## **Vision**

The Faculty will strive to be the leading provider of professional programs in the Arts and Design and will deliver outstanding education/training programs and provide opportunities to develop high levels of creative ambitions and technical skills to enable students to play a dynamic role in continuing development. Students will learn to challenge conventional wisdom from an informed and constructive position and be encouraged to engage in self-directed approaches to the acquisition of knowledge and understanding. Supporting faculty members' involvement in research, professional practice, development of teaching and learning methodology are a must in order to establish a more scholarly and professional environment.

## **Values**

Educating our students to build their future doesn't solely rely on us providing them with the technical tools and learning material to pursue a career; on the contrary, we pride ourselves in providing guidance to help individuals discover their own vision and thus become both professional and responsible.

On-campus interaction between NDU - FAAD faculty, staff and students, is characterized by a mutual respect for long-held traditions as well as openness and acceptance of positive change and constructive criticism. One of our main values, is to foster a culturally diverse environment where everyone is treated according to their human values, regardless of religion, race, belief or gender.

We encourage our students' active involvement in environmental educational and social issues and support them in their quest to make a genuine and lasting difference in their surroundings.

Our faith is part of our identity; this is why we rely on open communication and full cooperation to insure that every one's views and beliefs are respected at NDU in general and FAAD specifically. In order to maintain a healthy yet exciting learning environment while shaping principled individuals, we cherish these values as part of our educational identity and thus promote:

- Tolerance of all human beings regardless of background.
- Cooperation between all members of NDU to ensure personal and professional growth.
- Communication of views and beliefs within a positive and responsive environment.
- Diversity and cultural exchange devoid of prejudice and judgment.

## **FACULTY PROFILE**

The overall aim is to provide a comprehensive and flexible range of programs in response to the educational and professional needs of the local community, the region, national and international demand and to secure the opportunity for personal and professional development in any of the following areas: Architecture, art or design. In more specific terms:

- To help individuals develop their creative, intellectual and technical abilities and enhance their expertise to make an informed contribution to the cultural, technological, social and economic needs of society in general.
- To foster fundamental learning and research skills coupled with an understanding of the historical, cultural, social and commercial arena within which those engaged in architecture, arts and design operate.

- To equip individuals for an array of career paths and changes in employment patterns, thus promote ingenuity, adaptability and mobility.
- To enable students at all levels to deal flexibly with varied problems and tasks and technologies.

## **OBJECTIVES**

On completion of their studies, the students are expected to:

- Be articulate, informed graduates who have knowledge and understanding of the arts and design in general and their chosen discipline in particular;
- Demonstrate the ability to think creatively, to conceptualize, plan and apply an inventive approach in resolving formal and technical issues;
- Have acquired a knowledge and understanding of materials, processes and technologies through involvement in theory and practice;
- Have developed the critical skills necessary to analyze and understand the cultural and social context of arts and design practice and an appreciation of cultural diversity;
- Demonstrate interpersonal skills and the ability to work independently or collaboratively within a group;
- Be able to effectively communicate ideas, information and argument in written, oral and visual forms;
- Have an awareness of the needs of the profession, the community and the economy and be responsive to a wide range of social and economic needs;
- Have an understanding of professional responsibility and accountability;
- Have acquired the specialist knowledge to enable effective contribution to commerce, industry or research;
- Maintain a commitment to continuing professional development and lifelong learning.

## **Departments and Programs**

The following departments and programs constitute the Faculty of Architecture, Art and Design:

Department of Architecture  
 Department of Design  
 Department of Music  
 Department of Arts

## **Degrees**

The Department of Architecture offers an undergraduate program leading to the degree of:

Bachelor of Architecture (182 credits)

and a graduate program leading to the degree of:

Master of Architecture in Landscape Urbanism (36 credits)

The Department of Design offers undergraduate programs leading to the degrees of:

BA in Graphic Design (102 credits)

BA in Interior Design (136 credits)

BA in Fashion Design (102 credits)

BA in Photography (102 credits)

And a graduate program leading to the degree of:

Master of Arts in Design (36 credits)

And Minors in the following fields:

Minor in Graphic Design (18 credits)

Minor in Photography (18 credits)

The Department of Music offers undergraduate programs leading to the degree of:

BA in Music and Musicology

- Musicology emphasis (99 credits)
- Music Education emphasis (99 credits)
- Musimedialogy emphasis (99 credits)
- Arabic Musicology emphasis (99 credits)
- Jazz Music emphasis (99 credits)

And a graduate program leading to the degree of:

Master of Arts in Music (36 credits)

And a minor in Jazz (15 credits)

The Department of Arts offers undergraduate programs leading to the degrees of:

BA in Fine Arts (102 credits)

BA in Performing Arts (102 credits)

BA in Decorative Arts and Crafts (102 credits) And a graduate program leading to the degree of:

Master of Arts in Fine Arts (36 credits) And a Minor in Fine Arts (15 credits)

**Departmental Admission Requirements:**

In addition to the University admission requirements, prospective candidates must complete any remedial course(s) the first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to their bachelor degree in the Faculty of Architecture, Art and Design.

## DEPARTMENT OF ARCHITECTURE

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**Chairperson:** *Dr. Jean-Pierre El Asmar*

**Secretary:** *Mrs. Diane Sarkis*

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### **Associate Professor**

*Younes, Farid*, Ph.D., 1997, *Aménagement*, Université de Montréal, Québec, Canada

### **Assistant Professor**

*El Asmar, Jean-Pierre*, Ph.D., 2008, *Sustainable Built Environment*, De Monfort University, UK

*El-Hage, Gabriel*, Doctorate, 2011, *Civil Engineering*, INSA-Toulouse University, France  
*Gabriel, Nicolas*, Diplôme D'Etudes Supérieur Spécialisé, 2000, *Urbanism*, Université Libanaise, Lebanon

*Melki, Habib*, Master of Architecture, 1985, Ball State University, USA

*Voss, Jesse*, Ph D., 2008, *Architecture, Environmental-Behavior Studies*, University of Wisconsin, Milwaukee

*Zgheib, Hani*, Doctorate of Engineering *Living Environmental Studies*, 2001, Kyushu University, Japan

### **Lecturers**

*Bou Jaoudeh Khoury, Karen*, Master in Business Administration, 2006 Notre Dame University-Louaize

*Baroud, Dina*, Master of Architecture, 2007, *Landscape Urbanism*, Notre Dame University-Louaize, Lebanon

*Samra, Kristine*, DESS, 2003, *Urban Planning*, Lebanese University

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## **The Degree of Bachelor of Architecture**

### **Program Description**

The BArch (Bachelor of Architecture) program, offered by the Department of Architecture of the FAAD, aims at:

- Providing the learner with the proper exposure to enhance reflective approach to design and foster students' critical thinking.
- Developing the intellectual and theoretical backgrounds of the students through the study of ancient, modern and contemporary history and theories of architecture.
- Increasing student's awareness with respect to environmental and social issues. This concern mainly focuses on the interrelated influence between the human being, the society, and architecture.
- Contributing in building-up an architectural epistemology.
- Preparing the learner for professional practice and post-graduate studies.

### **Admission Requirements**

In addition to the University admission requirements, prospective candidates must complete all remedial courses, Math and/or English, if any, during their first year at NDU. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Architecture and other majors of the Faculty of Architecture, Art & Design.

### **Graduation Requirements**

To obtain the degree of bachelor of architecture, a student must complete a total of 182 credits with an overall grade-point average of at least 2.0/4.0 and a minimum cumulative grade point average of 2.3/4.0 in the Core and Major requirements. In addition, all major

courses must be successfully completed with a minimum grade of C- . In addition, all Architectural Design courses (ARP 311, 322, 433, 444, 555, 556, 590, 591, and 593) must be successfully completed with a minimum grade of C+.

Prior to enrolling into the ARP 590-Senior Study courses, student will have to fulfil the following requirements:

A minimum of 21 credits of their GERs must be completed prior to taking ARP 590.

Prerequisites: ARP 438, ARP 552, ARP 556, ARP 557, ARP 562

Students must have a minimum of 2.3 (C+) GPA in their cumulative major courses.

Courses CSC 201, MAT 201 and MAT 202 are not allowed for Architecture students.

These 182 credits are divided into:

### **Degree Requirements (182 credits)**

#### **General Education Requirements 27 cr.**

The GER are distributed as follows:

Communication Skills in English: ENL 213 & ENL 223 or ENL 230 6 cr.

Communication Skills in Arabic, One course from: 3 cr.

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

Religion, One course from: 3 cr.

REG 212, REG 213, REG 314, REG 313

Philosophy, One course from: 3 cr.

PHL 211, PHL 311, POS 345, ENS 205

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, BAD 201, ECN 200, ARP 215, COA 359, COA 315, NTR 215, ECN 211, ECN 212

Citizenship, one course from: 3 cr.

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

Science and Technology, one course from : 3 cr.

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207

*CSC 201, MAT 201, and MAT 202 courses should not be taken by Architecture students*

#### **Core Requirements 6 cr.**

FAP 211, GDP 212

#### **Major Requirements 143 cr.**

ARP 221, ARP 222, ARP 223, ARP 224, ARP 225, ARP 226, ARP 233, ARP 301, ARP 311, ARP 313, ARP 316, ARP 317, ARP 322, ARP 324, ARP 325, ARP 327, ARP 328, ARP 424, ARP 425, ARP 433, ARP 434, ARP 435, ARP 438, ARP 444, ARP 446, ARP 551, ARP 552, ARP 553, ARP 554, ARP 555, ARP 556, ARP 557, ARP 561, ARP 562, ARP 563, ARP 568, ARP 590, ARP 591, ARP 593

Choose one course from the following Electives I: ARP 564, ARP 565, ARP 566,

ARP 567, ARP 568, ARP 569

Choose two courses from the following Electives II: ARP 422, ARP 423, ARP 439, ARP 581, ARP 582, ARP 583, ARP 584, ARP 585, ARP 586

**Free Electives**

**6 cr.**

**Bachelor of Architecture**  
**Suggested Program (182 Credits)**

**Year I**

**Fall Semester I (15 Credits)**

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.
ARP	223	Descriptive Geometry	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

ARP	221	Architectural Sketching and Rendering	3 cr.
ARP	222	Principles of Architectural Design	3 cr.
ARP	225	Statics of Architecture	3 cr.
ARP	226	Technical Drawing I	3 cr.
—	—	GER	3 cr.

**Summer Session I (8 Credits)**

ARP	233	3D Architectural Survey	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II:**

**Fall Semester II (17 Credits)**

ARP	311	Architectural Design I	5 cr.
ARP	301	Technical Drawing II	3 cr.
ARP	313	History of Architecture I	3 cr.
ARP	317	Building Technology I	3 cr.
ARP	316	Strength of Materials	3 cr.

**Spring Semester II (17 Credits)**

ARP	322	Architectural Design II	5 cr.
ARP	324	History of Architecture II	3 cr.
ARP	328	Building Technology II	3 cr.
ARP	224	Applied Architectural Design I	3 cr.
ARP	327	Structural Analysis	3 cr.

**Summer Session II (6 Credits)**

—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Year III:**

**Fall Semester III (18 Credits)**

ARP	433	Architectural Design III	6 cr.
ARP	435	History of Architecture III	3 cr.
ARP	438	Reinforced Concrete Design	3 cr.
ARP	434	Electrical and Mechanical Systems	3 cr.
ARP	325	Applied Architectural Design II	3 cr.

**Spring Semester III (18 Credits)**

ARP	444	Architectural Design IV	6 cr.
ARP	446	History of Architecture IV	3 cr.
ARP	424	Bio-climatic Architecture	3 cr.
ARP	551	Construction Detailing Studio I	3 cr.
—	—	GER	3 cr.

**Summer Semester III (9 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Year IV:****Fall Semester IV (18 Credits)**

ARP	555	Architectural Design V	6 cr.
ARP	557	Architectural Theories	3 cr.
ARP	552	Construction Detailing Studio II	3 cr.
ARP	561	Urbanism I	3 cr.
ARP	563	Building Rules and Regulations	3 cr.

**Spring Semester IV (15 Credits)**

ARP	556	Architectural Design VI	6 cr.
ARP	554	Surveying and Field Surveying	3 cr.
ARP	562	Urbanism II	3 cr.
ARP	568	Social Architecture	3 cr.

**Summer Session IV (6 Credits)**

ARP	590	Senior Study	2 cr.
ARP	425	Architectural Practice	2 cr.
ARP	58	Major Elective II	2 cr.

**Year V:****Fall Semester V (12 Credits)**

ARP	591	Senior Project I	6 cr.
ARP	553	Specifications & Quantity Surveying	3 cr.
ARP	56	Major Elective I	3 cr.

**Spring Semester V (8 Credits)**

ARP	593	Senior Project II	6 cr.
ARP	58	Major Elective II	2 cr.

**Old/New Courses Equivalent or Substitute**

Old Course			New Course (equivalent)		
CSC 273	Computer Aided Architectural D.	3cr.	ARP 224	Applied Architecture Design I	3cr.
CSC 274	Software Package for Architects I	3cr.	ARP 325	Applied Architecture Design II	3cr.
CEN 308	Statics for Architects	3cr.	ARP 225	Statics for Architecture	3cr.
CEN 309	Mechanics of Materials for A.	3cr.	ARP 316	Strength of Materials	3cr.
CEN 419	Structures for Architects	3cr.	ARP 327	Structural Analysis	3cr.
CEN 439	Concrete Design for Architects	3cr.	ARP 438	Reinforced Concrete Design	3cr.
ARP 421	Architectural Model Making	2cr.	ARP 233	3D Architectural Survey	2cr.
FAP 221	Drawing II	3cr.	ARP 221	Architectural Sketching & Rendering	3cr.
GDP 222	Design Principles II	3cr.	ARP 222	Principles of Architectural Design	3cr.
ARP 213	Basic Technical Skills	3 cr.	ARP 226	Technical Drawing I	3cr.
Old Course			New Course (Substitution)		
MAT 213	Calculus 3	3cr.	ARP 568	Social Architecture	3cr.
PHS 203	General Physics	3cr.	ARP 424	Bioclimatic Architecture	3cr.
GEO 202	Geology for Architects	2cr.	ARP 425	Architectural Practice	2cr.

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## Undergraduate Courses: Architecture

**ARP 213 Basic Technical Skills (2.2); 3 cr.** Using different art tools, devices and materials. Preparing and presenting a portfolio.

**ARP 215 Cultural Themes in Lebanese Architecture (3.0); 3 cr.** Initiation to the Lebanese Art and Architecture pointing toward the conceptual determinants and constants omnipresent in the Lebanese Culture. A historical overview showing the morphological development through time.

**ARP 221 Architectural Sketching and Rendering (2.2); 3 cr.** The aim is to develop abilities in observation of the physical environment in a methodical and analytical manner. The skills are to be obtained through free hand sketching and sketch-measuring using different media. *Prerequisite:* FAP 211.

**ARP 222 Principles of Architectural Design (2.2); 3 cr.** It is a continuation of GDP 212 with an emphasis on applying three dimensional design principles on architectural settings. The dynamics of motion, light, form, and space are also explored via readings and workshops. Another major topic of this course is the Spatial Analysis of natural and man-made environment and their graphical representation through Bubble diagrams, Site and Area analysis, photography, etc. *Prerequisite:* GDP 212.

**ARP 223 Descriptive Geometry (2.2); 3 cr.** Study of geometric projections in space. Emphasis on volumetric development, shade and shadow construction.

**ARP 224 Applied Architectural Design I (1.4); 3 cr.** The application of computer aided design (CAD) concepts in developing and communicating architectural ideas and projects.

**ARP 225 Statics for Architecture (3.0); 3 cr.** Study of forces, moments and couples; free body diagrams; shear and bending moment diagram; centroids; moments of inertia; problems involving beams, trusses, and frames.

**ARP 226 Technical Drawing I (2.2); 3 cr.** The course is a studio based course. It aims at the development of students' graphic communication skills. Students will learn 2D as well as 3D techniques of drafting to describe objects of the man made and natural environment. The focus will be on survey of architecture, drafting to scale and rendering

techniques, as well as professional sheet layout. *Prerequisite:* ARP 223

**ARP 233 3D Architectural Survey (1.2); 2 cr.** The objective of this course is to help students understand deeply and experiment why and how to construct architectural models of different scale and different kinds of materials. Students will plan and do research on the use, detail, budget, and techniques before starting construction.

**ARP 301 Technical Drawing II (2.2.); 3 cr.** A continuation of Technical Drawing I, with an emphasis on perspective as a powerful visualization tool for the Architect. The course covers the mechanical construction method same as One, Two and, Three vanishing points perspective. It also introduces the study of shadows (different light directions) and reflections in perspective. *Prerequisite:* ARP 226.

**ARP 311 Architectural Design I (3.4); 5 cr.** This course is the first in a sequential series of design courses. The main purpose of Architectural Design I is to acquaint student with basic Architectural problems, through the analysis of context and precedents. *Prerequisites:* ARP 222, ARP 226.

**ARP 313 History of Architecture I (3.0); 3 cr.** The main objectives of studying History of Architecture are the studying of the genesis of the aesthetic phenomena with respect to the human needs and understanding the development, the evolution, the impact of different ideologies, the sequence and the innovations in Architecture through history pertaining to the "spirit of time". The History of Architecture I is a survey and analysis of the architectural production of antiquity: Prehistoric Architecture; Architecture of Egypt; Architecture of the Ancient Near East; Architecture of Greece; Architecture of the Hellenistic Kingdoms.

**ARP 316 Strength of Materials (3.0); 3 cr.** Study of materials' allowable constants; normal stresses due to axial loads and bending moments; shear stresses due to torque and shear; combined stresses; buckling of columns; discussion on real life examples. *Prerequisite:* ARP 225.

**ARP 317 Building Technology I (2.2); 3 cr.** A technical and cultural preparation, aiming at

assisting the student in resolving technological problems in the design phase and an appropriate use of the different materials in building construction.

**ARP 322 Architectural Design II (3.4); 5 cr.** A continuation of Architectural Design I. The understanding of environmental and residential design principles will be dealt with. Students are exposed to projects that will deal with tackling the appropriate methods in exploring and evaluating the different aspects of the design field. *Prerequisite:* ARP 311.

**ARP 324 History of Architecture II (3.0); 3 cr.** Continuation of History of Architecture I, the course covers the development of architecture from the 4th century BC to the 12th century AD. It covers the Architecture of Etruscans, Republican Rome and the Roman Empire; the Early Christian and the Byzantine Empire; the Early Mediaeval and Romanesque and the Architecture of Islam. *Prerequisite:* ARP 313.

**ARP 325 Applied Architectural Design II (1.4) 3 cr.** The application of 3D studio VIZ creating complex 3D representations, rendering and animation. *Prerequisite:* ARP224.

**ARP 327 Structural Analysis (3.0); 3 cr.** Analysis of structurally determinate and indeterminate structures; moving load structures, and approximate methods; modeling and analysis of structures; deflection of beams; discussion on real life examples. *Prerequisite:* ARP 316.

**ARP 328 Building Technology II (2.2); 3 cr.** The course closes with the learning and application of the technologies of building construction, aiming to assist students in the execution project. *Prerequisite:* ARP 317.

**ARP 422 Lighting Design and Electrical Systems (1.2); 2 cr.** Types of artificial light sources and the human eye. Production, measurement and control of light. Design of lighting systems. Electrical requirements and distribution in buildings and related execution problems. *Prerequisite:* ARP 328.

**ARP 423 Acoustics (1.2); 2 cr.** Analysis, design and detailing of acoustical factors influencing spaces and building design. *Prerequisite:* ARP 328.

**ARP 424 Bio-climatic Architecture (2.2); 3 cr.** Understanding of environmental aspects in Architectural Design and the focus on energy

efficiency from the concept to the detailing stages concluded with market investigations that permit the evaluation and use of local materials. *Prerequisite:* ARP 328.

**ARP 425 Architectural Practice (1.2); 2 cr.** A supervised internship and lectures dealing with: business correspondence, building up the corporate image of the firm, dealing with tender bids and offers, duties, responsibilities, and fees of the different phases of a project. *Prerequisites:* ARP 328, ARP 552.

**ARP 433 Architectural Design III (3.6); 6 cr.** A continuation of Architectural Design II. This course deals with the contextual peculiarities of an existing structure (a traditional house, an industrial or / and an urban wasteland...etc.). It surveys, analyzes its morphological components, and proposes new destinations. *Prerequisite:* ARP 322.

**ARP 434 Electrical and Mechanical Systems (2.2); 3 cr.** Preliminary analysis, estimation, and design consideration, of building electrical and mechanical systems, to assist students in the execution project. Electricity and lighting; water distribution; drainage; heating; ventilating; and air-conditioning (HVAC) are the systems included in this course. *Prerequisite:* ARP 328.

**ARP 435 History of Architecture III (3.0); 3 cr.** Continuation of History of Architecture II, from the 12th century to the mid-17th century. It covers the Gothic Architecture and The Renaissance Period. *Prerequisite:* ARP 324.

**ARP 438 Reinforced Concrete Design (3.0); 3 cr.** Behavior of reinforced concrete; ultimate strength design method; studying the concrete structural elements; design of beams for flexure and shear, one-way and introduction to two-way slabs, footings, and short columns. Analysis methods of concrete frames. Application design project of a multi-storey building. *Prerequisite:* 327.

**ARP 439 Mechanical and Sanitary Systems (2.2); 3 cr.** The physiological and environmental aspects of heating, ventilation and air conditioning; comfort tables and charts. Estimating heating and cooling loads and the choice of appropriate systems. The choice and design of water distribution and plumbing systems. Problems encountered with such installations on site. *Prerequisite:* ARP 328.

**ARP 444 Architectural Design IV (3.6); 6 cr.** A continuation of the precedent Architectural Design courses, with an emphasis on the

implementation of building codes and regulations on complex architectural settings in urban contexts. The chosen projects shall be more of a residential, public, and administrative nature. *Prerequisite:* ARP 433.

**ARP 446 History of Architecture IV (3.0); 3 cr.** Continuation of History of Architecture III, to cover the architecture from the mid-17th century to the mid 19th century. It covers The Baroque and the Rococo architecture. *Prerequisite:* ARP 435.

**ARP 551 Construction Detailing Studio I (2.2); 3 cr.** This course is meant to acquaint the student with the elaboration of professional construction document of architectural projects, and the adaptation of standard construction details to various architectural contexts. *Prerequisite:* ARP 328.

**ARP 552 Construction Detailing Studio II (2.2); 3 cr.** A continuation of Construction Detailing Studio I, with an emphasis on detail problem solving. Students are expected to develop further their architectural designs to reach the final stage of construction documents. *Prerequisite:* ARP 551.

**ARP 553 Specifications and Quantity Surveying (3.0); 3 cr.** Specifications and tender documents writing. The sources and the methods of classification for subsequent use. Practice projects. *Prerequisite:* ARP 552.

**ARP 554 Surveying and Field Surveying (2.2); 3 cr.** Surveying and instrumentation; introduction to optical, photographic, mathematical, and geometrical principles relevant to photogrammetry and remote sensing; introduction to global positioning system. Field plane surveying; topographic mapping; location survey and route surveying.

**ARP 555 Architectural Design V (3.6); 6 cr.** Continuation of Design IV dealing with more complex aspects of the built environment. It initiate students to the “scientific” research by admitting only obviousness (evidences) and theories in the different disciplines. *Prerequisite:* ARP 444.

**ARP 556 Architectural Design VI (3.6); 6 cr.** This course figures out the developing of the critical thinking and analyzing “objectively” of an Environmental Design issue; Sensibilization to the contextual demand of our society; Application of the different architectural paradigm and methodological conceptualization;

The concretization into a well developed architectural expression. The Implementation of a realistic contextual site as well as basic determinant constraints (laws, environment, etc.). *Prerequisite:* ARP 555.

**ARP 557 Architectural Theories (3.0); 3 cr.** Survey of architectural theories as stated by architects, historians, and architectural critics. The main objectives of this course are to have a global view on the different schools of thought in architecture and to heighten the student’s awareness of the various interpretations of the architectural paradigm as well as to the evolution of theories in architecture; *Prerequisite:* ARP 446.

**ARP 561 Urbanism I (3.0); 3 cr.** A survey of urban morphology in terms of characteristic phases of development with emphasis on environmental, cultural and economic factors governing urban growth. *Prerequisite:* ARP 444.

**ARP 562 Urbanism II (2.2); 3 cr.** A survey of different basic approaches to urban and city planning present and past. A comprehensive and critical survey of urban planning in Lebanon. *Prerequisite:* ARP 561.

**ARP 563 Building Rules & Regulations (3.0); 3 cr.** Professional code of ethics for the practice of the profession. The moral and legal responsibilities of the architect towards the executed project and concerned parties. A survey of construction building codes and a study of the Lebanese construction laws. (taught in Arabic).

**ARP 564 Restoration of Monuments (2.2); 3 cr.** The purpose of this course is to prepare the students for restoration projects, having professional characteristics, on a building which will be freely chosen by themselves. *Prerequisites:* ARP 226, ARP 435.

**ARP 565 Landscape Architecture (2.2); 3 cr.** Theory and principles of design and problem solving processes as applied to fundamentals of design form in the landscape. *Prerequisites:* ARP 226, ARP 446.

**ARP 566 Basic Industrial Design (2.2); 3 cr.** Introduction to the theories, methods and practices of industrial design with primary emphasis on basic visual language and visual encoding practices. *Prerequisite:* ARP 226.

**ARP 567 Archaeology (2.2); 3 cr.** Studying the cultural heritage and rediscovering human

experience since its origin to the present. It focuses on the archaeology of Lebanon: Its history, artifact recording or ethnographic data, composition and description. *Prerequisites:* ARP 226, ARP 435.

**ARP 568 Social Architecture (3.0); 3 cr.** The course aims at initiating students to the research in sociology; to give a comprehensive overview of the contribution of the behavioral sciences to architectural theory; to present generalizations on what the built environment affords people and a set of concepts for understanding the relationship between architecture and human behavior. *Prerequisite:* ARP 446.

**ARP 569 Project Planning and Management (3.0); 3 cr.** This course focuses on providing an overall understanding of the project development. The course tackles: Theoretical frameworks and tools; quantitative methods and process used in analyzing project investment decisions; case studies. Project scope definition, phasing, scheduling, and control method. *Prerequisite:* ARP 552.

**ARP 581 Seminar I (2.0); 2 cr.** Lectures and conferences held by visiting instructors.

**ARP 582 Seminar II (2.0); 2 cr.** Lectures and conferences held by visiting instructors.

**ARP 583 Design Theory (2.0); 2 cr.** Some recent examples include virtual and dynamic environments. The architecture of professional architects housing and modernity, 20th Century Design.

**ARP 584 Topics in Oriental Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of oriental architects and buildings.

**ARP 585 Topics in Japanese Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of Japanese architects and buildings.

**ARP 586 Topics in Lebanese Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of Lebanese architects and buildings.

**ARP 590 Senior Study (2.0); 2 cr.** An introduction to the senior design courses that allows students to choose and justify their final senior project. *Prerequisites:* ARP 552, ARP 556, ARP 557, ARP 438, ARP 562.

**ARP 591 Senior Project I (4.4); 6 cr.** The course involves a research that includes a theoretical and philosophical thought defining the problematic or situational aspect of the theme and the aim; specifying the hypothesis/concepts and justifying the *raison d'être* of the project. In respect to the theoretical thought, the conceptualization and “operationalization” of the hypothesis into concepts, dimensions and indicators, leads to the embryonic aspect of the proposed project. *Prerequisite:* ARP 590.

**ARP 593 Senior Project II (3.6); 6cr.** This Final senior course proposes a complete and comprehensive development of the project in which the relevance to the thesis presented in Senior Project-I should be demonstrated graphically. A complete set of drawings models, photographs, and recordings must be finalized by the student under the supervision of an advisor and collaborators. *Prerequisite:* ARP 591.

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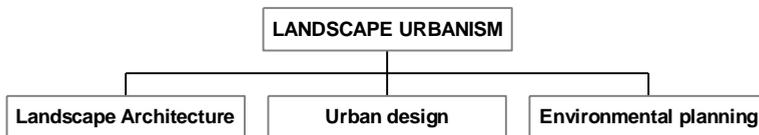
## The Degree of Master of Architecture in Landscape Urbanism

Boundaries between environmental design disciplines are getting blurred. Increasingly, landscape architecture is being explored from different perspectives pertaining to art, architecture, urbanism, ecology, and technology. As such, it is perceived as an architectural incorporation of nature, an investigation in regional ecologies, an experimental field for installation artists, or as a means for reinforcing regional and urban identities. Hence, landscape architecture is losing its narrow definition as a professional field concerned with designing gardens and urban open spaces. It is widening its scope to embrace contemporary environmental problems and philosophical debates about the evolving attitudes towards nature, design, cities and their interface.

In response to this inclusive attitude toward the environment, this program opens a new perspective for graduate studies bridging the gap between art, architecture, landscape architecture and urbanism. It provides new graduate students as well as experienced professionals the opportunity to explore and to learn to manage emerging and pressing issues related to environmental conservation and sustainable development. As such the program aims at educating professionals and researchers who are able to respond to the need of ministries, international agencies as well as private developers and consulting offices in devising a culturally-appropriate approach to environmental planning and in formulating landscape and urban design strategies at urban, metropolitan and regional scales. It also encourages aesthetic exploration by individual artists, architects and landscape designers who prefer to follow their own itinerary in professional or research work.

### Structure

The courses are organized around three areas of concentration: Landscape Architecture, Urban Design, and Environmental Planning. Specific requirements depend on the interest of the student and the recommendations of the advisor of the department.



During the first semester, the student is exposed to the breadth of the program through a series of intensive introductory lecture-workshop courses covering the wide range of theories, methods and issues underlying the three areas of concentration. Starting from the second semester, the student will start focusing on a specialization area that will guide his selection of elective courses as well as his disciplinary focus within the required studio and core courses. The program provides the added flexibility of opting for a design-oriented course of study leading to a professional project thesis or for a research-oriented course of study leading to a written thesis with high analysis content.

### Admission Requirements

In addition to the University admission requirements for graduate students, the candidate must submit a portfolio of work for assessment and schedule an interview with Master of Landscape Urbanism (MLU) senior faculty.

In addition, applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

In order to be accepted into the program, the students must take a minimum of 6 credits per semester as a part-time candidate and 9 credits as a full-time candidate.

Students applying with a bachelor degree outside of architecture should fulfill the undergraduate requirements of the university admission policy. Students with a degree from FAAD other than architecture will have to consult with MLU senior faculty.

**Graduation Requirements**

Students seeking the degree of MLU must meet the university graduation requirements and complete 36 credits with a cumulative average of at least 3.0/4.0.

**Degree Requirements  
(36 credits)**

**Core Courses** **30 cr.**  
 MLU 615, MLU 616, MLU 617, MLU 623/MLU 624, MLU 625/MLU 626,  
 MLU635, MLU636, MLU645

**Major Electives** **6 cr**

**Master of Landscape Urbanism  
Suggested Program (36 Credits)**

**Year I**

**Fall Semester (9 Credits)**

MLU	615	Ecological Foundations of Landscape Urbanism	3cr.
MLU	616	Aesthetic Foundations of Landscape Urbanism	3cr.
MLU	617	Landscape Informatics	3cr.

**Spring Semester (9 Credits)**

MLU	623	Cultural foundations of Landscape Urbanism	3cr.
or			
MLU	624	The coastal environment	
MLU	625	Generative landscapes	3cr.
or			
MLU	626	Policy and implementation in landscape urbanism	
—	—	Major Elective	3cr.

**Year II**

**Fall Semester (9 Credits)**

MLU	635	Workshop in Landscape Urbanism	6 cr.
MLU	636	Thesis Seminar	3 cr.

**Spring Semester (9 Credits)**

MLU	645	Thesis	6 cr.
—	—	Major elective	3 cr.

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## Graduate Courses: Landscape Urbanism

**MLU 615 Ecological foundations of Landscape Urbanism (2.2); 3 cr.** Combined lecture-workshop on the principles and practice of ecological design and planning with emphasis on the local and regional context.

**MLU 616 Aesthetic foundations of Landscape Urbanism (2.2); 3 cr.** Combined lecture-workshop course on the perceptual and spatial structures of landscapes as analytical and design tools.

**MLU 617 Landscape informatics (2.2); 3 cr.** The use of digital tools for terrain mapping and analysis, as well as landscape modeling and visualization.

**MLU 623 Cultural foundations of Landscape Urbanism (2.2); 3 cr.** Combined lecture-workshop course on the cultural identity of urban and metropolitan landscapes addressing their formative process and their underlying ideological, socio-economical and spatial dialectics. *Prerequisites:* MLU615, MLU 616

**MLU 624 The coastal environment (3.0); 3 cr.** The impact of urbanization on the coastal zone in the Mediterranean, regional and local contexts and the dialectics of development and conservation.

**MLU 625 Generative landscapes (3.0); 3 cr.** Exploration of landscape typologies, natural and man-made, that epitomize the various social and political orders through history.

**MLU 626 Policy and implementation in landscape urbanism (3.0); 3 cr.** The legislative foundations of environmental design and planning with identification of public and private sector stakeholders and the alternative approaches for policy implementation.

**MLU 627 Open space art: from statues to installations (2.2); 3 cr.** The historical and contemporary approaches to natural landscapes and public open spaces by artists and environmental designers, and the emerging trends on the international and local levels.

**MLU 628 Emerging International Issues in Landscape Urbanism (3.0); 3 cr.** A seminar in which international topics of current relevance to practice and critical thinking in environmental planning, urban design and landscape architecture will be explored. The course content will change each semester to maintain currency within the professions.

**MLU 629 Emerging regional and national Issues in Landscape Urbanism (3.0); 3 cr.** A seminar in which local and regional topics of current relevance to practice and critical thinking in environmental planning, urban design and landscape architecture will be explored. The course content will change each semester to maintain currency within the professions.

**MLU 635 Workshop in Landscape Urbanism (2.8); 6 cr.** Key development and conservation issues explored through the perspectives of environmental planning, urban design and landscape architecture. *Prerequisites:* MLU615, MLU 616, MLU 617.

**MLU 636 Thesis Seminar (2.2); 3 cr.** Preparation for final project/research thesis including an initial stage of data gathering and analysis leading to research proposal. *Prerequisite:* MLU 635.

**MLU 645 Thesis (4.4); 6 cr.** Supervised dissertation work in the form of a professional project or written thesis.

## DEPARTMENT OF DESIGN

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**Chairperson:** *Mr. Nadim Matta*

**Secretary:** *Mrs. Elsie Girgis*

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### **Associate Professor**

**Haddad, Robert**, Master of Fine Arts, 1980, University of Pennsylvania, USA

### **Assistant Professors**

**Bechara, André**, Master of Arts, 2007, *Design*, Notre Dame University-Louaize, Lebanon

**Daghfal, Graziella**, Master of Arts, 2002, *Design*, Middlesex University, UK

**Kortbawi, John**, Post-Graduate Diploma, 1977, *Advanced Typographic Design*, London College of Printing, UK

**Matta, Nadim**, Master of Arts, 1999, *Typographic Studies*, London Institute / London College of Printing, UK

**Selwood-Choueiri, Linda**, Master of Science, 2000, *Supervision & Administration in the Visual Arts*, Parsons School of Design / Bank Street College, USA

**Zaccour, Danielle**, Diplôme d'Etudes Supérieures, 1991, *Arts Plastiques*, Académie Libanaise des Beaux-Arts, Lebanon

### **Lecturers**

**Soghman, Jacqueline**, Master of Arts, 2007, *Graphic Design*, Savannah College of Arts & Design, Savannah, USA

**Khalil, Marina**, DESS, 2003, *Interior Design*, Université Saint Esprit, Kaslik

**Nasr, Noel**, Master of Arts, 2006, *Photography*, University of Kent, UK

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### **Goals**

The Department of Design provides an undergraduate degree which stresses the educational needs of a professional designer in a comprehensive and flexible manner.

The Department of Design actively contributes to the University as well as to local, national, and international industries through its scholarly and creative activities, educational programs, and service efforts.

The BA programs offered by the Department of Design will enable students to:

- Communicate as professional designers with clients, audience and industries, utilizing various forms of messages while maintaining personal and professional integrity.
- Critically assess designs through research and reflection while respecting both moral and ethical issues in cultural and social contexts of local, regional or global environments.
- Embrace the dynamic design process that reflects creativity in producing innovative and effective solutions.
- Understand and respond to a client's needs by following a design process which analyzes a problem, proposes a hypothesis and synthesizes relevant findings before designing possible solutions.
- Demonstrate flexibility while applying various theories from historical movements or schools of thought to support the generation of conceptual and contextual solutions.

## **Degrees**

The Department of Design is currently offering four undergraduate degrees:

- Bachelor of Arts in Graphic Design
- Bachelor of Arts in Interior Design
- Bachelor of Arts in Fashion Design
- Bachelor of Arts in Photography

The Department of Design offers a graduate degree:

- Master of Arts in Design

And Minors in

- Photography
- Graphic Design

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## **The Degree of Bachelor of Arts in Graphic Design**

### **Program Description**

Graphic Design is a creative and analytical process that integrates design and technology to communicate ideas and information from a client to an audience. The primary goal of the Graphic Design curriculum is to educate students to become innovators and leaders in print and screen related areas of professional practice.

Furthermore, the Graphic Design program encourages exploration through problem solving methodologies, innovative investigations, and creative research in all forms of communication. The program is dedicated to excellence in teaching, academic and creative research and professional practice.

The BA program aims to educate graphic designers through focusing on creative and intellectual thinking, awareness of individual, social and cultural issues in a global context, the integration of new technology and the concern for ethical implications and the natural environment.

The Bachelor of Arts Degree in Graphic Design is a 3 year full-time program of 102 credits. The students will choose from three concentration areas: Typographic Design, Multimedia Design, or Information Design.

### **Admission Requirements:**

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s) the first year of enrollement. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Graphic Design and other majors in the Design Department of the Faculty of Architecture, Art & Design.

### **Graduation Requirements:**

To receive the degree of Bachelor of Arts in Graphic Design, a student must complete a total of 102 credits with an overall grade-point average of at least 2.0/4.0 and a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. All major courses with a grade of less than C- must be repeated. The 102 credits necessary for graduation are divided as follows:

## **Degree Requirements (102 credits)**

### **General Education Requirements (GER): 30 cr.**

The GER are distributed as follows:

Communication Skills in English: ENL 213 & ENL 223 or ENL 230 6 cr

Communication Skills in Arabic: One course from ARB 211, ARB 212, ARB 224, ARB 231, ARB 317 3 cr.

Religion: One course from REG 212, REG 213, REG 314, REG 313 3 cr.

Philosophy: One course from PHL 211, PHL 311, POS 345, ENS 205 3 cr.

Cultural Studies: Two courses from HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212 6 cr.

Citizenship: One course from HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337 3 cr.

Science and Technology: Two courses from AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207 6 cr.

### **Core Requirements 9 cr.**

FAP 211, GDP 212, FAP 221

### **Major Requirements 57 cr.**

GDP 217, GDP 222, GDP 223, GDP 227, GDP 315, GDP 321, GDP 322, GDP 323, GDP 317, GDP 324, GDP 412, GDP 413, GDP 415, GDP 423, GDP 361, GDP 362, GDP 463, GDP 464, GDP 465.

### **Free Electives 6 cr**

In principle, the students will fulfill their concentration requirements during the last three semesters.

- In the course GDP 474 (or GDP 484 or GDP 494), the students will research and submit in writing their Senior Project Proposals which will be assessed by selected faculty members.
- In the final course GDP 476 (or GDP 486 or GDP 496), the students will develop and accomplish their Senior Projects and prepare a presentation in front of a jury composed of faculty members and invited professionals.

**Bachelor of Arts in Graphic Design  
Suggested Program (102 Credits)**

**Year I**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.
GDP	217	Conceptual Communication in Digital Media	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

FAP	221	Drawing II	3 cr.
GDP	222	Design Principles II	3 cr.
GDP	223	Fundamentals of Typogrphahy	3 cr.
GDP	227	Digital Media I	3 cr.
—	—	GER	3 cr.

**Summer Session (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester (15 Credits)**

GDP	315	Color & Illustration for Graphic Designers	3 cr.
GDP	317	Digital Media II	3 cr.
GDP	322	Applied Typographic Design	3 cr.
GDP	324	Photography for Graphic Designers	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

GDP	321	Visual Communication I	3 cr.
GDP	323	History of Graphic Design & Cont. Issues	3 cr.
GDP	361	Type Design and experimental Typography	3 cr.
GDP	362	Interactive Design and Motion Graphics	3 cr.
—	—	GER	3 cr.

**Summer Session (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester (15 Credits)**

GDP	412	Packaging	3 cr.
GDP	413	Print Management & Production	3 cr.
GDP	415	Branding for Design	3 cr.
GDP	463	Environmental Graphics and Arabic Type Design	3 cr.
GDP	464	3D in Motion	3 cr.

**Spring Semester (15 Credits)**

GDP	423	Professional Practice & Portfolio Preparation	3 cr.
GDP	465	Senior Studio	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

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## Minor in Graphic Design (18 credits)

The focus is on Typography in Graphic Design, students will develop a critical eye, and demonstrate proficiency in applying “*type*” to express clear and legible communication for different media. Students are qualified to manage a design project, and prepare and supervise for final production hereby enabling them to have additional work possibilities.

The Minor can be taken by all except Graphic Design students; the only prerequisite is prior knowledge of Photoshop .

The courses are carefully chosen from the major to order for the students to arrive at a sufficient level of skills that allow them to actually produce design projects in print; therefore there are no electives.

In order to challenge the students, two courses with strong conceptual and creative process’ are included: GDP 321 Visual Communication and GDP 415 Branding for Graphic Design.

### ***Career Opportunities***

Students can work in the fields of Advertising Agencies, Design Studios, and Production Houses, as Visual Communicators.

### **Minor in Graphic Design Suggested Program (18 Credits)**

#### **Semester I**

GDP	227	Digital Media I	3cr.
GDP	223	Fundamentals of Typography	3cr.

#### **Semester II**

GDP	321	Visual Communication I	3 cr.
GDP	322	Applied Typographic Design	3 cr.

#### **Semester III**

GDP	413	Print Management & Production	3 cr.
GDP	415	Branding for Design	3 cr.

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## Undergraduate Courses: Graphic Design

**GDP 212 Design Principles I (2.2); 3 cr.** Various design elements are introduced such as line, shape, plane, texture, color, style and composition. The students are encouraged to be creative and develop individual style.

**GDP 217 Conceptual Communication in Digital Media (2.2); 3 cr.** Students will learn the process of generating creative ideas, and apply principles of design to conceptual communication. In parallel, students are introduced to the fundamental tools to produce vector and raster-based graphics through the use of latest software for graphic production. Projects and assignments will focus on the exploration of concepts, and implementation through digital media. *Corequisite:* GDP 212.

**GDP 222 Design Principles II (2.2); 3 cr.** Relations between 3-D structure and space are explored analytically and synthetically. Students will investigate a given subject; learn to follow a problem-solving process in order to reach a functional and defendable design solution. *Prerequisite:* GDP 212.

**GDP 223 Fundamentals of Typography (2.2); 3 cr.** Students will learn how to classify type according to its history and development, type measurements, series of exercises exploring: space, hierarchy, order, kerning, tracking, type size and weight. Furthermore, the students will explore the use of type and space together with the development of grids through the application of design to a variety of formats. *Prerequisite:* GDP 217 or FDP 214.

**GDP 227 Digital Media I (2.2); 3 cr.** This course is designed to help graphic designers master professional studio techniques including photo-montage, photo retouching and special photographic effects. It also covers the fundamental software tools and techniques to produce publications and prepare the end product for printing process. *Prerequisite:* GDP 217 or FDP 214

**GDP 315 Color & Illustration for Graphic Designers (2.2); 3 cr.** An introduction to color using traditional tools and materials. The course will cover perceptual understanding of color and the use of color as a communication medium. It will also include the fundamentals in illustration which draws upon use of existing materials, illustration on location, abstract subject matter to assist the student in bringing an idea to life. A

range of media will be introduced such as pencil, paints and pastels. *Prerequisite:* GDP 227.

**GDP 317 Digital Media II (2.2); 3 cr.** This course concentrates on training design students to produce graphic solutions for online environment. Terminology, theory, structure, html basics and appropriate software tools for web design will be covered enabling the students to design Websites. Students will also be exposed to understand the process of conveying a message in motion and it interacts within the website. *Prerequisite:* GDP 227.

**GDP 321 Visual Communication (2.2); 3 cr.** Students will learn how to approach conceptual problem solving through the use of visual rhetoric and the science of semiotics. The course will also focus on signs and symbols, ideograms, sequential design, publication, and information design whilst taking into consideration the potential audience. *Prerequisites:* GDP 223, GDP 227

**GDP 322 Applied Typographic Design (2.2); 3 cr.** Students will explore projects of greater complexity; learn how to analyze substantial data, appreciate the design functions of relating ideas and develop logical structural systems to organize information for legible and clear communication. Students will be able to transform manuscripts into printed publications i.e. book design, newspaper, magazine, and instruction manual. They will have to follow a design process to assess typographical text application, expression, hierarchy, sequential design, layout and page systems including production. *Prerequisite:* GDP 223, GDP 227.

**GDP 323 History of Graphic Design & Contemporary Issues (3.0); 3 cr.** The course exposes the students to the genesis and development of graphic design in the 20th century. The students investigate the theory and practice of graphic design under the two main philosophies of the 20th century: modernism and postmodernism. The course aims to develop the student's ability to comprehend theoretically and visually the graphic design movements and pioneers as a source of inspiration and reference for their conceptual and innovative process.

**GDP 324 Photography for Graphic Designers I (2.2); 3 cr.** Students will be exposed to critical thinking and will learn the history of photography including the different photography

movements. Students will learn the principles and use of black and white photography, and its application in documentary photography and Photojournalism. The student will learn the concept of photo editing as it applies to printed matters. *Prerequisite:* GDP 227.

**GDP 361 Type Design and Experimental Typography (2.2); 3 cr.** Students will learn the principles of designing fonts ready for print and screen. They transfer the manually developed typeface into true type font using professional software. Furthermore, this course will provide the opportunity to experiment with type and research various methods and techniques to serve a pragmatic purpose to express ideas using type. The students will also learn how to develop a visual identity system and how to combine type with signs and symbols. *Prerequisite:* GDP 317, GDP 322.

**GDP 362 Interactive Design and Motion Graphics (2.2); 3 cr.** The course introduces the student to website history and digital interface, website structures and grids, website management and design principles using type, image, color scheme, hierarchy, sequential design, visual identity, animation and sound. Furthermore, Students will create visual projects for screen and TV through the understanding and application of type and image. They will learn how to plan movie concept through sketching and storyboarding and will gain knowledge on how to develop graphic sound tracks to be synchronized with motions. They will also learn the principles of generating short movies and the techniques of editing them. Through assigned projects, students are responsible to follow a design process in order to deliver a specific message using motion graphics. *Prerequisite:* GDP 317, GDP 322.

**GDP 412 Packaging (2.2); 3 cr.** Packaging is an important factor in retail environments and a key element in marketing strategies. This course focuses on the technical knowledge needed to execute a design, to prepare die-cuts, molds, paper section and boards, colors, quality and quantity. Size consideration, shapes and practicality will also be covered. Field trips are required in this course. *Prerequisite:* GDP 322.

**GDP 413 Print Management and Production (2.2); 3 cr.** Covers print methods and print techniques including color separation, film preparation, plate processing and the actual production process. It will also include the choice of papers, printing onto various surfaces,

paper engineering and management and finishing processes and binding. *Prerequisites:* GDP 321, GDP 322.

**GDP 415 Branding for Design (2.2); 3 cr.** Students will create the visual corporate identities of products, build the brand marketing strategy, analyze and define the unique selling proposal, and communicate its value. The student s will learn how to make professional presentations including documentation of the process. *Prerequisites:* GDP 321, GDP 322.

**GDP 423 Professional Practice & Portfolio Preparation (2.2); 3 cr.** Overview of the business aspects of design: Translation of jobs into properly written documents, meetings with clients and presentation of work, design and production processes, understanding the brief, debriefing, coding, encoding, budgets, estimating design, fees, and official contracts. During the semester, students will have to cover hours for the internship. This course also assists students in the development of their professional visual identity and portfolio. *Prerequisite:* GDP 413.

**GDP 463 Environmental Graphics and Arabic Type Design (2.2); 3 cr.** This course will introduce the students to the history of Arabic typography. Students will learn to identify the different Arabic type styles and their classifications, as well as applying a creative design process to produce Arabic typeface. Students are also introduced to ways of analyzing and creating meaning in graphic and typographic design solutions for indoor and outdoor environment. In the context of theory and practice, the students will develop way-finding systems, semiotics, and information presentation for the public. They will become aware of issues pertaining to the identification, categorization and structure of raw and complex information from different fields. *Prerequisite:* GDP 361.

**GDP 464 3D in Motion (2.2); 3 cr.** Students will learn how to communicate effectively using type, image and sound progressively with more and more complex needs for motion graphics. Students will know how to inform while underpinning the media constraints. In parallel, they will learn how to create interface design and promotional broadcasting graphic movies using different software platforms and advanced tools tracking 2D and 3D animations. Furthermore, the students are introduced to the principles of 3D animation; learn how to sketch,

illustrate and design characters as well as developing contemporary design solutions with new approaches of type, image, and characters for screen using appropriate tools and techniques to develop 3D motion graphics for multimedia. Students will investigate and formulate their senior project proposal. *Prerequisite:* GDP 362.

**GDP 465 Senior Studio (2.2); 3 cr.** Students will research, develop and design their individual senior project under instructor

guidance. Articles, discussions, seminars and lectures will take place during class sessions in support of the development of the senior projects. The senior project and related process will be presented in front of a professional jury. The senior project proposal can take the form of a screen and / or print based solution. *Prerequisite:* GDP 463, GDP 464.

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## **The Degree of Bachelor of Arts in Interior Design**

### **Program Description**

Our Interior Design program consists of a sequential undergraduate design studios that form the core of the professional interior design major. Basic architectural and design principles of form-making are the initial focus that soon shift to issues of people and space.

The program helps students develop critical thinking, creative design and evaluation of how interior design meets the needs of people, which is the essence of their professional curriculum. Within the instructional settings of the upper design studios, students learn about the dynamic interactions between people and space in the commercial, institutional, hospitality, healthcare and retail facilities. Graduates develop competency in specific interior design subject areas as they learn how to creatively make the world a better place for people. The program provides opportunities for the students to achieve excellence in the design of interior environments also to engage in research and develop a specialization in a related field and possible topics for advanced studies in furniture design, environmental design, historic preservation, visualization and interior applications for computers, design research and theory as well as design education.

### **Admission Requirements**

In addition to the University admission requirements, prospective candidates must complete any remedial English courses(s) (if required) the first year of enrolment. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Interior Design or other majors in the Design Department of the Faculty of Architecture, Art & Design.

### **Graduation Requirements**

To receive the degree of Bachelor of Arts in Interior Design, a student must complete a total of 136 credits with a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. All major courses with a grade of less than C- must be repeated. The 136 credits necessary for graduation are divided as follows:

## Degree Requirements (136 credits)

### **General Education Requirements** **30 cr.**

The GER are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr.

Communication skills in Arabic, One course from: 3 cr.

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

Religion: One course from: 3 cr.

REG 212, REG 213, REG 314, REG 313

Philosophy, One course from: 3 cr.

PHL 211, PHL 311, POS 345, ENS 205

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, BAD 201, ECN 200, ARP 215, COA 359, COA 315, NTR 215, ECN 211, ECN 212

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337 3 cr.

Science and Technology, two courses from : 6 cr.

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207

### **Core Requirements** **6 cr.**

FAP 211, GDP 212.

### **Major Requirements** **94 cr.**

IDP 210, IDP 211, IDP 212, IDP 214, IDP 215, IDP 222, IDP 223, IDP 224, IDP 225, IDP 226, IDP 227, IDP 311, IDP 312, IDP 313, IDP 314, IDP 321, IDP 322, IDP 323, IDP 324, IDP 326, IDP 327, IDP 328, IDP 411, IDP 412, IDP 413, IDP 421, IDP 422, IDP 423, IDP 424.

### **Free Electives** **6 cr**

**Bachelor of Arts Degree in Interior Design  
Suggested Program (136 Credits)**

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**Year I**

**Fall Semester ( 12 Credits)**

FAP	211	Drawing I	3cr.
GDP	212	Design Principles I	3cr.
IDP	210	Basic Skills for Interior Design	3cr.
IDP	313	Applied Interior Design I	3cr.

**Spring Semester ( 12 Credits)**

IDP	215	Descriptive Geometry for Int. Design	3cr.
IDP	223	Drawing for Interior Design	3cr.
—	—	GER	3cr.
—	—	GER	3cr.

**Summer Session (6credits)**

—	—	GER	3 cr.
—	—	GER	3cr.

**Year II**

**Fall Semester (15 Credits)**

IDP	211	History of Interiors and Furniture	3cr.
IDP	212	Fundamentals of Interior I	3cr.
IDP	214	Materials and Methods of Construction	3cr.
IDP	224	Colors in Interiors	3cr.
IDP	323	Applied Interior Design II	3cr.

**Spring Semester (15 Credits)**

IDP	222	Fundamentals of Interior II	3 cr.
IDP	225	Materials & Finishes	3 cr.
IDP	226	Textiles for Interiors	3 cr.
IDP	227	Human Factors for Int. Des.	3 cr.
—	—	GER	3 cr.

**Summer Session ( 6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester (15 Credits)**

IDP	311	History of Modern Contemporary Interiors	3 cr.
IDP	312	Interior Design Project I	3 cr.
IDP	314	Interior Detailing and Construction I	3 cr.
IDP	327	Furniture Design	3 cr.
IDP	413	Applied Interior Design III	3 cr.

**Spring Semester (16 Credits)**

IDP	321	Environmental Graphic Design	3 cr.
IDP	322	Interior Design Project II	4 cr.
IDP	324	Interior Detailing and Construction II	3 cr.
IDP	326	Concepts of Hist. Pres.	3 cr.
IDP	328	Lighting Design in Interiors	3 cr.

**Summer Semester ( 6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year IV****Fall Semester (15 Credits)**

IDP	411	Quantity Surveying for Interior Designers	3 cr.
IDP	412	Interior Design Studio I	6 cr.
IDP	423	Integrated Systems for Sustainable Interiors	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester ( 18 Credits)**

IDP	421	Business Practice for Interior Designers	3 cr.
IDP	422	Interior design Studio II	6 cr.
IDP	424	Interior Design Management	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate Courses: Interior Design

**IDP 210 Basic Skills for Interior Design (2.2); 3 cr.** This course helps the student develop the necessary skills and techniques required to communicate visually his interior design ideas effectively and professionally. This course will give the student the ability to draw and sketch, assess, evaluate and understand existing structures, also learn to survey sites and collect data and take them to the drawing board. Topics include: Design briefs and specifications; comprehensive drawing files; presentation techniques, layouts and renderings; technical drawing files: Scaled drawing, plans, elevations, sections, etc. *Corequisite:* FAP 211, IDP 313.

**IDP 211 History of Interiors and Furniture I (3.0); 3 cr.** A study of ancient architecture, interiors and furniture from the beginning of human civilization to the modern civilization. *Corequisite:* IDP 212.

**IDP 212 Fundamentals of Interior I (2.2); 3 cr.** Essentials of planning an interior architectural environment in relationship with spatial organization. *Prerequisite:* IDP 210, IDP 215.

**IDP 214 Materials and Methods of Construction (2.2); 3 cr.** This course combines case studies with lectures, readings and discussions on concepts of design technology. *Corequisite:* IDP 212.

**IDP 215 Descriptive Geometry for Int. Design. (2.2); 3 cr.** Study of the different interrelated geometric fields and three dimensional forms in the interior environment. Emphasis on the formation of volumetric development, light sources, shades, shadows and their constructions. *Prerequisite:* IDP 210, FAP 211.

**IDP 216 Design theories and critical thinking (3.0); 3 cr.** This course helps the student review the turning points of historical events and their influences on the design developments and movements. The student will also learn how to carry out investigative research and critical analysis of design when required. The student will also explore how social and political circumstances influence the design process. Topics include: Global design styles, modernism, design through ages.

**IDP 222 Fundamentals of Interior II (2.2); 3 cr.** Study of structural setting in any

architectural space leading to constraints in the design process. *Prerequisite:* IDP 212.

**IDP 223 Drawing for Interior Design (2.2); 3 cr.** This is an intense studio course developing free hand drawing skills, scaled perspective appropriate for the presentation of interior design projects. This course also develops a wide range of rendering skills and techniques applicable in traditional and computer media. *Prerequisite:* FAP 211, *Corequisite:* IDP 222.

**IDP 224 Colors in Interiors (2.2); 3 cr.** This course will teach the student to achieve the right choices of colors in different interior spaces and environments, and they will also learn to develop the opulent designer's eye when required to balance color schemes and combinations. Topics included: Color theories, color psychology, color science, color characteristics and notation. *Corequisite:* IDP 212.

**IDP 225 Materials and Finishes (1.4); 3 cr.** This course offers an introduction to construction detailing for interiors, focusing on architectural millwork. *Corequisite:* IDP 222.

**IDP 226 Textiles for Interiors (2.2); 3 cr.** Effects of fibers, yarns, fabrics and finishes on appearance and performance. Study of the construction of textile products used in interiors. *Corequisite:* IDP 222.

**IDP 227 Human Factors for Int. Des. (2.2); 3 cr.** This course investigates human factors as an essential ingredient in the design process. Physical and psychological human factors will be examined in an attempt to better understand The spatial relationship between humans and their environment. Topics include: Proximics, cognitive mapping, imageability, human sensory and ergonomics. *Corequisite:* IDP 222.

**IDP 311 History of Modern Contemporary Interiors (3.0); 3 cr.** This course is an overview of the 20th Century art, culture, interior and furniture. *Prerequisite:* IDP 221, *Corequisite:* IDP 312.

**IDP 312 Interior Design Project I (2.2); 3 cr.** This course covers the creative triggering of the design problem solving process through schematics. It also investigates human factors as an essential ingredient in the design process. *Prerequisite:* IDP 222.

**IDP 313 Applied Interior Design I (2.2); 3 cr.** This course explores the pragmatics of computer hardware and software as integral tools to contemporary design. *Corequisite:* IDP 210, FAP 211.

**IDP 314 Interior Detailing and Construction I (2.2); 3 cr.** The course introduces the students to the various material finishes used in interior design. *Corequisite:* IDP 312.

**IDP 321 Environmental Graphic Design (2.2); 3 cr.** This course studies the presentation of information in the designed environment. *Corequisite:* IDP 322.

**IDP 322 Interior Design Project II (2.4); 4 cr.** The student is challenged to work on a major construction displaying creativity and ability to remodel this space according to new functions. *Prerequisite:* IDP 312.

**IDP 323 Applied Interior Design II (2.2); 3 cr.** This course develops a more professional and creative approach to design while broadening the student's technical base. *Prerequisite:* FAP 211.

**IDP 324 Interior Detailing and Construction II (2.2); 3 cr.** Review, discussion and analysis of interior construction systems used in commercial and institutional structures. *Prerequisite:* IDP 314, *Corequisite:* IDP 322.

**IDP 326 Concepts of Historic Preservation (2.2); 3 cr.** Projects consist of a search for new remodeling techniques, constructing and preserving historic buildings and monuments. *Corequisite:* IDP 322.

**IDP 327 Furniture Design (2.2); 3 cr.** This course exposes the student to the design industry starting from the drawing board and ending with a full scale furniture model. The student will learn to implement the step by step hands on model making of furniture pieces that he created, the student will be using the ergonomic knowledge that he learned in the human factors course. Topics included: Ergonomic design for the global industry. Designing for the Industry. Model making. Specimen building and mass production. *Corequisite:* IDP 312.

**IDP 328 Lighting Design in Interiors (2.2); 3 cr.** This course takes a practical approach to lighting, and the student will learn about the different types of lighting such as ambient, task and decorative. The student will also learn the

fundamentals of lighting design in relation to residential and contract interiors. The subjects tackled in this course will give the student enough knowledge to incorporate lighting in the total interior design scheme. Topics covered: Natural, artificial lighting, quality of light. Technicalities: Switches and wiring. Finally, electrical plans and specifications. *Corequisite:* IDP 322.

**IDP 411 Quantity Surveying for Interior Designers (2.2); 3 cr.** Emphasis on the principals of construction. *Corequisite:* IDP 412.

**IDP 412 Interior Design Studio I (3.6); 6 cr.** This course covers all aspects of professional presentation of a complete construction drawing-file to secure accurate executions. *Prerequisite:* IDP 322.

**IDP 413 Applied Interior Design III (2.2); 3 cr.** This course shows students how to create computer animation and 3-rendered materials within an interior space. *Prerequisite:* IDP 323, *Corequisite:* IDP 412.

**IDP 421 Business Practice for Interior Designers (3.0); 3 cr.** Focuses on the legal aspects of design and contract documents for interior architecture. *Corequisite:* IDP 422. *Prerequisite:* IDP 411.

**IDP 422 Interior Design Studio II (3.6); 6 cr.** This course is structured to challenge the student to deal specifically with contract interiors. *Prerequisite:* IDP 412.

**IDP 423 Integrated Building Systems (HVAC and Plumbing) (2.2); 3 cr.** This course provides a structured opportunity to study and integrate all components of architectural technology into a comprehensive whole. *Corequisite:* IDP 412.

**IDP 424 Interior Design Management (3.0); 3 cr.** This course exposes the student to the main management principles in interior design with the understanding that this profession is an integral part of the the construction industry. The student will learn the different management techniques and skills that an interior designer needs to practice in his business formation starting with maning his office ending up with a contract and passing by all the processes that require a business like attitude. Finally, the student will learn the design-built team working approach. *Corequisite:* IDP 422.

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## **The Degree of Bachelor of Arts in Fashion Design**

### **Program Description**

Lebanon has already established itself in the international fashion design industry and as a result there is a potential for a prosperous local market in need of competent fashion designers. The graduates will be able to produce traditional as well as innovative and contemporary design concepts suitable for the national, regional and international market. The program combines advanced design concepts supported by current technology in order to produce creative and original, individual prototypes for haute couture or industrial production.

### ***Career Opportunities***

Fashion Design graduates will be ready to work in the fashion industry as creators of new collections, textile designs, managers, journalists, patternmakers, and in various fields of fashion commerce.

### **Admission Requirements**

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s) during their first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the Bachelor of Arts in Fashion Design and other majors in the Design Department of the Faculty of Architecture, Art & Design.

### **Graduation Requirements**

To receive the degree of Bachelor of Arts in Fashion Design, a student must complete a total of 102 credits with an overall grade-point average of at least 2.0/4.0 and a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. All major courses with a grade of less than C- must be repeated. The 102 credits necessary for graduation are divided as follows:

## Degree Requirements (102 credits)

### **General Education Requirements (GER):** **30 cr.**

The GER are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr

Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317 3 cr.

Religion: One course from REG 212, REG 213, REG 314, REG 313 3 cr.

Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205 3 cr.

Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, BAD 201, ECN 200, ARP 215, COA 359, COA 315, NTR 215, ECN 211, ECN 212 6 cr.

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337 3 cr.

Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207 6 cr.

### **Core Requirements** **6 cr.**

FAP 211, GDP 212

### **Major Requirements** **60 cr.**

GDP 222, FTP 214, FTP 212, FTP 224, FTP 222, FTP 229, FTP 314, FTP 315, FTP 318, FTP 319, FTP 326, FTP 325, FTP 328, FTP 329, FTP 415, FTP 418, FTP 419, FTP 423, FTP 425, FTP 428.

### **Free Electives** **6 cr**

**Bachelor of Arts Degree in Fashion Design  
Suggested Program (102 Credits)**

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**Year I**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3cr.
GDP	212	Design Principles I	3cr.
FTP	214	Textile Technology	3cr.
FTP	212	Fashion Illustration I	3cr.
—	—	GER	3cr.

**Spring Semester (15 Credits)**

GDP	222	Design Principles II	3cr.
FTP	224	History of Fashion Design	3cr.
FTP	222	Fashion Illustration II	3cr.
FTP	229	Fashion Design I	3cr.
—	—	GER	3cr.

**Summer Session. (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester (15 Credits)**

FTP	314	Contemporary Issues in Fashion Design	3cr.
FTP	315	Fashion Studio I	3cr.
FTP	318	Patternmaking I	3cr.
FTP	319	Fashion Design II	3cr.
—	—	GER	3cr.

**Spring Semester (15 Credits)**

FTP	326	Fashion Trends and New Concepts	3cr.
FTP	325	Fashion Studio II	3cr.
FTP	328	Patternmaking II	3cr.
FTP	329	Fashion Design III	3cr.
—	—	GER	3cr.

**Summer Semester (6 Credits)**

—	—	GER	3cr.
—	—	GER	3cr.
—	—		

**Year III**

**Fall Semester (15 Credits)**

FTP	415	Fashion Studio III	3cr.
FTP	418	Patternmaking III	3cr.
FTP	419	Fashion Design IV	3cr.
—	—	GER	3cr.
—	—	Free Elective	3 cr.

**Spring Semester (15 Credits)**

FTP	423	Professional Practice & Marketing	3cr.
FTP	425	Fashion Studio IV	3cr.
FTP	428	Patternmaking IV	3cr.
—	—	GER	3 cr.
—	—	Free Elective	3cr.

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## Undergraduate Courses: Fashion Design

**FTP 212 Fashion Illustration I (2.2); 3cr.** Students will learn to develop and illustrate fashion figures and garment details through analysis of the fashion canon, the figure research and the study of lines and proportions; resulting in fashion design sketches and illustrations. The emphasis is on the ability to express ideas visually and in a personal style. *Corequisite:* FAP 211.

**FTP 214 Textile Technology (2.2); 3 cr.** This course is an overview of the textiles in fashion design including printing techniques. Advanced surface treatments are investigated. Students are encouraged to experiment and apply original designs as inspiration for creation of textiles.

**FTP 222 Fashion Illustration II (2.2); 3 cr.** The students will explore the different techniques for illustrating fashion, analyzing the structural rhythm and movements of various poses, by combining media and advanced rendering techniques; including software used in the fashion industry; leading to new fashion design creations. *Prerequisite:* FTP 212.

**FTP 224 History of Fashion Design (3.0); 3cr.** This course traces the history of fashion tradition from antiquity until 1890, including the ancient civilizations of Egypt, Mesopotamia, Greece, Rome, and continuing with the Renaissance, the French Revolution until the Art Nouveau Period.

**FTP 229 Fashion Design I (2.2); 3 cr.** The students will learn to develop design fashions, in parallel they will sketch figures and garment details through analysis of photographs and research, resulting in fashion design sketches. The ability to design through creative exploration is an integrated part of the course. Techniques for rendering the characteristics of various fabric textures, weights and patterns will be explored. *Prerequisite:* FTP 212.

**FTP 314 Contemporary Issues of Fashion Design (3.0); 3 cr.** The students will investigate the relationship between fashion design and the contemporary issues of the 20th and 21st Century, beginning with the Art Nouveau period, the 'between the two Wars' period, the New York era, innovations of the 20th Century to end with the contemporary era. *Prerequisite:* ENL 213.

**FTP 315 Fashion Studio I (1.4); 3 cr.** Students work on creating their own concepts for designs and finished garments, strengthening their

understanding of cutting, construction and tailoring techniques. *Prerequisites:* FTP 222, GDP 222

**FTP 318 Patternmaking I (2.2); 3 cr.** Students will study the use of the pattern for various sectors while developing basic concepts as well as original designs according to professional standard through hands-on practice. *Prerequisite:* FTP 229.

**FTP 319 Fashion Design II (2.2); 3 cr.** The students will continue to develop creative concepts in fashion design illustrations and presentation boards through exposure to softwares used in the fashion industry. This process is explored both manually and digitally. *Prerequisite:* FTP 229.

**FTP 326 Fashion Trends and New Concepts (2.2); 3 cr.** Students will explore the concepts and trends that add glamour to fashion design, through various resources, such as the "Tendance" of the professional fore-casting services. Students will focus on the details such as accessories in new dimensions and materials; thus enhancing their creative potential. *Prerequisite:* FTP 314.

**FTP 325 Fashion Studio II (1.4); 3 cr.** Students will develop skills and techniques necessary to produce garments of various sectors, including professional processes and assembly procedures. *Prerequisite:* FTP 315.

**FTP 328 Patternmaking II (2.2); 3 cr.** The students will learn to create advanced patterns using computer and appropriate software as a tool for production, in order to efficiently reflect and execute their creative and original ideas. *Prerequisite:* FTP 318, *Corequisite:* FTP 325.

**FTP 329 Fashion Design III (2.2); 3 cr.** Creative thinking in both process and product will encourage the students to create trade sketches and storyboards of their fashion designs. The aim is to develop cohesiveness in a collection based on individual concepts with diverse applications, and to present the designs in fashion portfolios. *Prerequisite:* FTP 319. *Corequisite:* FTP 325.

**FTP 415 Fashion Studio III (1.4); 3 cr.** The students will continue to employ industrial standards for tailoring garments, including advanced construction processes and assembly

procedures to ensure a high quality garment.  
*Prerequisite:* FTP 325

**FTP 418 Patternmaking III (2.2); 3 cr.** The students master the translation of any volume or idea regardless of material or purpose. Students will further construct, in tandem manually and digitally, advanced patternmaking for final execution. *Prerequisites:* FTP 328, FTP 315

**FTP 419 Fashion Design IV (2.2); 3 cr.** Creative and advanced design methodology will ensure unique and professional development of a collection with personal style and effective communication of sketches, fashion design, storyboards and portfolios for their senior collection. *Prerequisite:* FTP 329.

**FTP 423 Professional Practice & Marketing (2.2); 3 cr.** The students will be exposed to the professional aspects of Fashion Design: Management of inventory, decision making, planning, licensing, plus strategies to enhance

market strength. The process of learning happens through daily journaling, written reports and a presentation of their internship experience. It is the student's responsibility to find an internship and to notify the instructor for approval. Furthermore, the students will design, prepare and present a professional portfolio of their individual collections including the senior project. *Prerequisites:* FTP 415, FTP 419.

**FTP 425 Fashion Studio VI (1.4); 3 cr.** Students will apply professional standards to the execution of their senior collection and its process will be presented in front of a jury in order to develop high quality prototypes. *Prerequisite:* FTP 415

**FTP 428 Patternmaking IV (2.2); 3 cr.** The concepts developed through design and research will inform the patternmaking for a collection as their senior project resulting in professional execution. *Prerequisite:* FTP 418, FTP 415

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## The Degree of Bachelor of Arts in Photography

### Program Description

Photography is by far the most used medium amongst all the creative disciplines. From fine arts, design, multimedia, artistically and commercially, the photograph has proven its strength and ability in delivering various sustainable messages in an innovative and challenging process.

The design department understands photography as a multidisciplinary medium devoted to research and experimentation. The photography program encourages the exploration and development of the individual style in a project based system where initiative, research and analytical thinking underlie each task.

The BA in photography offers the students the opportunity to learn photography combined with animation, multimedia, video and other related fields. Students are invited to combine traditional and contemporary methods to create photography, including still and moving images as well as image and text.

Graduates will develop a strong learning while tackling all the areas of the photographic industry enabling them to pursue a promising career in their chosen field of interest.

### ***Career Opportunities***

Students graduating with in photography will have the opportunity to work as freelancers covering the creative and artistic needs of the market such as advertising, editorial, fashion and documentary. They can also work as creative directors, image consultants and photojournalists. In parallel to their commercial work, graduates will be capable of setting up their own exhibitions and publishing their work.

### **Degree Requirements (102 credits)**

#### **General Education Requirements (GER): 30 cr.**

The GER are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr

Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317 3 cr.

Religion: One course from REG 212, REG 213, REG 314, REG 313 3 cr.

Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205 3 cr.

Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, BAD 201, ECN 200, ARP 215, COA 359, COA 315, NTR 215, ECN 211, ECN 212 6 cr.

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337 3 cr.

Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207 6 cr.

#### **Core Requirements 9 cr.**

FAP 211, GDP 212, GDP 222

#### **Major Requirements 57 cr.**

PDP 216, PDP 221, PDP 223, PDP 227, PDP 311, PDP 312, PDP 313, PDP 317, PDP 321, PDP 323, PDP 327, PDP 411, PDP 412, PDP 413, PDP 414, PDP 415, PDP 421, PDP 422, PDP 423.

#### **Free Electives 6 cr**

**Bachelor of Arts in Photography  
Suggested Program (102 Credits)**

**Year I**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3cr.
GDP	212	Design Principles I	3cr.
PDP	216	Introductory Photography	3cr.
—	—	GER	3cr.
—	—	GER	3cr.

**Spring Semester (15 Credits)**

PDP	221	Portraiture	3cr.
GDP	222	Design Principles II	3cr.
PDP	223	History of Photography	3cr.
PDP	227	Grain to Pixel	3cr.
—	—	GER	3cr.

**Summer Session. (6 Credits)**

PDP	313	GER	3 cr.
		GER	3 cr.

**Year II**

**Fall Semester (15 Credits)**

PDP	311	Branding in Photography	3cr.
PDP	312	Glamour and Fashion	3cr.
PDP	317	Line to Pixel	3cr.
—	—	GER	3cr.
—	—	GER	3cr.

**Spring Semester (15 Credits)**

PDP	321	Photojournalism and Documentary	3cr.
PDP	323	Time and Space	3cr.
PDP	327	Web Image	3cr.
—	—	GER	3cr.
—	—	Free Elective	3cr.

**Summer Semester (6 Credits)**

PDP	411	Image and Type	3cr.
—	—	GER	3cr.

**Year III**

**Fall Semester (15 Credits)**

PDP	412	Experimental photography	3cr.
PDP	413	Senior project I	3cr.
PDP	414	Movie production	3cr.
PDP	415	Photography and Animation	3cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

PDP	421	Promotion and Publication	3cr.
PDP	422	Professional practice and portfolio	3cr.
PDP	423	Senior Project II	3cr.
—	—	GER	3 cr.
—	—	Free Elective	3cr.

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## Minor in Photography (18 credits)

This Minor is ideal for students who believe in the alchemy of the still image and its creative and inspiring process. Out of all the visual communication media, photography stands out for its power in freezing time and capturing the essence of the real. Used in every discipline, it manages to travel through the eye to reach the mind and engrave its codes in the heart. New digital technologies and traditional techniques are merged here to offer pioneering creative methods in this challenging field.

Students who choose this Minor will acquire solid analytical, intellectual and technical skills necessary for the development of a consistent photographic body of work .

It is the hope that such a Minor can enrich the lives of the students by introducing a creative medium and sufficient skill to produce work.

### *Career Opportunities*

Students can work as freelancers responding to the creative and artistic needs of the market such as advertising, editorials, fashion and documentaries.

### Minor in Photography Suggested Program (18 Credits)

#### Semester 1

PDP	201	Basic Photography	3cr.
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#### Semester 2

PDP	227	Grain to Pixel	3 cr.
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#### Semester 3

PDP	311	Branding in Photography	3 cr.
PDP	312	Glamour and Fashion	3 cr.

#### Semester 4

PDP	321	Photojournalism and Documentary	3 cr.
PDP	323	Time and Space	3 cr.

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## Undergraduate Courses: Photography

**PDP 201 Basic Photography (2.2); 3 cr.** An introduction to the camera, dark room, film and processing. Students will learn about basic techniques of exposure, lighting and laboratory.

**PDP 216 Introductory Photography (2.2); 3 cr.** Students will develop a strong basis for the creation of the image while exploring digital and analog techniques that will enable them to express their own ideas visually. They will explore several photographic topics and represent them through various concepts and techniques.

**PDP 221 Portraiture (2.2); 3 cr.** Students will develop individual ideas through an understanding of the photographic portrait, including past and present representation of the self and the other. An interpretation of the facial representations and body language is expressed through analog and digital techniques. *Prerequisite:* PDP 216.

**PDP 223 History of photography (2.2); 3 cr.** This course gives an overview of the history of photography starting from the pioneers' era in the beginning of the 19<sup>th</sup> century until mid of the 20<sup>th</sup> century. It will cover the influence of science and technology in the creation of the image, as well as the challenge between painters and photographers. *Prerequisite:* PDP 216.

**PDP 227 Grain to Pixel (2.2); 3 cr.** Students will learn how to handle and manipulate digital images for diverse outcomes. They will be introduced to professional software for image retouching, montages, collage and special effects. *Prerequisite:* PDP 216.

**PDP 311 Branding in Photography (2.2); 3 cr.** Students learn to analyze a brand and target a given audience. They will be exposed to the process of how to deconstruct the commercial image, through the development of a brief; research, concept to image creation. Through photography students will learn to communicate successfully the image identity of a brand. *Prerequisite:* PDP 227.

**PDP 312 Glamour and Fashion (2.2); 3 cr.** Creativity and originality in the production of the fashion image and the ability to transmit the stylistic concept is an integrated part of this course. Students will learn to manage the team necessary for glamour shooting, whether in the studio, outdoors or during catwalk. *Prerequisite:* PDP 227.

**PDP 313 Contemporary Photography (2.2); 3 cr.** This course will cover photography from the beginning of the 20<sup>th</sup> century until present day. It will introduce critical and cultural theories pertaining to the contemporary image, including multimedia and the digital era. *Prerequisite:* PDP 227.

**PDP 317 Line to Pixel (2.2); 3 cr.** Students will master the manipulation of digital images in a variety of media. They will be introduced to different software in relation to design and publications, enabling the students to produce professional printed matter. *Prerequisite:* PDP 216.

**PDP 321 Photojournalism and Documentary (2.2); 3 cr.** Students will be aware of the responsibility and integrity of the photographer in capturing the moment and producing striking photographs. They will analyze the photograph in relation to various media while addressing ethical and social issues objectively and grasp a deeper insight of the ambiguity of the message. *Prerequisite:* PDP 317.

**PDP 322 Photography and Culture (2.2) 3 cr.** Students will investigate the way images are read, used and understood in different cultures in an international scope. They will research, identify and define the different obstacles that may limit or transform the meaning of a photograph in a global context.

**PDP 323 Time and Space (2.2); 3 cr.** Students will analyze the cultural meaning of a certain space or place and the signs held within its image. The architectural elements and methods for visual investigation will be explored through the quality and quantity of light in conveying different moods. *Prerequisite:* PDP 317.

**PDP 327 Web Image (3.0); 3 cr.** Students will learn the structure of websites, for clients and for self promotion, that reflect the genre of their work while understanding and analyzing creative website used by professional photographers. *Prerequisite:* PDP 317.

**PDP 411 Image and Type (2.2); 3 cr.** Students will understand and analyze different typefaces and the relation between a specific image and expressive typefaces, as well as the different messages that type and image can convey. They will experiment with their own photographs and produce design solutions for various publications. *Prerequisites:* PDP 321, PDP 327.

**PDP 412 Experimental photography (2.2); 3 cr.** This course will offer a survey of the contemporary experimental photography; emphasizing past and present methods. Students will create original and unique images through exploration and application of alternative techniques. *Prerequisite:* PDP 327.

**PDP 413 Senior project I (2.2); 3 cr.** Students will investigate and formulate their senior project proposal. They will determine subject matter and concepts, after researching and analyzing the disciplines in which their own practice is located. Dissertations will be submitted and approved by a jury of academics and professionals. *Prerequisites:* PDP 327, PDP 411.

**PDP 414 Movie production (2.2); 3 cr.** This course aims to acquaint the student with multi-camera usage in a studio setting and on location, combining photography and moving image towards movie production. The common language of the contemporary moving and still image is explored through the concept of storyboarding, directing and digital editing techniques. *Prerequisite:* PDP 327.

**PDP 415 Photography and Animation (2.2); 3cr.** Students will experiment different processes and techniques to produce an animation, including stop-motion using related software. Students will develop concepts and ideas through sketching and storyboarding enabling them to produce animation and synchronized sound tracks. *Prerequisite:* PDP 327.

**PDP 416 Photo and printing techniques (2.2); 3cr.** This course combines darkroom and digital

techniques. Aesthetic and conceptual problems will be addressed through assignments and critiques. Emphasis is on individual directions and approaches. It includes image combination, processing and printing techniques. *Prerequisites:* PDP 325

**PDP 421 Promotion and Publication (2.2); 3cr.** Students will be exposed to the process of promoting their own work, through exhibitions, installations, and publications, locally and internationally. They will be responsible to manage and organize professionally all the preparation needed for a successful promotion. *Prerequisite:* PDP 413

**PDP 422 Professional practice and portfolio (2.2); 3cr.** This course aims to acquaint the student to develop their professional portfolio for self promotion. In parallel students will be exposed to the legal issues related to the copyright of the image and the way to protect their rights as professional photographers. *Prerequisite:* PDP 413.

**PDP 423 Senior Project II (2.2); 3cr.** Students will develop their set objectives and produce their senior project in photography under instructor guidance. Articles, discussions, seminars, lectures and fieldtrips will take place supporting of the development of the senior projects. The senior project and related process will be presented in front of a professional jury. *Prerequisite:* PDP 415, PDP 413

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## **The Degree of Master of Arts in Design**

The Master of Art in Design program is designed for students of Visual Arts and Design who wish to engage in a further period of study as a continuum to their bachelor studies. It is also designed for experienced students who wish to raise their intellectual and professional experience in a field of study, following a period of work in industry or in the professions associated with design.

The post-graduate status of the Master Program derives from the emphasis given to the relationship between theoretical concepts and practical realization of a problem; theory and practice at an informed and exploratory level.

The post-graduate status also derives from a teaching approach which lays considerable emphasis upon the managerial and professional aspects of project research and development designed to raise the standards of the successful implementation of the subjects in the professional, applied context of society and industry.

Finally, the post-graduate status of the course allows the student to disengage from the daily pursuit of tasks in their field, which are normally carried out under constraints which limit their exploration of the subject in a holistic sense. Instead, the students are enabled to look deeply into the context of their work, the history and theory, the practice and achievement of specialists in this and other countries on an international, global scale.

The impacts of traditional, new and developing technologies are studied. Graduates of the course can keep abreast of current trends by providing themselves with the intellectual network and contacts necessary to remain fully informed throughout their future professional lives; a benefit to themselves, and their employers.

Master students are able to follow their intellectual and creative discoveries to a depth and distance which will give the opportunity to create pilot schemes and projects which can be developed in the true scientific manner of trial and error: Testing, revision and proposals for further development. Thus, building a body of knowledge on their subject provides the basis for further pioneering and exploratory work, creatively and technically.

### **The Program Aims:**

- To extend and further develop the intellectual, professional and technical skills of graduates and of mid-career practicing designers
- To explore the social and cultural context within which the processes of designing take place
- To support the individual in developing high-level research ability and to explore the interrelationship of theory and practice.

### **Admission Requirements**

The Master of Art in Design is set for students from the several disciplines that are embraced by the term visual arts and designs, who wish to engage in a period of study beyond the bachelor level, and who wish to raise their intellectual and/or professional experience associated with visual arts and/or design.

Students with bachelor degrees from other disciplines are invited into the program after they have fulfilled undergraduate requirements of the university admission policy.

In addition to the university admission requirements for graduate students, the candidate must submit a portfolio of work for assessment and schedule an interview with MA course faculty.

In order to be accepted into the program, the student must take a minimum of 6 credits per semester as a part-time candidate and 9 credits as a full-time candidate.

### **Transfer**

Although transfer is not generalized, some credits from major universities can be transferable upon admission by the Graduate Committee. A transferred course must be passed at the grade of 80 according to the NDU grading bylaws.

In addition, applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

### **Graduation Requirements**

Students seeking the degree of Master of Design must meet the University graduation requirements and complete 36 credits with a cumulative average of at least 3.0/4.0.

### **Degree Requirements (36 Credits)**

#### **Major Courses 36 cr.**

MAD 615, MAD 616, MAD 617, MAD 625, MAD 626, MAD 627, MAD 635,  
MAD 636, MAD 645.

### **The Degree of Master of Arts in Design (MA) Suggested Program (36 Credits)**

#### **Year 1**

##### **Fall Semester I (6-12 Credits)**

MAD	615	Design Research Methodologies	3cr.
MAD	616	Contemporary Issues in Design	3cr.
MAD	617	Design Studio I	6cr.

##### **Spring Semester I (6-12 Credits)**

MAD	625	Design Research Development	3cr.
MAD	626	Cultural Issues in Design	3cr.
MAD	627	Design Studio II	6cr.

#### **Year 2**

##### **Fall Semester II (6 Credits)**

MAD	635	Thesis I	3cr.
MAD	636	Special Topic	3cr.

##### **Spring Semester II (6 Credits)**

MAD	645	Thesis II	6cr.
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## Graduate Courses: Master of Arts in Design

**MAD 615 Design Research Methodologies (2.2); 3 cr.** A survey of current design thinking and research methodologies to aid the student in the development of projects in response to a critical content framework. The course is intended to offer the student support and direction in the formation of the critical thinking that will inform their written and visual solutions. Includes lectures, readings and discussion of contemporary issues in design in social and cultural contexts.

**MAD 616 Contemporary Issues in Design (2.2); 3 cr.** A seminar in which topics of current relevance to design practice and critical thinking will be explored and analyzed. The course content will change each semester to remain up to date within the profession.

**MAD 617 Design Studio I (2.8); 6cr.** Design projects in response to the critical content of Contemporary Issues in Design. Includes the role of designed objects in contemporary culture and the effect on society, including interaction with potential audiences. *Co-requisite* and/or *Prerequisite*: MAD 616.

**MAD 625 Design Research Development (2.2); 3 cr.** Development of conceptual and analytical skills for the self-initiated design research, which will culminate in a written proposal. *Prerequisite*: MAD 615.

**MAD 626 Cultural Issues in Design (2.2); 3 cr.** A seminar that will consider the relevance of culture to design particularly in the Lebanese

context. An introduction to recent theories in various disciplines concerning cultural understanding of design. The course content will change each semester to remain up to date within the profession. *Prerequisite*: MAD 616.

**MAD 627 Design Studio II (2.8); 6 cr.** A visual application of the topics and ideas covered in Cultural Issues in Design. The course is a platform for experimentation and exploration of concepts from the seminars. It focuses on the role of design objects as cultural artifacts and their reflection of social diversity on both designers and audience. It includes creation, reproduction, distribution and reception of messages. *Co-requisite* and/or *Prerequisite*: MAD 626.

**MAD 635 Thesis I (2.2); 3 cr.** This course will support and assist the student in the development and preparation of their research into a comprehensive written document that will complement the visual work to be undertaken in Thesis II. The two components will interrelate to support the theories, hypothesis and conclusions. *Prerequisite*: MAD 627.

**MAD 636 Special Topic (2.2); 3 cr.** This course is given by an invited instructor to explore topics of current interest. *Prerequisite*: MAD 627.

**MAD 645 Thesis II (4.4); 6 cr.** The course provides further guidance during the development of the thesis. The final outcome answers the research study developed in Thesis I. *Prerequisite*: MAD 635.

## **DEPARTMENT OF MUSIC**

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**Chairperson:** *Prof. Fr. Elias Kesrwani*

**Secretary:** *Miss Adelle Dib*

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### **Professor**

*Kesrwani, Elias (Fr.)*, Diplome de Docteur, 1989, *Musicologie*, Sorbone Paris IV, France

### **Assistant Professor**

*Beyrouti, Lola*, Doctorate, 2002, *Musicology*, Université Saint-Esprit, Kaslik, Lebanon

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## **The Degree of Bachelor of Arts in Music Musicology Emphasis**

### **Program Description**

The B.A. program is designed to help students develop competence and expertise in the areas of music history, theory and analysis.

In addition, students will further acquire professional skills in voice and instrument playing.

### **Admission Requirements**

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s) during their first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the degree courses in Musicology and other majors in the departments of the Faculty of Architecture, Art & Design.

Also, prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice and musical background.

### **Graduation Requirements**

To receive the degree of Bachelor of Arts in Music – Musicology emphasis, a student must complete a total of 99 credits with a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. Any major course with a grade of less than C- must be repeated. The 99 credits necessary for graduation are divided as follows:

## Degree Requirements (99 credits)

### **General Education Requirements (GER):** **30 cr.**

The GER courses are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr.

Communication skills in Arabic, One course from: 3 cr.

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

Religion: One course from REG 212, REG 213, REG 314, REG 313 3 cr.

Philosophy, One course from: 3 cr.

PHL 211, PHL 311, POS 345, ENS 205

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212

Citizenship, one course from: 3 cr.

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

Science and Technology, two courses from : 6 cr.

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207

### **Major Requirements** **39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463.

### **Concentration** **24 cr.**

MUM 354, MUS 214, MUS 244, MUS 384, MUS 444, MUS 454, MUS 455, MUS 475.

### **Free Electives** **6 cr.**

**Bachelor of Arts in Music**  
**Musicology Emphasis - Suggested Program (99 Credits)**

**Year I**

**Fall Semester (15 Credits)**

MUS	211	Applied Music Instrumental or Vocal I	1 cr.
MUS	222	Theory of Music I	1 cr.
MUS	223	Sight Singing and Ear Training I	1 cr.
MUS	214	Introduction to Musicology	3 cr.
MUS	224	History and Analysis of Western Music: Medieval – Baroque Period	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

MUS	221	Applied Music Instrumental or Vocal II	1 cr.
MUS	232	Theory of Music II	1 cr.
MUS	233	Sight Singing and Ear Training II	1 cr.
MUS	234	History and Analysis of Western Music: Classical Period	3 cr.
MUS	243	Lebanese Music	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

MUA	222	Arabic Music (Theory, Maqamat, Rhythms and Forms)	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester II (15 Credits)**

MUS	331	Applied Music Instrumental or Vocal III	1 cr.
MUS	342	Harmony I	1 cr.
MUS	343	Sight Singing, Rhythmic Chanting, and Ear Training III	1 cr.
MUS	324	History and Analysis of Western Music: Romantic and Post-Romantic Period	3 cr.
MUM	244	Ethnomusicology	3 cr.
MUS	382	Methodology (research methods) of Music	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester II (15 Credits)**

MUS	341	Applied Music Instrumental or Vocal IV	1 cr.
MUS	352	Harmony II	1 cr.
MUS	353	Sight Singing, Rhythmic Chanting, and Ear Training IV	1 cr.
MUS	334	History and Analysis of Western Music: 20 <sup>th</sup> Century and Contemporary Music	3 cr.
MUS	384	Research Seminar	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Summer Session II (3 Credits)**

—	—	GER	3 cr.
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**Year III**

**Fall Semester III (15 Credits)**

MUS	441	Applied Music Instrumental or Vocal V	1 cr.
MUS	452	Harmony III	1 cr.
MUS	453	Sight Singing, Rhythmic Chanting, and Ear Training V	1 cr.
MUM	354	Organology of Music	3 cr.
MUS	444	Philology of Music	3 cr.
MUS	475	Acoustics of Music	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

MUS	451	Applied Music Instrumental or Vocal VI	1 cr.
MUS	462	Counterpoint and Fugue	1 cr.
MUS	463	Sight Singing, Rhythmic Chanting, and Ear Training VI	1 cr.
MUS	454	Instrumentation	3 cr.
MUS	455	Orchestration	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

## The Degree of Bachelor of Arts in Music Music Education Emphasis

A concentration in music education provides students with qualifications to serve in educational settings.

### Admission Requirements

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s), during their first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the degree courses in Music Education and other majors in the departments of the Faculty of Architecture, Art & Design.

Also, prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice and musical background.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Music – Music Education Concentration, a student must complete a total of 99 credits with a minimum cumulative grade point average of 2.3/4.0 in Major and Core Requirements. Any major course with a grade of less than C- must be repeated. The 99 credits necessary for graduation are divided as follows:

### Degree Requirements (99 credits)

#### General Education Requirements (GER): **30 cr.**

The GER courses are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 **6 cr.**

Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317 **3 cr.**

Religion: One course from: REG 212, REG 213, REG 314, REG 313 **3 cr.**

Philosophy, One course from: PHL 211, PHL 311, POS 345, ENS 205 **3 cr.**

Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212 **6 cr.**

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337 **3 cr.**

Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207 **6 cr.**

**Major Requirements****39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463.

**Concentration****24 cr.**

EDU 313, EDU 355, MUE 335, MUE 446, MUE 476, STA 201, MUE 479, MUE 474.

**Free electives****6 cr.**

**Bachelor of Arts in Music**  
**Music Education Emphasis - Suggested Program (99 Credits)**

**Year I**

**Fall Semester (15 Credits)**

MUS	211	Applied Music Instrumental or Vocal I	1 cr.
MUS	222	Theory of Music I	1 cr.
MUS	223	Sight Singing and Ear Training I	1 cr.
MUS	224	History and Analysis of Western Music: Medieval – Baroque Period	3 cr.
—	—	GER	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

MUS	221	Applied Music Instrumental or Vocal II	1 cr.
MUS	232	Theory of Music II	1 cr.
MUS	233	Sight Singing and Ear Training II	1 cr.
MUS	234	History and Analysis of Western Music: Classical Period	3 cr.
MUS	243	Lebanese Music	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

MUA	222	Arabic Music (Theory, Maqamat, Rhythms and Forms)	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester II (15 Credits)**

MUS	331	Applied Music Instrumental or Vocal III	1 cr.
MUS	342	Harmony I	1 cr.
MUS	343	Sight Singing, Rhythmic Chanting, and Ear Training III	1 cr.
MUS	324	History and Analysis of Western Music: Romantic and Post-Romantic Period	3 cr.
STA	201	Statistics for Social Sciences	3 cr.
EDU	313	Psychology of Education: Learning	3 cr.
MUS	382	Methodology (research methods) of Music	3 cr.

**Spring Semester II (15 Credits)**

MUS	341	Applied Music Instrumental or Vocal IV	1 cr.
MUS	352	Harmony II	1 cr.
MUS	353	Sight Singing, Rhythmic Chanting, and Ear Training IV	1 cr.
MUS	334	History and Analysis of Western Music: 20th Century and Contemporary Music	3 cr.
EDU	355	Methods of Teaching: Early Childhood	3 cr.
MUE	335	Music Education	3 cr.
—	—	GER	3 cr.

**Summer Session II (3 Credits)**

—	—	GER	3 cr.
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**Year III**

**Fall Semester III (15 Credits)**

MUS	441	Applied Music Instrumental or Vocal V	1 cr.
MUS	452	Harmony III	1 cr.
MUS	453	Sight Singing, Rhythmic Chanting, and Ear Training V	1 cr.
MUE	474	Child Theater Music	3 cr.
MUE	446	Teaching Music at the Elementary Level	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

MUS	451	Applied Music Instrumental or Vocal VI	1 cr.
MUS	462	Counterpoint and Fugue	1 cr.
MUS	463	Sight Singing, Rhythmic Chanting, and Ear Training VI	1 cr.
MUE	476	Teaching Music at Secondary Level	3 cr.
MUE	479	Lebanese Folk Educational Music	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

## The Degree of Bachelor of Arts in Music Musimedialogy Emphasis

An avant-garde perspective combining music to all fields of media needed for music. Students will master the art of relaying music information via radio, TV, journalism, and the telecommunication systems.

### Admission Requirements

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s), during their first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the degree courses in Musimedialogy and other majors in the departments of the Faculty of Architecture, Art & Design.

Also, prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice and musical background.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Music – Musimedialogy emphasis, a student must complete a total of 99 credits with a minimum cumulative grade point average of 2.3/4.0 in Major and Core Requirements. Any major course with a grade of less than C- must be repeated. The 99 credits necessary for graduation are divided as follows:

### Degree Requirements (99 credits)

#### General Education Requirements (GER): **30 cr.**

The GER courses are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr.

Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317 3 cr.

Religion: One course from: REG 212, REG 213, REG 314, REG 313 3 cr.

Philosophy, One course from: 3 cr.

PHL 211, PHL 311, POS 345, ENS 205

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212

Citizenship, one course from: 3 cr.

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

Science and Technology, two courses from : 6 cr.

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207

**Major Requirements****39 cr.**

MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 454, MUS 462, MUS 463.

**Concentration****24 cr.**

JOU 310, MUM 350, MUM 437, MUM 448, MUM 457, MUM 474, MUM 245, MUS 444.

**Free Electives****6 cr.**

**Bachelor of Arts in Music**  
**Musimedialogy Emphasis - Suggested Program (99 Credits)**

**Year I**

**Fall Semester (15 Credits)**

MUS	211	Applied Music Instrumental or Vocal I	1 cr.
MUS	222	Theory of Music I	1 cr.
MUS	223	Sight Singing and Ear Training I	1 cr.
MUS	224	History and Analysis of Western Music: Medieval – Baroque Period	3 cr.
MUS	243	Lebanese Music	3 cr.
—	—	GER	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester (15 Credits)**

MUS	221	Applied Music Instrumental or Vocal II	1 cr.
MUS	232	Theory of Music II	1 cr.
MUS	233	Sight Singing and Ear Training II	1 cr.
MUS	234	History and Analysis of Western Music: Classical Period	3 cr.
MUS	245	Musical Forms	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (3 Credits)**

—	—	GER	3 cr.
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**Year II**

**Fall Semester II (15 Credits)**

MUS	331	Applied Music Instrumental or Vocal III	1 cr.
MUS	342	Harmony I	1 cr.
MUS	343	Sight Singing, Rhythmic Chanting, and Ear Training III	1 cr.
MUS	324	History and Analysis of Western Music: Romantic and Post-Romantic Period	3 cr.
MUS	382	Methodology (research methods) of Music	3 cr.
MUM	437	Music Management	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester II (15 Credits)**

MUS	341	Applied Music Instrumental or Vocal IV	1 cr.
MUS	352	Harmony II	1 cr.
MUS	353	Sight Singing, Rhythmic Chanting, and Ear Training IV	1 cr.
MUS	334	History and Analysis of Western Music: 20th Century and Contemporary Music	3 cr.
MUM	350	Audio-Video Workshop	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

MUS	454	Instrumentation	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester III (15 Credits)**

MUS	441	Applied Music Instrumental or Vocal V	1 cr.
MUS	452	Harmony III	1 cr.
MUS	453	Sight Singing, Rhythmic Chanting, and Ear Training V	1 cr.
JOU	310	Newswriting and Reporting I	3 cr.
MUS	444	Philology of Music	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

MUS	451	Applied Music Instrumental or Vocal VI	1 cr.
MUS	462	Counterpoint and Fugue	1 cr.
MUS	463	Sight Singing, Rhythmic Chanting, and Ear Training VI	1 cr.
MUM	457	Radio and Television Music Casting	3 cr.
MUM	474	Music Law	3 cr.
MUM	448	Musical Criticism	3 cr.
—	—	GER	3 cr.

## The Degree of Bachelor of Arts in Music Arabic Musicology Emphasis

بكالوريوس في الموسيقى والعلوم الموسيقية العربية (تُعطى في اللغة العربية)

A concentration in the different schools of Arabic Music, from Al-Kindi and Al-Farabi to modern era. Students will be proficient in at least one oriental instrument.

### Admission Requirements

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s), during the first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the degree courses in Arabic Musicology and other majors in the departments of the Faculty of Architecture, Art & Design.

Also, prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice and musical background.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Music - Arabic Musicology emphasis, a student must complete a total of 99 credits with a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. Any major course with a grade of less than C- must be repeated. The 99 credits necessary for graduation are divided as follows:

### Degree Requirements (99 credits)

#### General Education Requirements (GER): 30 cr.

The GER courses are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr.

Communication skills in Arabic, One course from: 3 cr.

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

Religion: One course from : 3 cr.

REG 212, REG 213, REG 314, REG 313

Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205 3 cr.

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215,

ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215,

ECN 211, ECN 212

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, 3 cr.

POS 319, POS 337

Science and Technology, two courses from :

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201,

HEA 201, MAT 201, MAT 202, MAT 211, NTR 201, PHS 211, STA 202,

STA 210, PHS 207

**Major Requirements****39 cr.**

MUA 222, MUA 254, MUS 211, MUS 221, MUS 222, MUS 223, MUS 228,  
MUS 229, MUS 232, MUS 233, MUS 243, MUS 244, MUS 331, MUS 341,  
MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451,  
MUS 452, MUS 453, MUS 462, MUS 463

**Concentration****24 cr.**

MUA 227, MUA 234, MUA 324, MUA 332, MUA 334, MUA 343, MUA 344,  
MUA 353, MUA 363, MUA 424, MUA 463, MUA 477.

**Free Electives****6 cr.**

**Bachelor of Arts in Music**  
**Arabic Musicology Emphasis - Suggested Program (99 Credits)**

**Year I**

**Fall Semester I (15 credits)**

MUS	211	Applied Music Instrumental or Vocal I	1 cr.
MUS	222	Theory of Music I	1 cr.
MUS	223	Sight Singing and Ear Training I	1 cr.
MUS	228	History and Analysis of Western Music A : Medieval-Baroque-Classical Period	3 cr.
—	—	GER	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
MUA	222	Arabic Music Theory I (Theory, Maqam(s), Rhythms, and Forms)	3 cr.

**Spring Semester I (15 credits)**

MUS	221	Applied Music Instrumental or Vocal II	1 cr.
MUS	232	Theory of Music II;	1 cr.
MUS	233	Sight Singing and Ear Training II	1 cr.
MUS	229	History and Analysis of Western Music B: Romantic-Post Romantic-20 <sup>th</sup> Century and Contemporary Music	3 cr.
MUA	254	History of Arabic Music I	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 credits)**

MUS	244	Ethnomusicology	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester II (15 credits)**

MUS	331	Applied Music Instrumental or Vocal III	1 cr.
MUS	343	Sight Singing Rhythmic chanting and Ear Training III	1 cr.
MUA	343	Oriental Sight Singing 1	1 cr.
MUS	342	Harmony I	1 cr.
MUA	222	Arabic Music Theory II	3 cr.
MUA	234	History and Analysis of Arabic Music II	2 cr.
MUS	382	Methodology (research methods) of Music	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 credits)**

MUS	341	Applied Music Instrumental or Vocal IV	1 cr.
MUA	353	Oriental Sight Singing 2	1 cr.
MUS	353	Sight Singing, Rhythmic Chanting, and Ear Training IV	1 cr.
MUS	352	Harmony II	1 cr.
MUA	332	Arabic Music Theory III	2 cr.
MUA	324	History and Analysis of Arabic Music III	3 cr.
MUS	243	Lebanese Music	3 cr.
—	—	GER	3 cr.

**Summer Session II (3 credits)**

—	—	GER	3 cr.
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**Year III**

**Fall Semester III (15 credits)**

MUS	441	Applied Music Instrumental or Vocal V	1 cr.
MUS	452	Harmony III	1 cr.
MUA	453	Sight Singing , Rhythmic Chanting, and Ear Training V	1 cr.
MUA	363	Oriental Sight Singing and Ear Training III	1 cr.
MUA	334	History and Analysis of Arabic Music IV	2 cr.
MUS	477	Andalusian Music	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III(15 credits)**

MUS	451	Applied Music Instrumental or Vocal VI	1 cr.
MUS	463	Sight Singing , Rhythmic Chanting, and Ear Training VI	1 cr.
MUA	463	Oriental Sight Singing and Ear Training IV	1 cr.
MUS	462	Counterpoint and Fugue	1 cr.
MUA	424	History and Analysis of Arabic Music V	2 cr.
MUS	344	Religious Music (Gregorian, Byzantine, and Syriac)	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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**The Degree of Bachelor of Arts in Music  
Jazz Music Emphasis**

The Jazz music is the 20<sup>th</sup> Century musical phenomenon that combined the American, African, and Indian music and heritage. Developed in the American Continent, it spread around the world. It became evident that such a rich music has been able to touch a great number of music lovers and scholars internationally. It is a musical art with its own language, rhythms, harmony which excelled in its creative improvisation. Our students will become knowledgeable with the masters of such art including composers, performers and schools.

**Admission requirements**

In addition to the University admission requirements, prospective candidates must complete any remedial English course(s), during their first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to the degree courses in Jazz Music and other majors in the departments of the Faculty of Architecture, Art & Design.

Also, prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice and musical background.

**Graduation requirements**

To receive the degree of Bachelor of Arts in Music – Jazz Music emphasis, a student must complete a total of 99 credits with a minimum cumulative grade point average of 2.3/4.0 in Major and Core Requirements. Any major course with a grade of less than C- must be repeated. The 99 credits necessary for graduation are divided as follows:

## Degree Requirements (99 credits)

### **General Education Requirements (GER):** **30 cr.**

The GER courses are distributed as follows:

Communication skills in English, ENL 213 & ENL 223 or ENL 230 6 cr.

Communication skills in Arabic, One course from: 3 cr.

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

Religion, One course from : 3 cr.

REG 212, REG 213, REG 314, REG 313

Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205 3 cr.

Cultural Studies, Two courses from: 6 cr.

HUT 305, HUT 306, PSL 201, SOL 301, MUS 210, FAP 215,

ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215,

ECN 211, ECN 212

Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, 3 cr.

POS 319, POS 337

Science and Technology, two courses from :

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201,

HEA 201, MAT 201, MAT 202, MAT 211, NTR 201, PHS 211, STA 202,

STA 210, PHS 207

### **Major Requirements** **39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232,

MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341,

MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451,

MUS 452, MUS 453, MUS 462, MUS 463.

### **Concentration** **24 cr.**

MUJ 342, MUJ 352 MUJ 311, MUJ 322, MUJ 411, MUJ 422, MUJ 324,

MUJ 325, MUJ 434, MUJ 435, MUJ 474, MUJ 475, MUJ 345, MUJ 485,

MUJ 486, MUJ 494, MUJ 495.

### **Free Electives** **6 cr.**

**Bachelor of Arts in Music**  
**Jazz Music Emphasis - Suggested Program (99 Credits)**

**Year I**

**Fall Semester I (15 credits)**

MUS	211	Applied Music Instrumental or Vocal I	1 cr.
MUS	222	Theory of Music I	1 cr.
MUS	223	Sight Singing and Ear Training I	1 cr.
MUS	228	History and Analysis of Western Music A : Medieval-Baroque-Classical Period	3 cr.
MUS	243	Lebanese Music	3 cr.
—	—	GER	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 credits)**

MUS	221	Applied Music Instrumental or Vocal II	1 cr.
MUS	232	Theory of Music II;	1 cr.
MUS	233	Sight Singing and Ear Training II	1 cr.
MUS	229	History and Analysis of Western Music B: Romantic-Post Romantic-20 <sup>th</sup> Century and Contemporary Music	3 cr.
MUS	382	Methodology (research methods) of Music	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 credits)**

MUA	222	Arabic Music (Theory, Maqamat, Rhythms and Forms)	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester II (16 credits)**

MUS	331	Applied Music Instrumental or Vocal III	1 cr.
MUS	342	Harmony I	1 cr.
MUS	343	Sight Singing Rhythmic chanting and Ear Training III	1 cr.
MUJ	311	Jazz Sight Singing, Rhythmic Chanting, and Ear Training I	1 cr.
MUJ	324	History and Analysis of Jazz Music I	2 cr.
MUJ	342	Jazz Theory I	2 cr.
MUJ	345	Afro-Cuban Music	2 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester II(15 credits)**

MUS	341	Applied Music Instrumental or Vocal IV	1 cr.
MUS	352	Harmony II	1 cr.
MUS	353	Sight Singing, Rhythmic Chanting, and Ear Training IV	1 cr.
MUJ	322	Jazz Sight Singing, Rhythmic Chanting, and Ear Training II	1 cr.
MUJ	325	History and Analysis of Jazz Music II	2 cr.
MUJ	352	Jazz Theory II	2 cr.
MUJ	355	American Ethnic Music	2 cr.
MUJ	356	African and Far East Ethnic Music	2 cr.
—	—	Free Elective	3 cr.

**Summer Session II (3 credits)**

—	—	GER	3 cr.
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### Year III

#### Fall Semester III (14 credits)

MUS	441	Applied Music Instrumental or Vocal V	1 cr.
MUS	452	Harmony III	1 cr.
MUS	453	Sight Singing , Rhythmic Chanting, and Ear Training V	1 cr.
MUJ	411	Jazz Sight Singing , Rhythmic Chanting, and Ear Training III	1 cr.
MUJ	434	History and Analysis of Jazz Music III	2 cr.
MUJ	474	Jazz Ensemble I	1 cr.
MUJ	464	Gospel Chorus	2 cr.
MUJ	485	Jazz Arranging I	1 cr.
MUJ	494	Advanced Re-harmonization	1 cr.
—	—	GER	3 cr.

#### Spring Semester III (15 credits)

MUS	451	Applied Music Instrumental or Vocal VI	1 cr.
MUS	462	Counterpoint and Fugue	1 cr.
MUS	463	Sight Singing , Rhythmic Chanting, and Ear Training VI	1 cr.
MUJ	422	Jazz Sight Singing, Ear Training & Rhythmic Analysis IV	1 cr.
MUJ	435	History and Analysis of Jazz Music IV	2 cr.
MUJ	475	Jazz Ensemble II	1 cr.
MUJ	486	Jazz Arranging II	1 cr.
MUJ	495	Advanced Re-harmonization	1 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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### Minor in Jazz (15 credits)

Selection and preparation of courses for the Minor in Jazz Music at the Department of Musicology at NDU is based on the observation that the contemporary application of jazz music seems more attractive to the younger generations. The number of students inquiring about Jazz music exceeds the number of students inquiring about other minors in Music. This minor will educate students about the background theory and the applied instrumental needed to qualify for job opportunities in entertainment, teaching, festivals, directing, etc.

NDU will be the first university opening this Minor in Jazz Music creating opportunities for students to add to their education an added knowledge in the subject and in accordance with the Mission of the University and its commitment to the philosophy and standards of the American model of liberal arts education.

Our goal is to attract students from other Faculties to learn jazz music language and appreciate the cultural richness of this field. Theory and application will be combined to provide the knowledge and creativity in becoming aware of this music.

Proposal: The NDU minor in Jazz Music comprises **15 credits**. The candidate could be an amateur musician practicing occasionally a musical instrument. Students with a good academic standing of a GPA of 2.0/4 or above may enroll in this minor. They can count only 6 credits that they have taken from the list of the Jazz Music minor requirements while pursuing another major.

#### The Courses required for a Minor in Jazz

MUS	222	Theory of Music I	1 cr.
MUJ	311	Jazz Sight Singing, Ear Training and Rhythmic Analysis I	1 cr.
MUJ	324	History and Analysis of Jazz Music I	2 cr.
MUJ	342	Jazz Theory I	2 cr.
MUJ	474	Jazz Ensemble I	1 cr.
MUJ	485	Jazz Arranging I	2 cr.

**Pool 1: Two courses from the following**

MUJ	352	Jazz Theory II (theory)	2 cr.
MUJ	355	American Ethnic Music (theory)	2 cr.
MUJ	464	Gospel Chorus (practice)	2 cr.
MUJ	486	Jazz Arranging II (practice)	2 cr.

**Pool 2: Two courses from the following**

MUS	232	Theory of Music II (theory)	1 cr.
MUJ	322	Jazz Sight Singing, Ear Training and R. A. II (practice)	1 cr.
MUJ	475	Jazz Ensemble II (practice)	1 cr.
			<b>15 cr.</b>

**Suggested Program – Minor in Jazz – 15 credits****Year I****Fall Semester (4 credits)**

MUS	222	Theory of Music I	1 cr.
MUJ	311	Jazz Sight Singing, Ear Training and Rhythmic Analysis I	1 cr.
MUJ	324	History and Analysis of Jazz Music I	2 cr.

**Spring Semester (5 credits)**

MUJ	342	Jazz Theory I	2 cr.
MUJ	474	Jazz Ensemble I	1 cr.
MUJ	485	Jazz arranging I	2 cr.

**Year II****Fall Semester II (3 credits)**

MU --	Pool 1	2 cr.
MU --	Pool 2	1 cr.

**Spring Semester II (3 credits)**

MU --	Pool 1	2 cr.
MU --	Pool 2	1 cr.
<hr/>		
<b>15 cr.</b>		

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## Undergraduate Courses: Musicology

**MUS 201 Music Archeology (3.0); 3 cr.** Music instruments and inscriptions of the early time.

**MUS 210 Music Appreciation (3.0); 3cr.** A brief survey of the music history in various cultures and ages aiming at introducing students to knowing and appreciating the art of music in its different forms, and instruments. The course relies heavily on listening to music through visual aids relaying the sound to the instrument.

**MUS 211 Applied Music Instrumental or Vocal I (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument or voice. *Prerequisite:* Knowledge of 20% of the Latin program or its equivalent.

**MUS 214 Introduction to Musicology (3.0); 3 cr.** A survey of musicology, its philosophy and objectives, Relating musicology to auxiliary disciplines.

**MUS 221 Applied Music Instrumental or Vocal II (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 211.

**MUS 222 Theory of Music I (1.0); 1 cr.** Last and general survey of Theory of Music aiming to fill up any lack in theory supposed to be achieved.

**MUS 223 Sight Singing and Ear Training I (1.0); 1 cr.** Ear training and sight singing exercises in the keys of C major, A minor, F major, D minor, G major, and E minor.

**MUS 224 History and Analysis of Western Music: Medieval – Baroque Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Medieval, Renaissance, and Baroque periods.

**MUS 228 History and Analysis of Western Music A: Medieval – Baroque - Classical Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Medieval, Baroque and Classical periods. The instructor focuses on explaining the basic concept of the Medieval, Baroque and Classical philosophies relating the art of music to other fine arts of the same period. The process of music languages teaching focuses on reading the scores, playing it on instruments and listening to it recorded.

**MUS 229 History and Analysis of Western Music B: Romantic – Post Romantic – 20<sup>th</sup> Century (3.0); 3 cr.** Survey of composers,

pieces, languages and styles of Romantic, Post Romantic and 20<sup>th</sup> Century periods. The instructor focuses on explaining the basic concept of the Romantic, Post Romantic and 20<sup>th</sup> Century philosophies relating the art of music to other fine arts of the same period. The process of music languages teaching focuses on reading the scores, playing it on instruments and listening to it recorded.

**MUS 232 Theory of Music II (1.0); 1 cr.** The modes (other than the major and minor modes), chords (up to five tone chords), modulation, phrases and the different kinds of cadences, transposition, ornaments and abbreviations, and the contemporary notation. In brief: open horizon on harmony. *Prerequisite:* MUS 222.

**MUS 233 Sight Singing and Ear Training II (1.0); 1 cr.** Sight singing and ear training exercises in keys with up to four alterations. Introduction to the eighth and 16th notes and syncopation, and the cut-time time signature. *Prerequisite:* MUS 223.

**MUS 234 History and Analysis of Western Music: Classical Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of the Classical period.

**MUS 243 Lebanese Music (3.0); 3 cr.** Traditional and popular Lebanese music: forms, metrics, modes rhythms and instruments from early time to the 20th century.

**MUS 244 Ethnomusicology (3.0); 3 cr.** Introduction to music of different cultures and times.

**MUS 245 Musical Forms (3.0); 3 cr.** Genres, styles, forms, structures of music throughout history.

**MUS 324 History and Analysis of Western Music: Romantic and Post-Romantic Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Romantic, and Post-Romantic periods.

**MUS 331 Applied Music Instrumental or Vocal III (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 221.

**MUS 334 History and Analysis of Western Music: 20<sup>th</sup> Century and Contemporary Music (3.0); 3 cr.** Survey of composers, pieces,

and styles of 20th Century and contemporary periods.

**MUS 341 Applied Music Instrumental or Vocal IV (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 331.

**MUS 342 Harmony I (1.0); 1 cr.** Three tone chords, cadences, and modulation. Harmonizing short pieces and the dominant seventh chords. *Prerequisite:* MUS 232.

**MUS 343 Sight Singing, Rhythmic Chanting, and Ear Training III (1.0); 1cr.** Sight singing and ear training exercises in keys with up to 6 alterations in the key signature. Introduction to composite measures, and more in depth applications of syncopation. *Prerequisite:* MUS 233

**MUS 344 Religious Music (Gregorian, Byzantine, and Syriac) (3.0); 3 cr.** Survey of Gregorian, Byzantine, and Aramaic chants and their modes.

**MUS 352 Harmony II (1.0); 1 cr.** 9th, 11th, and 13th chords, diminished seventh chords, and altered chords. *Prerequisite:* MUS 342.

**MUS 353 Sight Singing, Rhythmic Chanting, and Ear Training IV (1.0); 1 cr.** Sight singing and ear training exercises in the key of F with advanced rhythms. *Prerequisite:* MUS 343.

**MUS 382 Methodology (research methods) of Music (3.0); 3 cr.** Introduction to musical sources, principles of research, research styles, citations, and formatting. Art of writing theses and scientific works.

**MUS 441 Applied Music Instrumental or Vocal V (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 341.

**MUS 444 Philology of Music (3.0); 3 cr.** Musical intelligence, development of musical principles, intervals, and scales. *Prerequisite:* MUS 352.

**MUS 451 Applied Music Instrumental or Vocal VI (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument: Knowledge of 50% of the Latin program or its equivalent. *Prerequisite:* MUS 441.

**MUS 452 Harmony III (1.0); 1 cr.** Retardation, pedal points, passing tones, neighboring tones, anticipation, the appoggiatura, and escape notes. *Prerequisite:* MUS 352.

**MUS 453 Sight Singing, Rhythmic Chanting, and Ear Training V (1.0); 1 cr.** Sight singing and ear training exercises in simple keys with advanced rhythms. *Prerequisite:* MUS 353.

**MUS 454 Instrumentation (3.0); 3 cr.** Study of instrumentation and arranging different music to different ensembles. *Prerequisite:* MUS 452.

**MUS 455 Orchestration (3.0); 3 cr.** Art of orchestra composing based on the evolution of instruments and music Schools.

**MUS 462 Counterpoint and Fugue (1.0); 1 cr.** Writing music for more than one voice in the modal styles of the organum, Motet... to fugue. *Prerequisite:* MUS 352.

**MUS 463 Sight Singing, Rhythmic Chanting, and Ear Training VI (1.0); 1 cr.** Sight singing and ear training exercises in all tonalities, and the C-clef. *Prerequisite:* MUS 453.

**MUS 475 Acoustics of Music (3.0); 3 cr.** Principles of sounds. Science of sound and the process of hearing. The study of hall acoustics.

**MUS 484 Project I (3.0); 3 cr.** Presentation of a research project under the supervision of the teacher. *Prerequisite:* MUS 384.

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## Undergraduate Courses: Music Education

**MUE 335 Music Education (3.0); 3 cr.** A survey of the various musical education methods, such as the Orff, Dalcroze, Kodaly, Suzuki and other methods.

**MUE 446 Teaching Music at the Elementary Level (3.0); 3 cr.** Writing lesson plans appropriate to the elementary level and applying them. Learning teaching methods suitable for the age group (6-11).

**MUE 474 Child Theater Music (3.0); 3 cr.** This course is divided into two parts: one theoretical and the other practical. This course requires music majoring students to study and apply the learned material to create and develop

theatrical events for children in neighbouring schools.

**MUE 476 Teaching Music at Secondary Level (3.0); 3 cr.** Writing lesson plans appropriate to the secondary level and applying them. Learning teaching methods suitable for the age group (12-17).

**MUE 479 Lebanese Folk Educational Music (3.0); 3 cr.** This course centers upon a variety of music folk education covering a wide span beginning with the childhood to adulthood. Special emphasis will be on exploring the local folk musical trends and traditions which would drive the educator to focus on local modalities: rhythms and forms.

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## Undergraduate Courses: Musimedialogy

**MUM 347 Computer and Music (3.0); 3 cr.** Introduction to different musical notation and MIDI programs.

**MUM 350 Audio-Video Workshop (3.0); 3cr.** Broadcasting, diffusion, mixers, cameras, editing (Montage from classic to computerized)

**MUM 354 Organology of music (3.0); 3 cr.** Music Prototype Instruments manufacture and evolution through history: Strings, winds..., ear and vocal cords.

**MUM 437 Music Management (3.0); 3 cr.** Business aspects of the arts; selecting suitable musical acts for performances, providing the venue, selecting the program, promoting the act, and selling the tickets, rules and P.R. required for musician relation with consumer public and producers. Music Managements studys the procedures and techniques applied to administer and manage areas in the musical industry such as choirs, classes, concerts, production, festivals, musical events, management of talented artists

through the public marketing of the final production.

**MUM 447 Survey of Art Schools (1.0); 1 cr.** A course surveying the Art schools aiming at preparing the Musical Criticism.

**MUM 448 Musical Criticism (3.0); 3 cr.** Writing musical critiques, reviews, and previews, of musical events.

**MUM 457 Radio and Television Music Casting (3.0); 3 cr.** Performing critiques, reviews, and previews of musical events, live or taped on the radio or the television. Students are required to maintain 2 free hours, one before and the other after the lecturing time of the course.

**MUM 474 Music Law (3.0); 3cr.** The course focuses on the national, regional and international laws protecting the rights of composition, production, distribution, and marketing locally and internationally. Students will be acquainted with the various international organizations protecting intellectual property such as SACEM, WTO and others.

## Undergraduate Courses: Arabic Musicology

- MUA 218 Arabic Prosody (2.0); 2 cr.** ( علم لأوزان الشعر العربية وإيقاعاتها، موسيقى الشعر (العروض
- MUA 222 Arabic Music Theory I (3.0); 3 cr.** (Theory, Maqamat, rhythms and forms).
- MUA 227 Arabic Music Theory II (3.0); 3 cr.** تحليل معمقة للنظريات الموسيقية العربية: (نظريات الموسيقى العربية، المقامات المركبة والإيقاعات المركبة).  
*Prerequisite:*MUA 222
- MUA 228 History and Analysis of Western Music A (3.0); 3 cr.** The course is a condensation of two courses MUS 224 and MUS 234.
- MUA 229 History and Analysis of Western Music B (3.0); 3 cr.** The course is a condensation of two courses MUS 324 and MUS 334.
- MUA 234 History and Analysis of Arabic Music II (2.0); 2 cr.** Al-Kindy - Andalusian music
- MUA 254 History of Arabic music I. (3.0); 3 cr.** A general survey of the history of of Arabic music from the beginning to the contemporary era.
- MUA 318 Qoran Chanting(2.0); 2 cr.** ( الانشاد القرآني)
- MUA 324 History and Analysis of Arabic Music III (3.0); 3cr.** Al-Farabi.
- MUA 332 Arabic Music Theory III (2.0); 2cr.** تحليل مؤلفات عربية كلاسيكية واستخراج النظريات الموسيقية العربية: المقامات المركبة والإيقاعات المركبة منها .
- MUA 334 History and Analysis of Arabic Music IV (2.0); 2 cr.** Ibn Sina, Al-Ikhawan Al-Safa, Ibn Rushd.
- MUA 343 Oriental Sight Singing 1 (1.0); 1 cr.** صولفيج شرقي ١
- MUA 353 Oriental Sight Singing 2 (1.0); 1 cr.** صولفيج شرقي ٢. *Prerequisite:* MUA 343.
- MUA 363 Oriental Sight Singing & Ear Training 3 (1.0); 1cr.** صولفيج شرقي ٣ .  
*Prerequisite:* MUA 353.
- MUA 374 Arabic Instrumental Ensemble (2.0); 2cr.** This course offers the student the possibility to apply within an ensemble the Arabic Music Instrument he plays or the Arabic Chanting he studied, not withstanding that the difference between playing instrument and singing alone would not provide the student the same knowledge and experience compared to the same application in a group.
- MUA 424 History and Analysis of Arabic Music V (2.0); 2cr.** Cairo Congress of Arabic Music 1932-1934 Michael Moushaqa and contemporary theorists.
- MUA 444 History and Analysis of Arabic Music VI (3.0); 3 cr.** Arab Renaissance-Modern Arabic Music.
- MUA 463 Oriental Sight Singing & Ear Training 4 (1.0); 1 cr.** (صولفيج شرقي ٤)  
*Prerequisite:* MUA 363.
- MUA 477 Andalousian Music (3.0); 3 cr.** الوزن الشعري للموشحات الأندلسية والموسيقى الناتجة عنه ( في الحقبة الأندلسية ؛ ومميزات هذه الموسيقى من حيث النغم والشكل والإيقاع وانتقالها من الأندلس الى المغرب العربي ثم (...الى حلب ومصر).

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## Undergraduate Courses: Jazz Music

**MUJ 311 Jazz Sight Singing, Ear Training and Rhythmic Analysis I (1.0); 1cr.** The course deals with the basic sight singing so that students would begin to grasp the specificities of elementary level of Jazz melody and rhythm. Practicing by voice and instrument are an integral part of this course.

**MUJ 322 Jazz Sight Singing, Ear Training and Rhythmic Analysis II (1.0); 1cr.** The course provides students with an intermediate level of learning the specificities of Jazz melody and rhythm based mainly on major and minor. *Prerequisite:* MUJ 311

**MUJ 324 History and Analysis of Jazz Music I, (2.0); 2cr.** The course provides an historical and analytical overview of the Jazz roots and development. It focuses on the works of the master Jazz composers, starting with Oliver till Hawkins.

**MUJ 325 History and Analysis of Jazz Music II, (2.0); 2cr.** The course provides an advanced analysis of the works and performance of the Jazz master composers and performers during the thirties.

**MUJ 342 Jazz Theory I, (1.0); 1cr.** Theory of Jazz Music is divided into two credit courses to be taught in the span of two academic semesters: MUJ 342 and MUJ 352. This course provides in addition to the classical theory of music, the specific foundations of Jazz Theory and harmony. MUJ 342 begins with basic Jazz Theory, the Major Scale and the II-V-I Progression, Chord, Major Scale Harmony, Melodic Minor Scale Harmony, Diminished Scale Harmony, Whole Tone Scale Harmony, to how to practice Scales and Slash Chords. The course will be taken in conjunction with other four semesters courses dealing with Sight Singing and Ear Training.

**MUJ 345 Afro-Cuban Music & Percussion (2.0); 2cr.** The course explores from a historical perspective the various styles of Afro-Cuban Music and Percussion along its dual relationship to the Jazz language. The percussion instruments are all studied and explored in group setting. Afro-Cuban religious ceremonial rhythms, in addition to drum set applications, are also covered. The course also focuses in depth upon the analysis and knowledge of the inner workings of clove and basic techniques on the major battery of Afro-Cuban percussion (congas,

bongo, timbales) in addition to minor battery (maracas, guiro, shakers, cowbells, etc.).

**MUJ 352 Jazz Theory II, (1.0); 1cr.** In continuity with Jazz Theory I, this course includes improvisation from Scales to Music, the Bebop Scales, playing “Outside”, Pentatonic Scales, the Blues, “Rhythm” changes, melodic construction, choir voicing and voice leading. The course aims at exposing students to other important and related topics to include basic music analysis, the blues, standard Jazz forms and typical chord substitutions. *Prerequisite:* MUJ 342.

**MUJ 355 American Ethnic Music (2.0); 2cr.** American Ethnic Music role is considered as the basis (raw material) for creation and development of the Jazz music in addition to contributions offered by African and Asian ethnic music. This American music culture has been a faithful mirror of the pluralistic ethnic American socio-cultural composition.

**MUJ 356 African & Far-East Ethnic Music (2.0); 2cr.** The course studies in depth the basic connecting relations between the African music: melody, modalities and rhythms recognized as the inspirational source of jazz, developed by the Afro-American symbiosis of the people and cultures. The same applies to the Far- Eastern cultural contributions

**MUJ 411 Jazz Sight Singing, Ear Training and Rhythmic Analysis III (1.0); 1cr.** The course offers the students a higher level of learning the sight singing and ear training of Jazz music applied to accidental and ethnic modalities that Jazz had developed. *Prerequisite:* MUJ 322.

**MUJ 422 Jazz Sight Singing, Ear Training and Rhythmic Analysis IV (1.0); 1cr.** This is an advanced level in learning sight singing and ear training of Jazz music. It focuses on reaching and analyzing complex melodies and rhythms. *Prerequisite:* MUJ 411.

**MUJ 434 History and Analysis of Jazz Music III, (2.0); 2cr.** The course focuses on the development of the Jazz music during the fifties and sixties with special emphasis on the works of the masters of this period.

**MUJ 435 History and Analysis of Jazz Music IV, (2.0); 2cr.** Students will be exposed to the

evolution of the Jazz language, styles and forms as presently performed.

**MUJ 464 Gospel Chorus (2.0); 2cr.** The course is designed for all students interested in singing gospel music: styles, ranging from traditional to contemporary schools. A special emphasis will be on phrasing, stamina and singing techniques.

**MUJ 474 Jazz Ensemble I (1.0); 1 cr.** The course offers the students the opportunity to prepare him/herself, accompanied by the instructor, to master, and qualify as a competent member of the Jazz ensemble. The course encompasses the elementary forms of the big band, swing,...

**MUJ 475 Jazz Ensemble II (1.0); 1cr.** This course is an advanced level of Jazz ensemble. The main objective centers upon giving the student the necessary experience from playing in a band and spending longer time into applying the practical side of learning. It develops sight reading skills and creativity in the student so that he/she might be able to perform arrangements and compositions as well as playing in bands. (Students who register for this course should

understand that each teaching hour tends from two to three hours in practice).

**MUJ 485 Jazz Arranging I (2.0); 2cr.** The course provides the student with the basic techniques and methods to arrange existing Jazz melodies for small groups.

**MUJ 486 Jazz Arranging II (2.0); 2cr.** In this advanced level the student will master the techniques regarding voicing, instrument sonorities, capabilities and other extended forms. It focuses on large group. *Prerequisite:* MUJ 485.

**MUJ 494 Advanced Re-harmonization I (2.0); 2cr.** This course provides the students with an overview of the variety of techniques for re-harmonization. *Prerequisite:* Theory of Music II or equivalent.

**MUJ 495 Advanced Re-harmonization II (2.0); 2cr.** The course will focus in-depth on materials stressing the pedal point and the creation of chromatic voicing to enable students develop a personalized relationship with the harmony. *Prerequisite:* MUJ 494

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## **The Degree of Master of Arts in Music**

Graduate study in musicology covers approaches such as historical and ethnomusicological investigation as well as hermeneutics, semiotics and criticism. Students are expected to become familiar with a wide range of areas: methods, philosophies and techniques of historical research methods for analysis of music and ethnomusicological research.

Students enrolled in the program are expected to familiarize themselves with the current state of musicological research and thinking through independent study as well as in consultation with faculty members. Students are also expected to take an active part in the working musicological community at large, through participation in regional, national, and international meetings and concomitant informal contacts with students and faculty at other institutions.

The program aims:

- To develop and sharpen the skills each student needs to realize his or her future specialization intentions;
- To expand each student's conception of what is possible in construing music performance or research through speculation and experimentation;
- To develop a larger and sharper sense of the context in which the students work, and on which it depends by continued study and research.

### **Admission Requirements**

Applicants will normally hold a bachelor degree in music or an equivalent qualification. They need to submit an extended piece of writing on a musical subject in order to provide evidence of writing skills and intellectual ability appropriate for musicological study at master's level. An English test is required except for students majoring in Arabic music. Selection is based on information submitted by the applicant, and by interview when necessary.

### **Transfer**

Although transfer is not generalized, some credits from major universities can be transferable upon admission by the Committee. A transferred course must be passed at the grade of 80 according to the NDU grading and University bylaws.

In addition, applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

### **Graduation Requirements**

To receive the degree of Master of Arts in Music, a student must complete a total of 36 credits with a minimum cumulative grade point average of 3.0/4.0 in all Major Courses.

### **Structure and Time-table**

The program is delivered over four semesters. All students, whether full- or part-time, initially complete the program requirements, and attend the research method course. Classes are normally timetabled in the afternoons.

The program moves from general methodological concerns towards greater specialisations.

1. Research methodology.
2. Academic study. All students are required to take courses in Musical Thought, languages and aesthetics.
3. Dissertation. Here students embark on a programme of independent study, supervised by a dissertation advisor.

**Degree Requirements  
(36 Credits)**

**Major Courses**

**36 cr.**

MUS 615, MUS 616, MUS 617, MUS 625, MUS 626, MUS 627, MUS 636, MUS 637, MUS 638, MUS 639, MUS 699.

**The Degree of Master of Arts in Music  
Suggested Program (36 Credits)**

**Year I**

**Fall Semester I (9 Credits)**

MUS	615	Methodology Research	3 cr.
MUS	616	Seminar in Musicology I	3 cr.
MUS	617	Seminar in Musicology II	3 cr.

**Spring Semester I (9 Credits)**

MUS	625	Seminar in Ethnomusicology I	3 cr.
MUS	626	Seminar in Ethnomusicology II	3 cr.
MUS	627	Art Criticism	3 cr.

**Year II**

**Fall Semester II (9 Credits)**

MUS	636	Aesthetic Philosophy	3 cr.
MUS	637	Modern Music: 1900 - 1960	3 cr.
MUS	638	Serial Music	3 cr.

**Spring Semester II (9 Credits)**

MUS	639	The Music Industry	3 cr.
MUS	699	Thesis	6 cr.

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## Graduate Courses: Music

**MUS 615 Methodology of Research (3.0); 3cr.**

The students learn the art of writing the MA thesis. In this course, students will use a variety of methods, skills and sources including but not limited to qualitative and quantitative information, i.e. documentation techniques. Students will need to focus on the application side of methodological techniques and international theory displaying the ability to analyze, discover and evaluate and using the actual archives, musicological tools and technology and other source or reference material.

**MUS 616 Seminar in Musicology I (3.0); 3cr.**

Original work in areas of current musicological significance will be presented to and reviewed by the seminar as the occasion arises. Emphasis is given to student projects, but work in progress by any member of the seminar may be discussed or a topic of particular controversy examined.

**MUS 617 Seminar in Musicology II (3.0); 3cr.**

Student chose a free subject related to his/her one musical interest that he may specialize in for his/her PhD.

**MUS 625 Seminar in Ethnomusicology I (3.0); 3cr.**

Research Methods in Ethnomusicology: Musical Ethnography, an introduction to the theories and methods of ethnomusicological fieldwork, including changing conceptions of the research site, ethical concerns, interview techniques, the ethnography of musical performance, and data analysis and interpretation. Individual research project required.

**MUS 626 Seminar in Ethnomusicology II (3.0); 3cr.**

Ethnomusicology: *Theory and Structure of oriental or occidental Classical Music*. Students analyze rhythmic and melodic structures of musical genres and forms, examine relative explanatory tools and assess alternate theories of Music material.

**MUS 627 Art Criticism (3.0); 3cr.**

This course studies the methods used by various schools of art criticism throughout history with special emphasis on helping the students to see how technology and the diversity of languages in

modernity have influenced contemporary methods of art criticism.

**MUS 636 Aesthetic Philosophy (3.0); 3cr.**

This course investigates the fundamental nature or soul of art and aesthetic experience. Students explore and scrutinize the artistic theories and aesthetic principles that are presupposed in both Western and Eastern art. This course provides students with both a personal appreciation of aesthetics, as well as a basic ability to apply this appreciation to art criticism.

**MUS 637 Modern Music: 1900 – 1960 (3.0); 3cr.**

A survey of major works from occidental music, spanning the first six decades of the 20th century. Divided into three periods: 1900 to World War I; WWI to WWII; and 1945 to the early 1960s. The following composers receive greatest attention: Schoenberg, Berg, Webern, Ravel, Stravinsky, Prokofiev, Shostakovich, Ives, Britten, Messiaen, Stockhausen, and Carter. By studying the great masters of modern music, the student would learn how to discern their creations in order to produce and apply his/her own particular musical language using new elements of his/her own cultural content.

**MUS 638 Serial Music (3.0); 3cr.**

A critical examination primarily of twelve-tone serialism. Particular emphasis is given to the relations embodied in the twelve-tone set and its transformations, associated invariants, combinatorial, derivation, and aggregate structure, with reference to representative compositional realizations. The dimensions and the levels of structure that do not necessarily manifest set relations are also examined.

**MUS 639 The Music Industry (3.0); 3cr.**

The course will assist the student to invent and invest in music. It prepares the student for a more fruitful interaction with the present techniques and music technology by managing the world of sound from the microphone to the commercial music items.

**MUS 699 Thesis (6.0); 6cr.**

A dissertation of around 15,000 words on an agreed subject is required.

## DEPARTMENT OF ARTS

The Department offers degree programs at both the undergraduate and the graduate levels:

- BA in Fine Arts (102 credits)
- BA in Performing Arts (102 credits)
- BA in Decorative Arts and Crafts (102 credits)
- Master of Arts in Fine Arts (36 credits)

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### The Degree of Bachelor of Arts in Fine Arts

This degree is designed to offer the student a possibility to engage critically with the contemporary Lebanese art culture. It is fundamentally a cross disciplinary pedagogical program which aims at developing in the student, and consequently in the context of a transformed art scene, a desire to reformulate the arts relation with the public sphere. It is a program, which elaborates the tradition of the studio process of art making by equally emphasizing art historical and theoretical studies.

The Bachelor of Arts Degree in Fine Arts spans 3 years of full-time studies. The program totals 102 credits. The Fine Arts program is divided into three full-time phases each of one academic year, (sophomore, junior and senior), commencing each September and concluding each July.

#### Admission Requirements

In addition to the University admission requirements, prospective candidates must complete all major courses with a 2.3/4.0 grade or above. In addition all major courses with a grade of less than C- must be repeated. All remedial courses, must be completed prior to entering the major courses. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Fine Arts and other majors in the Departments of the Faculty of Architecture, Art & Design.

Students, who are computer illiterate, are encouraged to take CSC 201 within their GER or free elective courses before starting their major requirements.

#### Graduation Requirements

To receive the degree of Bachelor of Arts in Fine Arts, a student must complete a total of 102 credits with a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. Any major course with a grade of less than C- must be repeated. The 102 credits necessary for graduation are divided as follows:

#### Degree Requirements: Fine Arts (102 credits)

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
The GER are distributed as follows:	
Communication skills in English, ENL 213 & ENL 223 or ENL 230	6 cr
Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	3 cr.
Religion: One course from REG 212, REG 213, REG 314, REG 313	3 cr.
Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205	3 cr.
Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212	6 cr.
Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337	3 cr.

Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207 6 cr.

**Core Requirements 18 cr.**

Foundation Studies: FAP 211, GDP 212, PDP 216, FAP 221, GDP 222, FAP 225

**Major Requirements 48 cr.**

FAP 311, FAP 312, FAP 313, FAP 314, FAP 315, FAP 321, FAP 322, FAP 323, FAP 324, FAP 325, FAP 411, FAP 412, FAP 413, FAP 414, FAP 415, FAP 421, FAP 422, FAP 423, FAP 424.

**Free Electives 6 cr**

**Bachelor of Arts Degree in Fine Arts  
Suggested Program (102 Credits)**

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**Foundation Studies (Year I)**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.
PDP	216	Introductory Photography I	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

FAP	221	Drawing II	3 cr.
FAP	225	Conceptual Communication	3 cr.
GDP	222	Design Principles II	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session** is left for remedial courses not completed. GER courses could also be taken

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester (17 Credits)**

FAP	311	Painting I	3 cr.
FAP	312	Drawing III	3 cr.
FAP	313	Sculpture I	3 cr.
FAP	314	Conceptual Visual Thinking I	2 cr.
FAP	315	History of Art	3 cr.
—	—	GER	3 cr.

**Spring Semester (17 Credits)**

FAP	321	Painting II	3 cr.
FAP	322	Drawing IV	3 cr.
FAP	323	Sculpture II	3 cr.
FAP	324	Conceptual Visual Thinking II	2 cr.
FAP	325	History of Modern Art	3 cr.
—	—	GER	3 cr.

**Summer Semester (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester (14 Credits)**

FAP	411	Multi-Media & Image Develop. I (Painters/Sculptors)	3 cr.
FAP	412	Print Media	3 cr.
FAP	413	Digital Media I for the Fine Artist	2 cr.
FAP	414	Studio Work I	1 cr.
FAP	415	Conceptual Visual Thinking III	2 cr.
—	—	Free Elective	3 cr.

**Spring Semester (12 Credits)**

FAP	421	Multi-Media & Image Develop. II (Painters/Sculptors)	3 cr.
FAP	422	Installation Art	3 cr.
FAP	423	Digital Media II for the Fine Artist	2 cr.
FAP	424	Studio Work II	1 cr.
—	—	Free Elective	3 cr.

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## The Degree of Bachelor of Arts in Performing Arts

The program is designed to open opportunities for students who wish to major in performing arts. The degree is a combination of interdisciplinary areas, such as acting and directing, dance and choreography as well as music.

### Admission Requirements

In addition to the University admission requirements, prospective candidates must complete the Foundation Studies with a 2.3/4.0 grade or above. In addition all major courses with a grade of less than C- must be repeated. All remedial courses, Math and/or English must be completed prior to entering the major courses. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Performing Arts and other majors in the Departments of the Faculty of Architecture, Art & Design.

Students, who are computer illiterate, are encouraged to take CSC 201 within their GER or free elective courses before starting their major requirements.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Performing Arts, a student must complete a total of 102 credits with a minimum cumulative grade point average of 2.3/4.0 in all major courses. Any core and major course with a grade of less than C- must be repeated. The 102 credits necessary for graduation are divided as follows:

#### Degree Requirements: Performing Arts (102 credits)

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
The GER are distributed as follows:	
Communication skills in English, ENL 213 & ENL 223 or ENL 230	6 cr
Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	3 cr.
Religion: One course from REG 212, REG 213, REG 314, REG 313	3 cr.
Philosophy, One course from PHL 211, PHL 311, POS 345, ENS 205	3 cr.
Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212	6 cr.
Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337	3 cr.
Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207	6 cr.
<b>Core Requirements</b>	<b>18 cr.</b>
Foundation Studies: FAP 211, GDP 212, FAP 214, FAP 221, GDP 222, PDP 216	
<b>Major Requirements</b>	<b>48 cr.</b>
FPA 311, FPA 312, FTA 313, FPA 314, FPA 315, FPA 316, FPA 321, FPA 322, FPA 323, FPA 324, FPA 325, FPA 326, FPA 411, FPA 412, FPA 413, FPA 414, FPA 421, FPA 422, FPA 423, FPA 424.	
<b>Free Electives</b>	<b>6 cr</b>

**Bachelor of Arts Degree in Performing Arts  
Suggested Program (102 Credits)**

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**Foundation Studies (Year I)**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3 cr.
FAP	214	Performing Arts and Music	3 cr.
GDP	212	Design Principles I	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

FAP	221	Drawing II	3 cr.
GDP	222	Design Principles II	3 cr.
PDP	216	Introductory Photography	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session (6 credits)** is left for remedial courses not completed. GER courses could also be taken

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester (16 Credits)**

FPA	311	Acting I	3 cr.
FPA	312	Make-up, Costume and Set Design	3 cr.
FPA	313	History of the Theatre	2 cr.
FPA	314	Movement I	2 cr.
FPA	315	Voice and Text I	2 cr.
FPA	316	Resident Workshop	1 cr.
—	—	GER	3 cr.

**Spring Semester (16 Credits)**

FPA	321	Acting II	3 cr.
FPA	322	Light, Sound, and Multi-Media	3 cr.
FPA	323	Text Analysis	2 cr.
FPA	324	Movement II	2 cr.
FPA	325	Voice & Text II	3 cr.
—	—	GER	3 cr.

**Summer Semester (6 Credits)**

FPA	326	Theater in Performance	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester (15 Credits)**

FPA	411	Acting III	3 cr.
FPA	412	Creative dramatics	2 cr.
FPA	413	Fields of Performances I	1 cr.
FPA	414	Directing I	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester (13 Credits)**

FPA	421	Directing II	3 cr.
FPA	422	Senior Study	3 cr.
FPA	423	Fields of Performance II	1 cr.
FPA	424	Playwriting Workshop	3 cr.
—	—	Free Elective	3 cr.

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## **The Degree of Bachelor of Arts in Decorative Arts and Crafts**

The Bachelor of Arts in Arts and Crafts combines: Arts, Crafts, Ceramics, Jewelry, Metal Working, Leather Working with textile design for fiber arts so as to express the individuals' aesthetic capabilities.

Students learn both traditional and innovative techniques, working in two and three dimensions, with an emphasis on creative approaches to design, use of media including computer applications and technical information.

Ceramics, jewelry, metal working and leather work will be studied and practiced in a workshop environment involving traditional methods and new technologies. Courses in weaving cover four-harness and multi-harness structures, open weaves, dyed and painted warps, tapestry, computer aided techniques and others which allow the properties of color, fiber and texture to interact.

In surface design courses, students will learn processes such as silk-screen printing, resist dying, block-printing and design technologies where patterns are designed on paper and computer.

A variety of non-loom methods will be experienced such as hand-made paper, knotting, basketry, and others.

Projects assigned may include creations such as rugs, wall pieces, installations, garments, or sample designs; ceramics, jewelry; metal worked products and leather goods.

Graduates may design for industry, while others start their own business or build an exhibition portfolio as a Fine Artist within their chosen field of arts and crafts.

### **Admission Requirements**

In addition to the University admission requirements, prospective candidates must complete the Foundation Studies with a 2.3/4.0 grade or above. In addition all major courses with a grade of less than C- must be repeated (see separate Foundation Studies description). All remedial courses, Math and/or English must be completed prior to entering the major courses. Students who fail to meet the above requirements will not be allowed to proceed to the degree courses in Arts & Crafts and other majors in the Departments of the Faculty of Architecture, Art & Design.

Students, who are computer illiterate, are encouraged to take CSC 201 within their GER or free elective courses before starting their major requirements.

### **Graduation Requirements**

To receive the degree of Bachelor of Arts in Arts & Crafts, a student must complete a total of 102 credits with a minimum cumulative grade point average of 2.3/4.0 in all Core and Major Courses. Any major course with a grade of less than C- must be repeated. The 102 credits necessary for graduation are divided as follows:

**Degree Requirements: Decorative Arts and Crafts  
(102 credits)**

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
The GER are distributed as follows:	
Communication skills in English, ENL 213 & ENL 223 or ENL 230	6 cr
Communication skills in Arabic, One course from: ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	3 cr.
Religion: One course from: REG 212, REG 213, REG 314, REG 313	3 cr.
Philosophy, One course from: PHL 211, PHL 311, POS 345, ENS 205	3 cr.
Cultural Studies, Two courses from: HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, MUS 210, FAP 215, ARP 215, BAD 201, ECN 200, COA 359, COA 315, NTR 215, ECN 211, ECN 212	6 cr.
Citizenship, one course from: HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337	3 cr.
Science and Technology, two courses from : AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, CSC 201, HEA 201, MAT 201, MAT 202, MAT 204, MAT 211, NTR 201, PHS 211, STA 202, STA 210, PHS 207	6 cr.
<b>Core Requirements</b>	<b>18 cr.</b>
FAP 211, GDP 212, FAP 214, FAP 221, GDP 222, PDP 216	
<b>Major Requirements</b>	<b>48 cr.</b>
FAC 311, FAP 312, FAC 313, FAP 314, FAP 315, FAC 316, FAC 321, FAP 322, FAC 323, FAC 324, FAP 325, FAC 411, FAC 412, FAP 413, FAC 414, FAC 412, FAC 421, FAC 422, FAC 423, FAP 423, FAC 424.	
<b>Free Electives</b>	<b>6 cr.</b>

**Bachelor of Arts Degree in Decorative Arts and Crafts  
Suggested Program (102 Credits)**

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**Foundation Studies (Year I)**

**Fall Semester (15 Credits)**

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.
FAP	214	Performing Arts and Music	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester (15 Credits)**

FAP	221	Drawing II	3 cr.
GDP	222	Design Principles II	3 cr.
FAP	216	Introductory Photography	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session** is left for remedial courses not completed. GER courses could also be taken

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year II**

**Fall Semester (18 Credits)**

FAC	311	Arts & Crafts I	3 cr.
FAP	312	Drawing III	3 cr.
FAC	313	Technique I	2 cr.
FAP	314	Conceptual Visual Thinking I	2 cr.
FAP	315	History of Art	3 cr.
FAC	316	Studio Art I	2 cr.
—	—	GER	3 cr.

**Spring Semester (16 Credits)**

FAC	321	Arts & Crafts II	3 cr.
FAP	322	Drawing IV	3 cr.
FAC	323	Technique II	3 cr.
FAC	324	Studio Art II	2 cr.
FAP	325	History of Modern Art	3 cr.
—	—	GER	3 cr.

**Summer Semester (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Year III**

**Fall Semester (14 Credits)**

FAC	411	Arts & Crafts III	3 cr.
FAC	412	Multi-Media & Personal Development I	3 cr.
FAP	413	Digital Media I for the Fine Artist	2 cr.
FAC	414	Studio Work I	1 cr.
FAC	415	History of Arts & Crafts	2 cr.
—	—	Free Elective	3 cr.

**Spring Semester (12 Credits)**

FAC	421	Arts & Crafts IV	3 cr.
FAC	422	Multi-Media & Personal Development II	3 cr.
FAC	423	Digital Media II for the Fine Artist	2 cr.
FAC	424	Studio Work II	1 cr.
—	—	Free Elective	3 cr.

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## Minor in Fine Arts (15 credits)

The Studio Arts Minor is meant for students from various majors who intend to acquire artistic skills, enrich self creativity and expand their knowledge of contemporary aesthetic issues.

This program also helps in developing, a proactive rather than reactive mentality, and this, due to enhanced creativity.

The faculty of Architecture, Art and Design offers a flexible minor that allows students to concentrate either on a single artistic discipline such as painting, sculpture, digital media and photography covering a wide range of disciplines mainly meant as a general incentive towards artistic culture.

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### Option A: General Minor in Fine Art (15 cr.)

#### Introductory courses

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.

#### Upper level courses:

To choose three courses from the following:

FAP	311	Painting I	3 cr.
FAP	313	Sculpture I	3 cr.
FAP	224	Digital Art I	3 cr.
PDP	216	Introductory Photography	3 cr.
FAP	315	Printmaking I	3 cr.

### Option B: Emphasis in Painting (15 cr.)

#### Introductory courses

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.

#### Upper level courses:

FAP	311	Painting I	3 cr.
FAP	321	Painting II	3 cr.
FAP	413	Independent Painting Studio I	3 cr.

### Option C: Emphasis in Sculpture (15 cr.)

#### Introductory courses

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.

#### Upper level courses:

FAP	313	Sculpture I	3 cr.
FAP	323	Sculpture II	3 cr.
FAP	414	Independent Sculpture Studio I	3 cr.

### Option D: Emphasis in Digital Art (15 cr)

#### Introductory courses

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.

**Upper level courses:**

FAP	224	Digital Art I	3 cr.
FAP	314	Digital Art II	3 cr.
FAP	411	Multimedia & Image Development I	3 cr.

**Option E: Emphasis in Photography (15cr)**

**Introductory courses**

FAP	211	Drawing I	3 cr.
GDP	212	Design Principles I	3 cr.
GDP	216	Introductory Photography	3 cr.

**Upper level courses:**

PDP	325	Photography in the Arts	3 cr.
PDP	416	Photography and Printing Techniques	3 cr.

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## Undergraduate Courses: Fine Arts

**FAP 101 Introduction to Music and Art (3.0); 3 cr.** Introduces students to techniques and representative works in the music and arts of various periods.

**FAP 201 Intro to Painting (2.2); 3 cr.** Introduces the student to different materials of painting, construction, composition and paint handling.

**FAP 202 Intro to Sculpture (2.2); 3 cr.** A course designed to introduce the student to 3-dimensional forms. Emphasis will be on the concept of modeling, carving, casting and constructing as well as developing new modes of expression.

**FAP 203 Intro to Ceramics (2.2); 3 cr.** This course will allow the students to build forms from clay using basic handbuilding techniques and the potter's wheel.

**FAP 204 Intro to Printmaking (2.2); 3 cr.** Students experiment with classical and contemporary methods for creating multiple originals.

**FAP 205 Intro to Textiles (2.2); 3 cr.** Introduction to weaving and surface design. Basic elements of color, texture, and structure.

**FAP 211 Drawing I (2.2); 3 cr.** Eye and hand coordination are developed through the use of different drawing techniques.

**FAP 214 Performing Arts and Music (2.2); 3 cr.** Designed to enhance student's creativity in discovering the fields of theater, dance and music.

**FAP 215 Art & Culture (1.2); 3 cr.** The course focuses on how artworks reflect the culture, the societies and the times. Students will learn to see, analyze and understand the works of art in relation to the relevant context. This course will be organized thematically and will explore modern issues from historical, cultural and social perspectives.

**FAP 221 Drawing II (2.2); 3 cr.** Drawing is encouraged through observation and application. The human figure is considered in relation to the environment. *Prerequisite:* FAP 211.

**FAP 224 Digital Art I (2.2); 3cr.** An introductory course offering technical instruction in operating different software's on computers such as Photoshop, illustrator and Indesign. The

emphasis is on exploring conceptual and technical approaches specific to digital media arts.

**FAP 225 Conceptual Communication (1.2) 2 cr.** A course based on "visual thinking" exercises for the development of the students' ideas and visual expressions.

**FAP 311 Painting I (2.2); 3 cr.** This is a beginning course dealing with different painting techniques.

**FAP 312 Drawing III (2.2); 3 cr.** This course consists of a complete study of the human anatomy (skeletal & muscular system). It is designed to improve the sense of observation, proportion, structure while drawing the figure in different movement considering its different expressions. *Prerequisite* FAP 221.

**FAP 313 Sculpture I (2.2); 3 cr.** The course is designed to introduce the three dimensions form as well as expose the various sculptural techniques of modeling, carving, casting, mold making. Emphasis will be on clay modeling and Plaster. Traditional & conceptual approach to sculpture will be addressed.

**FAP 314 Conceptual Visual Thinking I (1.2); 2 cr.** This course challenge the students' capacity to conceptualize ideas related to contemporary art and presented by the instructor. The student will be using a variety of materials in order to communicate and develop his or her concept.

**FAP 315 History of Art (3.0); 3 cr.** This course is an exposure to a discussion of the major concepts and developments in the classical period in the history of art.

**FAP 321 Painting II (2.2); 3 cr.** This is an advanced course in painting techniques using modern and contemporary approaches. An investigation of new material techniques using different painting surfaces. *Prerequisite:* FAP 311.

**FAP 322 Drawing IV (2.2); 3 cr.** This course is designed to explore various approaches and techniques through sketching. It consists of a quick and rough representation of an object, a scene, an activity etc... The goal of this course is to develop and explore individual expression. *Prerequisite:* FAP 312.

**FAP 323 Sculpture II (2.2); 3 cr.** This course is a continuation of Sculpture I with more advanced projects. New materials and techniques will be introduced and more individual freedom in choosing the media will be given, which will enhance personal vision and develop individual expression. Prerequisite: FAP 313.

**FAP 324 Conceptual Visual Thinking II (1.2); 2 cr.** This course challenges the students' capacity to conceptualize ideas related to contemporary culture and presented by the instructor. The student will be using a variety of materials in order to communicate and develop his or her concept. Prerequisite: FAP 314.

**FAP 325 History of Modern Art (3.0); 3 cr.** This course is an exposure to a discussion of the major concepts and developments in the modern contemporary history of art.

**FAP 411 Multi-Media & Image Development I (Painters/Sculptors) (2.2); 3 cr.** This is the course where student can choose to work with different techniques from video and computer art to realistic painting and sculpture. This multi-media approach is geared towards the development of a personal vocabulary as well as acquisition of the needed skills. Prerequisites: FAP 321 & FAP 323.

**FAP 412 Print Media (2.2); 3 cr.** General introduction to printmaking techniques such as intaglio: etching, relief, etc... Prerequisites: FAP 321 & FAP 323.

**FAP 413 Digital Media I for the Fine Artist (1.2); 2 cr.** Students are exposed to different softwares pertaining to fine arts. Prerequisites: FAP 321 & FAP 323.

**FAP 414 Studio Work I (0.2); 1 cr.** Third year students will have access to a small but permanent and private space, where they would spend at least 3 hours per week developing their research and work. A faculty member will meet privately with each student to discuss and critique the developed work. Independent studio work is where the student gets a preview of what

it feels to work independently in a studio, not guided by a classroom project or a teacher. This is the place to acquire self-motivation while guided for one year by an encouraging faculty member. Prerequisites: FAP 321 and FAP 323.

**FAP 415 Conceptual Visual Thinking III (1.2); 2 cr.** This course challenges the students' capacity to conceptualize ideas related to contemporary issues and presented by the instructor. The student will be using a variety of materials in order to communicate and develop his or her concept. Prerequisite: FAP 324.

**FAP 421 Multi-Media & Image Development II (Painters/Sculptors) (2.2) 3 cr.** Advanced level of the multi-media approach studied in FAP 411 and is geared towards the development of a personal vocabulary. Prerequisite: FAP 411.

**FAP 422 Installation Art (2.2); 3 cr.** This course attempts to synthesize several intersecting problematics from the practices of painting, sculpture, architecture, theater and theories dealing with the issues of 'spectatorship'. These issues are studied both within the parameters of an interior space and on the site of a public space. Prerequisite: FAP 411.

**FAP 423 Digital Media II for the Fine Artist (1.2); 2 cr.** This course builds on the technical skills acquired during the previous course. Prerequisite: FAP 413.

**FAP 424 Studio Work II (1.4); 1 cr.** This course is a continuation of the previous course FAP 414. Prerequisite: FAP 414.

**FDP 201 Basic Design (2.2); 3 cr.** Introduces students to basics of visual expression and organization. Prerequisite: Sophomore Standing.

**FDP 214 Design for Advertising (2.2); 3 cr.** This course is designed for the communication art students. It emphasizes both the functional and the aesthetic aspects of design. Prerequisite: FDP 201.

**FDP 490 Senior Study (2.2); 3 cr.** Research in any special topic dealing with history of architecture, furniture, antiques, textiles or costume design. Prerequisite: Senior Standing.

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## Undergraduate Courses: Performing Arts

**FPA 311 Acting I (2.2); 3 cr.** English/ Arabic. The course explores movement for the actor and establishes basic physical warm-up techniques that serve the student throughout his or her studies. Includes the actor's exploration of stage space, and building character, through improvisation and text work.

**FPA 312 Make-up, Costume and Set Design (2.2); 3 cr.** An exploration of the collaborative process of designing for the live theatre. (1) Basic techniques of make-up for the stage including corrective make-up, and fantasy make-up. (2) Basic techniques of costume design for the stage including research, patterning, setting, constructing and fitting costumes. (3) Basic techniques of set design for the stage. Emphasis on the analysis of the dramatic text, research and the use of imagery to support the dramatic intent of a particular production, class project will engage students in using a variety of medium to explore how architecture, the arrangement of space, and the elements of design are used dramatically.

**FPA 314 Movement I (1.2); 2 cr.** This course is a physically demanding exploration of the role of the body as a main tool of performance. Training student in making connections with their bodies as a mean of assimilating and reacting to external/ internal stimuli without allowing the mind faculties and/or normative social behavior to mask the process.

**FPA 315 Voice and Text I (1.2); 2 cr.** English/ Arabic. The course consists of breathing and vocal exercises that aim at developing the actor's capacity of vocal expression.

**FPA 316 Resident Workshop (0.2); 1 cr.** English/ Arabic. Workshop with visiting theatre professionals which may include stage directors, designers, choreographers, and professional performers. This workshop leads to student's performances based on workshops, and supervised by the visiting practitioner and co-instructor.

**FPA 321 Acting II (2.2); 3 cr.** English/ Arabic. A continuation of Acting I with specific periods of theatrical and dramatic history explored; for instance, Greek and Roman theatre, Period Drama, Spanish Golden Age, Arabic Modern and others. *Prerequisite:* FPA 311.

**FPA 322 Light, Sound, and Multi-Media (2.2); 3 cr.** This course will consider design and

technology in theatre. It will entail three distinctive parts: (1) Light Design: an exploration of the process of seeing, basic theories of color, and the psychological and physical characteristics of light. This part of the course considers the role of light as a flexible, expressive art medium. (2) Sound Design: the use of sound as a medium of design for the theatre; research and creation of sound score, recording and engineering techniques, live effects and projects in live and studio sound production. (3) Digital multimedia as an option of stage design. Students will be exposed to a variety of media and to techniques such as video, computer animation, and projection. Students will learn how to incorporate such elements within the other elements of stage design through research and projects. *Prerequisite:* FPA 311.

**FPA 323 Text Analysis (2.0); 2 cr.** Through an exploration of various plays from different periods, the course aims at equipping the students with the necessary tools of analyzing, and interpreting texts. *Prerequisite:* FPA 311.

**FPA 324 Movement II (1.2); 2 cr.** A continuation of Movement I. *Prerequisite:* FPA 314.

**FPA 325 Voice & Text II (2.2); 3 cr.** A continuation of Voice and Text I. *Prerequisite:* FPA 315.

**FPA 326 Theatre in Performance (2.2); 3 cr.** English/Arabic This course entails a collaborative process that leads to a production, which will represent the department in festivals. A part from the registered students, the course is open to students from across the program, as well as, to the community. *Prerequisite:* FPA 311.

**FPA 411 Acting III (2.2); 3 cr.** English/ Arabic. A continuation of Acting II with a survey and workshops on different schools of acting; for instance, Stanislavski, Brecht, Boal, Grotowski, Mnouchkine. *Prerequisite:* FPA 321.

**FPA 412 Creative Dramatics (1.2); 2 cr.** English/ Arabic A study of the principles and methods of developing original dramatization with children. Observation of children 's classes in creative dramatics is included. *Prerequisite:* FPA 321.

**FPA 413 Fields of Performances I (1.2); 1 cr.** English/ Arabic. This course offers the students the opportunity to be exposed to fields of performances such as: children theatre, puppetry, mime, musical, "Attitudologie", story telling, stage combat, dance, circus and others.

**FPA 414 Directing I (2.2); 3 cr.** English/ Arabic. Methods, theories, exercise, and practice in directing and presenting theatrical and non-theatrical texts. Special attention will be given to dramaturgy, and composition in space and time. *Prerequisite:* FPA 321.

**FPA 421 Directing II (2.2); 3 cr.** English/Arabic. A continuation of "Directing I" on a more advanced level. *Prerequisite:* FPA 414.

**FPA 422 Senior Study (2.2); 3 cr.** English/ Arabic. Individual study directed by the instructor in a selected area of study. *Prerequisite:* FPA 411.

**FPA 423 Fields of Performance II (1.2); 1 cr.** English/ Arabic. Same structure as "Fields of Performances I". Different fields will be explored. *Prerequisite:* FPA 411.

**FPA 424 Playwriting Workshop (2.2); 3 cr.** English/ Arabic. Focus is on creativity in the writing of theatrical texts. Students will engage in analytical exercises in which they will learn to build characters, construct plot and develop point of view. *Prerequisite:* FPA 411.

**FTA 313 History of Theatre (2.0); 2 cr.**The development of the theatre from its beginning till present.

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### Undergraduate Courses: Decorative Arts and Crafts

**FAC 311 Arts and Crafts I (2.2); 3 cr.** An introduction to the surface design of decorative arts and crafts, including fabric dyes, material and techniques used in traditional and non-traditional methods of surface design for ceramics, jewelry, metal- working, leather work, and fiber arts. Japanese, African, Indonesian techniques for tie-dye, batik, paste resist and hand painting on fabric are also studied. Projects emphasize development of personal expression as well as technical proficiency.

**FAC 313 Technique I (1.2); 2 cr.** This is an overview of traditional and contemporary methods of form making using a variety of materials. Projects explore both technical and conceptual possibilities in two and three-dimensional constructions, and the development of images and ideas.

**FAC 316 Studio Art I (1.2); 2 cr.** This course addresses all aspects of commercial design production, including different rendering techniques, production standards and terminology, and professional practices for rendering the presentation of designs for crafts, ceramics, jewelry, metal working, leather work, and constructed fiber arts. Students develop a work methodology to design flat patterns from conceptual evolution to final presentation. The development of professional portfolios are encouraged. Students may start using computer aided design.

**FAC 321 Arts & Crafts II (2.2); 3 cr.** This course focuses on the development of the creative and technical skills necessary to produce a variety of design; including, tooling leather work, embossing and engraving metal surfaces, applying decoration to ceramics, and printing fabrics. Various medias are explored. Students are encouraged to be experimental and inventive in their approach to using the various surfaces available to the decorative arts and crafts. *Prerequisite:* FAC 311.

**FAC 323 Technique II (1.2); 2 cr.** This course exposes students to the use of the computer as a design tool. Students draw and alter images on the computer as well as develop design units for execution. A number of applications for the computer-generated designs are investigated, including the production of photo-ready positives for portfolio presentation. *Prerequisite:* FAC 313.

**FAC 324 Studio Art II (1.2); 2 cr.** This is a studio course in which all the student's works as well as the many areas of professional practice in the field are directed towards a specific career goal. Some of the topics covered are artists statements, curriculum vitae, portfolio preparation, cover letter and contracts. Professionalism in presentation and documentation is emphasized. Students also investigate marketing and merchandising techniques. *Prerequisite:* FAC 316.

**FAC 411 Arts & Crafts III (2.2); 3 cr.** Students develop skills necessary to translate single graphic images into interconnecting repetitive patterns suitable for use in all commercial and hand-crafted media. *Prerequisite:* FAC 321.

**FAC 412 Multi-Media & Personal Development I (2.2); 3 cr.** Students research information and artists, which are important to their personal development. With faculty assistance, students define and develop a body of work for the whole semester. An active journal related to the work is required. Mid-semester critiques and final review are also required. *Prerequisite:* FAC 321.

**FAC 414 Studio Work I (1.4); 1 cr.** Third year students will have access to a small but permanent and private space, where they would spend at least 3 hours per week developing their research and work. A faculty member will meet privately with each student to discuss and critique the development work. Independent studio work is where the student gets a preview of what it feels to work independently in a studio, not guided by a classroom project or a teacher. This is the place to acquire self-motivation while guided for one year by an encouraging faculty member. *Prerequisite:* FAC 321.

**FAC 415 History of Arts & Crafts (3.0); 3 cr.** An exploration of the beginnings of arts, crafts, weaving, and, textile printing and their evolution through the Middle ages to the present. This study becomes a source for many individual studio projects.

**FAC 421 Arts & Crafts IV (2.2); 3 cr.** Traditional and non-traditional techniques are used to develop conceptual and functional ideas. *Prerequisite:* FAC 411.

**FAC 422 Multi-Media & Personal Development II (2.2); 3 cr.** Students work with faculty to develop a personal body of work that represents depth and breadth of exploration and a maturing sense of aesthetic direction and self-expression. Group and individual discussions emphasize the development of critical vocabulary along with advanced technical exploration. Students plan and prepare setting up and displaying of their major works. A Journal must be kept along with schedules of exhibition details and plans. *Prerequisite:* FAC 412.

**FAC 424 Studio Work II (0.2); 1 cr.** This course is a continuation of the previous course FAC 414. *Prerequisite:* FAC 414.

**FAC 425 Internship (0.2); 1 cr.** Practical training within a professional environment. *Prerequisite:* FAC 411.

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## **The Degree of Master of Arts in Fine Arts (MA)**

The NDU Master of Art in Fine Art is set to prepare graduates who can significantly influence and lead the development of the art professions in Lebanon thus contributing to the country's global position and status. Also, this program is designed to help those students who are willing to develop an interdisciplinary approach to their work within a theoretically informed context and who wish to explore new arenas of practice.

The program offers the opportunity for involvement across the disciplines of design, painting, sculpture, printmaking, photography and computer based fine art.

On the other hand, the Master of Art in Fine Art allows the students to disengage from the daily pursuit of tasks in their fields that are normally carried out under constraints, and which may limit their exploration of the subject in a holistic sense. Instead, the student is able to look in depth into the history, theory, practice and achievements of art on local, national and international levels.

Students follow a number of common courses which focus on the activity of theory and practice at an informed and exploratory level; and, managerial and professional aspects of project research and development.

Groups of students engage in several activities which enable them to produce a significant body of work, including major projects carried out with the support of industry or sponsors, and will demonstrate their mastery of their assignments, self initiated work, disciplines and technology; demonstrating their ability to initiate and manage their own work program and the work of others involved in the production of their ultimate assignments.

The MA in Fine Art program seeks to prepare graduates for professional involvement in art practice and related activities.

The MA courses also aim to provide a stimulating environment for personal development, to highly motivated, committed and talented graduates from a range of Fine Art disciplines.

### **Candidate's Profile**

The Master of Art in Fine Art program is designed for students from the many disciplines that are embraced by the term visual art and / or fine arts, who wish to engage in a period of study beyond the bachelor level, and who wish to raise their intellectual and/or professional experience associated with arts.

Students with bachelor degrees from other disciplines are invited into the program after they have fulfilled undergraduate requirements of the University admission policy.

### **Admission Requirements**

In addition to the University admission requirements for graduate students, the candidate must submit a portfolio of work for assessment and schedule an interview with the MA course advisor.

### **Transfer**

Applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

### **Graduation Requirements**

Students seeking the degree of Master of Art must meet the university graduation requirements and complete 36 credits with a cumulative average of at least 3.0/4.0.

**Degree Requirements Thesis Option  
(36 credits)**

**Major Requirements (GER):** **36 cr.**  
MAA 615, MAA 616, MAA 617, MAA 625, MAA 626, MAA 627, MAA 635,  
MAA 636, MAA 645

**Master of Arts in Fine Arts  
Suggested Program (36 Credits)**

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<b>Year I</b>		
<b>Fall Semester (6 - 12 Credits)</b>		
MAA 615	Art Research Methodologies	3 cr.
MAA 616	Contemporary Issues in Art	3 cr.
MAA 617	Art Studio I	6 cr.
<b>Spring Semester (6 -12 Credits)</b>		
MAA 625	Art Research Development	3 cr.
MAA 626	Cultural Issues in Art	3 cr.
MAA 627	Art Studio II	6 cr.
<b>Year II</b>		
<b>Fall Semester (6 credits)</b>		
MAA 635	Thesis I	3 cr.
MAA 636	Special Topic	3 cr.
<b>Fall Semester (6 Credits)</b>		
MAA 645	Thesis II	6 cr.

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## Graduate Courses: Fine Arts

**MAA 615 Art Research Methodologies (2.2); 3 cr.** A survey of current art thinking and research methodologies to aid the student in the development of projects in response to a critical content framework. The course is intended to offer the student support and direction in the formation of the critical thinking that will inform their written and visual solutions. Includes lectures, readings and discussion of contemporary issues in art in social and cultural contexts.

**MAA 616 Contemporary Issues in Art (2.2); 3 cr.** A seminar in which topics of current relevance to art practice and critical thinking will be explored and analyzed. The course content will change each semester to remain up to date within the profession.

**MAA 617 Art Studio I (2.8); 6 cr.** Art projects in response to the critical content of Contemporary Issues in Arts. Includes the role of artistic objects in contemporary culture and the effect on society, including interaction with potential audiences. *Co-requisite and/or Prerequisite:* MAA 616.

**MAA 625 Art Research Development (2.2); 3 cr.** Development of conceptual and analytical skills for the self-initiated art research which will culminate in a written proposal. *Prerequisite:* MAA 615.

**MAA 626 Cultural Issues in Art (2.2); 3 cr.** A seminar that will consider the relevance of culture to art particularly in the Lebanese

context. An introduction to recent theories in various disciplines concerning cultural understanding of art. The course content will change each semester to remain up to date within the profession. *Prerequisite:* MAA 616.

**MAA 627 Art Studio II (2.8); 6 cr.** A visual application of the topics and ideas covered in Cultural Issues in Art. The course will be a platform for experimentation and exploration of concepts from the seminars. Focuses on the role of art objects as cultural artifacts and their reflection of social diversity on both artists and audiences. Includes creation, reproduction, distribution and reception of messages. *Co-requisite and/or Prerequisite:* MAA 626.

**MAA 635 Thesis I (2.2); 3 cr.** This course will support and assist the student in the development and preparation of their research into a comprehensive written document that will complement the work to be undertaken in Thesis II. The two components will interrelate to support the theories, hypothesis and conclusions. *Prerequisite:* MAA 627.

**MAA 636 Special Topic (2.2); 3 cr.** This course is given by an invited instructor to explore topics of current interest. *Prerequisite:* MAA 627.

**MAA 645 Thesis II (4.4); 6 cr.** The course will provide further guidance during the development of the thesis. The final outcome answers the research study developed in Thesis I. *Prerequisite:* MAA 635.

# FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS (FBAE)

Dr. Elie Yachoui, *Dean*  
Dr. Roy Khoueiri, Assistant Dean

DEPARTMENT OF ACCOUNTING, FINANCE  
AND ECONOMICS

Dr. Mohamad Hamadeh, *Chairperson*

DEPARTMENT OF MANAGEMENT AND MARKETING

Dr. Atef Harb, *Chairperson*

DEPARTMENT OF HOSPITALITY AND TOURISM  
MANAGEMENT

Mr. Ghassan Beyrouthy, *Chairperson*

## FACULTY DIRECTORY

### **Office of the Dean**

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### **Department of Accounting, Finance and Economics**

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### **Office of the Assistant Dean**

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# FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS

## LIST OF FULL-TIME FACULTY MEMBERS

### Professors

*Yachoui, Elie*, Doctorat d'Etat, 1982, *Economics*, Dauphine, France  
*Hobeika, Louis*, Ph.D., 1980, *Economics*, University of Pennsylvania, USA

### Associate Professors

*Hamadeh, Mhamad*, Ph.D., 1998, *Economics*, Syracuse University, USA  
*Mehanna, Rock-Antoine*, Ph.D., 2000, *Business Policy*, Southern University, Baton Rouge, Louisiana, USA  
*Naimy, Viviane*, Ph.D., 2001, *Economics and Finance*, Université de Paris XI, France  
*Hasham, Elham S.*, Ph.D. 2004, *Educational Leadership, Management and Administration*, Leicester University, United Kingdom.  
*Khalil, Antoine*, M.B.A., 1981, *Finance*, Pace University, USA

### Assistant Professors

*Akhras, Caroline*, Ph.D., 2007, *Doctorate in Education*, University of Leicester, UK  
*Bassil, Charbel*, Doctorate, 2010, *Economics*, Cergy Pontoise University, France  
*Bitar, Nicolas*, Ph.D., 2005, *International Finance and Economics*, University of Wisconsin-Milwaukee, USA  
*Frayha, Norma*, M.B.A., 1982, *Accounting*, American University of Beirut, Lebanon  
*Hamadi, Hassan*, Ph.D., 2005, *Finance*, University of Surrey, UK  
*Harb, Atef*, Ph.D., 1996, *Economics-Operations Research*, Ecole Polytechnique de Montreal, Canada  
*Hovivian, Hrair*, M.S., 1984, *Finance and Economics*, Beirut University College, Lebanon  
*Kanbar, Nancy*, Ph.D, 2006, *Environmental Science & Public Policy*, George Mason University  
*Khoueiri, Roy*, Doctorate, 2003, *Economics*, Universite Paris 13, Paris Nord, France  
*Khoury, Rim*, Ph.D, 2009, *International Finance*, Sogang University, Korea  
*Matar-Haddad, Dorine*, Ph.D., 2006, *Management*, University of Leicester, UK  
*Zgheib, Youssef*, Ph.D. 2002, *International Hospitality Management*, University of Strathclyde, Scotland, UK

### Senior Lecturers

*Barakat, Edgard*, M.B.A., 1981, *Marketing*, University of Dayton, USA  
*Karam, Selim*, MBA, 1983, University of Detroit, USA  
*Shaffu, Raja*, M.B.A., 1970, *Finance*, American University of Beirut, Lebanon  
*Zakhour, Kamal*, M.B.A., 1982, *Marketing*, University of Pittsburgh, USA  
*Nakhlé, Vivianne*, M.S., 1993, *Business Administration*, Strayer College, Washington D.C.  
*Menassa, Joyce*, M.S., 1994, *Marketing*, Beirut University College, Lebanon  
*Assaf Carole*, M.B.A., 1995, *Tourism and Marketing*, Notre Dame University-Louaize, Lebanon

### Lecturers

*Beyrouthy, Ghassan*, Doctorate (abd), 2008, *Economics*, Université de Québec à Montréal, Canada  
*Ghaleb, George*, MBA, 2002, *Management*, Notre Dame University, Louaize, Lebanon  
*Gharzouzi, George*, MBA, 1984, University of Tulsa, USA

<sup>1</sup> Leave of Absence for 2010-2011

*Sleilati, Esther*, 1997, *Master of Business Administration in Marketing*, Notre Dame University-Louaize, Lebanon

**Instructor**

*Kaassamany, Talie*, M.B.A., 2002, *Finance*, American University of Beirut, Lebanon

**List of Staff Members**

*Akiki, Dunia*, Secretary, *Department of Hospitality and Tourism Management*

*Cattan, Ghada*, Diploma, ECP-V, 1995, USEK, Lebanon, *Administrative Assistant to the Dean*

*Kanaan, Grace*, Secretarial Studies, 1982, Ecole Pigier pour le Commerce, Gemmezye – *Secretary, Department of Management and Marketing*

*Khalil, Rita*, Executive Secretary, 1989, Clerk

*Moubarak, Kamale*, Certificate, *Business Marketing*, DCE-NDU, *Secretary, Department of Accounting, Finance and Economics*

*Rashed, Maya*, B.S., 2005, *Business Computing*, Notre Dame University-Louaize, Lebanon, *Administrative Assistant to the Director of Graduate Programs*

# FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS

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**Dean:** *Dr. Elie Yachoui*

**Administrative Assistant:** *Mrs. Ghada Cattan*

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## HISTORICAL OVERVIEW

In 1987, the first meeting of the Executive council established the School of Business Administration and appointed Mr. Antoine Khalil as the first Dean. The name was changed from School of Business Administration to the Faculty of Business Administration in 1994 and to the Faculty of Business Administration and Economics in 1996.

The MBA program started in 1993 and the MBA-MIB program was launched in 2004 in collaboration with Bordeaux University, France (courses taught in English).

The student enrollment included 78 students in 1987, and today, it reached 2428 students.

The Faculty of Business Administration and Economics is young compared to its competitors, but it has accomplished a phenomenal achievement in its short history. It has received praise from employers for its rigorous academic work.

## Deans of the Faculty of Business Administration and Economics

Mr. Antoine Khalil 1987-1989

Dr. Roy Khoueiry 1989-1992

Dr. Raymond Mallat 1992-1994

Dr. Hratch Hadjetian 1994-2001

Dr. Antoine Karam 2001-2003

Dr. Elie Yachoui 2003-present

## MISSION, VISION AND VALUES

### Mission

Our mission is to prepare students to become ethical business professionals and leaders with high moral values and with a deep knowledge of the global business environment. The Faculty also prepares its students to pursue their graduate education, in Lebanon and abroad. It places emphasis on developing its curricula and teaching methods to meet the standards of academic rigor and career orientation.

### Vision

The vision of the Faculty of Business Administration and Economics is to be one of the leading business schools in the Middle East known for excellence in learning and for the ability to develop the academic, leadership and entrepreneurial capabilities for our students. The Faculty aims to provide our students with the educational experiences in an environment of technological sophistication and strong conceptual and practical orientations. The Faculty will emphasize the atmosphere that responds to the needs of our diverse student backgrounds.

### Values

Consistent with those of the University, the FBAE is inspired by the following values:

- We are always driven by positive forces
- We are concerned by the public good
- We have full ability to act
- We are in continuous search for knowledge and spiritual values

- Students are our young partners
- We believe in a perpetual renewal of our academic life
- We help realizing talents and potential
- Hurdles make us stronger over time
- We accept differences and look for diversity
- We act to deserve international recognition
- We believe in the multiplication effect of teamwork.

## **FACULTY PROFILE**

The primary objectives of the Faculty are:

- To serve the community by providing programs of study that are professionally oriented, comprehensive, relevant to today's business world, and of high standard.
- To prepare well-rounded business graduates who are equipped with analytical, quantitative, managerial and human skills to make sound and responsible decisions.
- To develop business graduates who are aware of the connection between business-management decisions and political, social, economic, legal, ethical, technological and environmental factors.
- To develop business graduates who are able to identify management and organizational problems, isolate critical factors, generate feasible alternatives and, after critical thinking and analysis, come up with the most appropriate solution.

### **Summary Of Degree Programs Offered**

The Faculty of Business Administration and Economics consists of:

- Department of Accounting, Finance and Economics
- Department of Management and Marketing
- Department of Hotel Management and Tourism

The Department of Accounting, Finance and Economics offers programs leading to the degrees of Bachelor of Business Administration with emphasis on:

- Accounting areas: Accounting Information Systems, General Accounting, Management Accounting and Control, Auditing.
- Finance areas: Investment management, Corporate Finance, Real Estate, banking, Personal Financial Planning, General Finance.
- Economics

The Department of Management and Marketing offers programs leading to the degree of Bachelor of Business Administration (B.B.A.) and the degrees of Bachelor of Business Administration with concentrations on:

- Management
- International Business Management
- Marketing

The Bachelor's degree is a three-year and two-summer program of full-time study.

The Department of Management and Marketing also offers a program leading to the degree of Master of Business Administration (M.B.A.).

The Master's degree follows a two-year full-time program or its equivalent in part-time work.

The Department of Hotel Management and Tourism offers a program leading to the degree of Bachelor of Hotel Management and Tourism. This degree is a three-year and two-summer program of full-time study.

## **Undergraduate Degrees**

### **Admission Procedures and Requirements**

For admission procedures and requirements to the undergraduate degree programs offered by the Faculty of Business Administration and Economics, see the appropriate page numbers in this catalog.

### **Registration Procedure**

For registration procedure for newly admitted and old students, late registration, course load, withdrawal from courses, and change of courses, see the appropriate page numbers in this catalog.

## **Undergraduate Degree Curricula**

### **I. Bachelor of Business Administration (B.B.A.)**

All candidates for the degrees offered by the Department of Accounting, Finance and Economics and the Department of Management and Marketing must satisfy the following curricula:

#### **A- General Education Requirements**

It is strongly believed that graduating business students should have a well-rounded education irrespective of their area of study. For this reason all candidates for a Bachelor's degree must complete a set of courses chosen from a wide range of academic disciplines: religion, English, environmental science, Arabic, computer science, psychology, sociology, history, and political science. The purpose of these courses is to provide basic skills which are essential to success, to clear communication orally and in writing, and to the breadth and depth of education.

#### **B- Required Common Core courses**

All candidates for the B.B.A. degree, irrespective of their area of concentration, must complete the following required common courses. These courses are designed to provide business students with basic management skills - quantitative, behavioral, and technical - which every manager should possess in order to meet the demanding requirements of modern business organizations and to be able to face new challenges. The courses are:

ACO	201	Principles of Accounting I <sup>1</sup>
ACO	202	Principles of Accounting II <sup>1</sup>
ACO	311	Managerial Accounting <sup>2</sup>
BAD	201	Fundamentals of Management
BAD	311	Business Law
BAD	323	Software Tools for Bus. Application
BAD	453	e-Business
BAF	311	Principles of Financial Management I <sup>1</sup>
ECN	211	Principles of Microeconomics <sup>1</sup>
ECN	212	Principles of Macroeconomics <sup>1</sup>
ECN	333	Managerial Economics
MRK	201	Fundamentals of Marketing

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<sup>1</sup> Minimum passing grade is C.

<sup>2</sup> Not required from majors in the Marketing and Management Department. Instead, it is substituted with BAD 433.

STA	206	Applied Statistics for Bus. and Eco. I
STA	207	Applied Statistics for Bus. and Eco. II
MAT	205	Math for Business and Economics II

### **C- Major Requirements**

Those B.B.A. candidates should complete certain concentration courses specified by their respective departments. Together with the common required courses, these courses provide some depth in one particular area of business. For the courses required for each concentration, see the concerned degree requirements.

### **D- Free Electives**

Business students have the opportunity to choose six credits offered by any Faculty to satisfy their non-business interests, diversify their background, and even be of additional business knowledge.

### **Internship Program**

Internship provides an opportunity for business majors to test and utilize theories learned in the classroom. It gives valuable on-the-job experience, and facilitates finding employment. The internship should be related to the students' majors, and should consist of a specific project. Seniors are placed in the offices of cooperating firms under the supervision of staff of the firm. The student earns 1 credit. To earn this credit, the intern should work for at least 350 hours. He/she should keep a record for hours worked signed by his/her direct supervisor. He/she should present periodic reports and at the end of the internship, he/she should write a 10-page report on the internship, verified by the authorized supervisor. It is preferable to have the internship in the summer.

Additional details are available with the internship advisors.

## **II. Bachelor of Hotel Management and Tourism**

All candidates to the degree of Bachelor of Hotel Management and Tourism must satisfy the following curricula:

### **A- General Education Requirements (30 cr.)**

The general education requirements are the same as for the Bachelor of Business Administration, in as long as they contribute to widen the candidate's professional, societal and personal perspectives.

The following list shows the General Education Requirements (GER) for all students in the Faculty of Business Administration and Economics entering Fall 2008 and thereafter.

- |            |  |              |
|------------|--|--------------|
| <b>I.</b>  | <b>Communication Skills</b>  | <b>9 cr.</b> |
|            | <b>English (6 cr.)</b>   |              |
|            | ENL 213: Sophomore English Rhetoric  |              |
|            | And  |              |
|            | ENL 223: Communication Arts  |              |
|            | Or   |              |
|            | ENL 230: English in the workplace  |              |
|            | <b>Arabic (3 cr.)</b>  |              |
|            | ARB 211: Appreciation for Arabic Literature                                      |              |
|            | ARB 212: Advanced Arabic Grammar   |              |
|            | ARB 224 Arabic Literature and Human Thought                                      |              |
|            | ARB 231: Technical Arabic  |              |
|            | ARB 317 Themes of Modern Arabic Literature in Lebanon (20 <sup>th</sup> century) |              |
| <b>II.</b> | <b>Philosophy and Religion</b>   | <b>6 cr.</b> |
|            | <b>Religion (3 cr.)</b>  |              |

REG 212: Religion and Social Issues  
REG 213: Catholicism  
REG 313: The Maronites: Faith and Cultural Heritage  
REG 314: Marriage and Family in the Catholic Church  
**Philosophy + Ethics (3 cr.)**  
ENS 205: Environment, Society and Ethics  
PHL 211: Logic and the Scientific Method  
PHL 311: Ethics and the Modern World  
POS 345: Ethics and Leadership

**III. Cultural Studies and Social Sciences 6 cr.**  
**A – Cultural Studies (3cr.)**

HUT 305: Human Thought to 1500  
HUT 306: Human Thought from 1500 to the present  
MUS 210: Music Appreciation  
FAP 215: Art and Culture  
COA 359: Media and Society  
COA 315: World Cinema Survey  
NTR 215: Foods and Nutrition of World Cultures  
ARP 215: Cultural Themes in Lebanese Architectural

**B – Social Sciences (3cr.)**

PSL 201: Intro to Psychology  
SOL 201: Intro to Sociology  
SOL 301: Introduction to Anthropology  
\*BAD 201: Fundamentals of Management  
\*ECN 200: Survey of Economics  
\*ECN 211: Principles of Microeconomics  
\*ECN 212: Principles of Macroeconomics

**IV. Citizenship 3 cr.**

**Choose one course (3 cr) of the following:**

HIT 211: History of Lebanon & the Middle East  
POS 201: Introduction to Political Science  
POS 210: Government and Politics in Lebanon  
POS 240: Law and Society  
IAF 301: Modern Political Ideologies  
COA 350: Current Issues  
POS 319: Democracy and Human Rights  
POS 337: Dialogue of Civilizations

**V. Science and Technology 6 cr.**

**Choose one course of the following**

**Mathematics/ Statistics/Computer Science (3cr.)**

CSC 201: Computer and their use  
MAT 201: Fundamentals of Mathematics  
MAT 204: Mathematics for Business and Economics I

**Natural Sciences (3cr.)**

PHS 211: Principles of Physics  
PHS 207: Development of Science and Technology  
AST 201: Discovering Astronomy

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\* Not for Business students

CHM 211: Principles of Chemistry  
ENS 201: Introduction to Environmental Science  
ENS 202: Environment and Sustainable Development  
ENS 206: Ecotourism  
BIO 202: Mystery of Life  
BIO 203: Discover Biology  
HEA 201: Health Awareness  
NTR 201: Basic Human Nutrition

### **B- Major Requirements**

All candidates for the Bachelor of Hotel Management and Tourism degree have to complete a 17 3-credit courses as specified by the Department, 2 courses of Lab application, and an Internship to be preferably taken during the summer vacation. These courses provide the core Business, and Hospitality and Tourism operational skills needed prior to choosing a field of concentration.

### **C- Concentration Requirements**

Consists of six 3-credit courses and 1 Internship depending on the chosen concentration and the candidates preferred sub-specialization. These courses are to equip students with advance knowledge in their future professional field.

### **D- Electives**

In addition to the major requirements, candidates need to fulfill 3 credits as free electives according to their personal interests.

### **Academic Rules and Regulations**

*For complete and detailed information regarding academic rules and regulations for the undergraduate degree programs, students should refer to the appropriate page numbers in this catalog. The following additions and amendments pertain to the Faculty of Business Administration and Economics.*

### **Repeating Courses**

A student in the Faculty of Business Administration and Economics cannot register for a core or major course more than three times. At the third attempt, if the student still fails to get a passing grade, he/she should shift to another major or Faculty.

### **Academic Probation**

A student in the Faculty of Business Administration and Economics will be placed on academic probation if at the end of a semester his/her overall GPA falls below 2.0/4.0.

### **Dropping a Major**

A student in the Faculty of Business Administration and Economics who is on probation and fails at the end of a semester or summer session in two or more core and/or major courses, will be asked to change his/her major. Also, a student will be asked to change his/her major or Faculty if his/her GPA in the core and major courses drop below 2.0/4.0 for two consecutive semesters, provided he/she has completed 15 credits in the core and major courses.

### **Readmission**

A business student who was asked to change his/her major or his/her Faculty of study due to poor performance in his/her major will not be readmitted in the same major or in the Faculty.

### **Change of Major**

A change of major to the Faculty of Business Administration and Economics may be approved if the student meets the admission requirements and academic standards established by the Faculty. The student should follow the latest program of the new major.

### **Incomplete Grade**

This grade is used only when the student, for reasons beyond his/her control, is unable to finish the work of the course, and there is reasonable expectation that he/she will successfully complete course requirements. If this grade is not resolved by the end of the eighth week of the following semester, the Registrar's Office will convert the "I" to "F". Granting "I" needs the prior approval of the Dean of the Faculty.

### **Graduate Degree – Master of Business Administration (MBA)**

The graduate program of the Faculty of Business Administration and Economics was established in 1992. It was revised last in June 2010 to be effective for the Fall semester 2010. The program is designed to provide advanced business and management studies for students who have shown distinct academic ability and for practicing managers who aim at higher achievement in their present position.

The objectives of the program are:

- To provide advanced knowledge and skills in management and the capability to apply them;
- To develop the graduates' capacity for independent study and continued professional growth;
- To form graduates who are able to think logically and critically, and are able to apply analytical tools to decision making.
- To form graduates who can adapt to rapidly changing business and technological environments and are able to make flexible adjustments;
- To develop in graduates the desire for continued self-improvement.

Students may attend on a full-time or part-time basis. All the courses are offered starting 5:30 p.m. to allow the student to complete the program on a part-time basis. The program is a two-year full-time course of study or its equivalent in part-time work.

Instructional methods include regular lectures, seminars, case studies, field work, and lectures by guest speakers.

Although the graduate program is designed as a terminal degree program, graduates are well prepared to pursue higher degrees in business and economics.

### **Admission Procedure**

For admission procedures to the graduate degree program offered by the Faculty of Business Administration and Economics, see the appropriate page numbers in this catalog.

### **Admission Requirements**

MBA applicants are accepted based on their undergraduate GPA, work experience, and/or seminars or special business courses taken if applicable.

The MBA remedial courses are:

- ACO 500 Fundamentals of Financial Accounting
- BAM 500 Fundamentals of Management and Marketing
- BAF 500 Fundamentals of Financial Management
- ECN 500 Fundamentals of Micro and Macro Economics

### ***BBA holders with GPA above 3.0/4.0***

- Applicants are admitted.

***BBA holders with GPA between 2.7/4.0 and 2.99/4.0***

- Applicants are admitted on probation, which means that after completing 12 credits the student should obtain a minimum cumulative GPA of 3.0/4.0, otherwise he/she will be dismissed from the program.
- Applicants may be required to take up to three remedial course(s) in which the student got a grade of C or below during his/her undergraduate studies. The student should obtain a minimum grade of B in each remedial course before he/she can pursue the MBA studies.

***None BBA holders with GPA above 3.0/4.0***

- Applicants are admitted with Remedial course(s). The student should obtain a minimum grade of B in each remedial course before he/she can pursue the MBA studies

***None BBA holders with GPA between 2.7/4.0 and 2.99/4.0***

- Applicants are admitted on probation, which means that after completing 12 credits the student should obtain a minimum cumulative GPA of 3.0/4.0, otherwise he/she will be dismissed from the program.
- Applicants should be assigned Remedial course(s). The student should obtain a minimum grade of B in each remedial course before he/she can pursue the MBA studies.

***BBA and none BBA holders with GPA between 2.3/4.0 and 2.69/4.0***

- Applicants are allowed to enroll as special student.
- The student will be given a minimum of 4 remedial courses. The student should pass the remedial courses with a minimum grade of B in each, otherwise he/she will not be accepted to the MBA program.
  - If accepted, the student should obtain a minimum cumulative GPA of 3.0/4.0 upon completing 12 credits, otherwise he/she will be dismissed from the program.
- Minimum professional work experience in the business field is a plus.
- Reputation of the university of origin.

**The GMAT, Graduate Management Admission Test, should be taken prior to completing 18 credits. No Petitions are required prior to the 18 credits. Petitions may be submitted, studied and accepted on exceptional cases after completing 18 credits for one last additional semester.**

**\*Applicants from institutions where English is not the language of instruction, a minimum of 600 in the English Entrance Test.**

**Registration Procedure**

For registration procedure to the graduate program, see corresponding pages in this catalog.

**Graduate Degrees**

Starting with Fall 2010, candidates for the MBA degree can pursue an MBA with a concentration in the following areas: Finance and Economics, Management and Marketing, Human Resources Management, Project and Operations Management. For the non-thesis option, the student should complete 36 semester hours of regular course work plus a 3-credit research project. For the thesis option, the student should complete 33 semester hours of regular course work plus a six-credit thesis.

The details of the graduate degree curricula are given below.

**Academic Rules and Regulations**

*For complete and detailed information regarding academic rules and regulations of the graduate degree programs, students should refer to corresponding pages in this catalog. The following additions and amendments pertain to the Faculty of Business Administration and Economics.*

It is the responsibility of the graduate student to read and observe the academic rules and regulations set by the University and the Faculty. Ignorance of a rule or a regulation is not a justification for not applying that rule.

### **Course Load**

The maximum course load for a full-time student is 12 credits per semester and for a part-time student 6 credits.

### **Academic Advisor**

Each graduate student shall be assigned an academic advisor to assist him/her in the preparation of the plan of study and in selecting a supervisor for his/her thesis. However, it is the student's ultimate responsibility to ensure that all graduation requirements are met.

### **Repeating Graduate Courses**

A graduate course may be repeated only once. In the calculation of the student's cumulative GPA, only the last grade is considered.

### **Dismissal from the Graduate Program**

A graduate student will be dismissed from the program for one of the following reasons:

- Failure to remove probation within two consecutive semesters after being placed on probation.
- Getting two "F"s or three grades below "B".
- Failing the research project or the thesis defense twice.

## DEPARTMENT OF ACCOUNTING, FINANCE AND ECONOMICS

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**Chairperson:** *Dr. Mohamad Hamadeh*

**Secretary:** *Mrs. Kamale Moubarak*

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### **Professors**

*Yachoui, Elie*, Doctorat d'Etat, 1982, *Economics*, Dauphine, France

*Hobeika, Louis*, Ph.D., 1980, *Economics*, University of Pennsylvania, USA

### **Associate Professors**

*Hamadeh, Mohamad*, Ph.D., 1998, *Economics*, Syracuse University, USA

*Khalil, Antoine*, M.B.A., 1981, *Finance*, Pace University, USA

*Naimy, Viviane*, Doctorate, 2001, *Economics and Finance*, Université de Paris XI, France

### **Assistant Professors**

*Bassil, Charbel*, Doctorate, 2010, *Economics*, Cergy Pontoise University, France

*Bitar, Nicolas*, Ph.D., 2005, *International Finance and Economics*, University of Wisconsin-Milwaukee, USA

*El Khoury, Rim*, Ph.D, 2009, *International Finance*, Sogang University, Korea

*Frayha, Norma*, M.B.A., 1982, *Accounting*, American University of Beirut, Lebanon

*Hamadi, Hassan*, Ph.D., 2005, *Finance*, University of Surrey, UK

*Hovivian, Hrair*, M.S., 1984, *Finance and Economics*, Beirut University College, Lebanon

*Kanbar, Nancy*, Ph.D, 2006, *Environmental Science & Public Policy*, George Mason University

*Khoueiri, Roy*, Doctorate, 2003, *Economics*, Universite Paris 13, Paris Nord, France

### **Senior Lecturer**

*Shaffu, Raja*, M.B.A., 1970, *Finance*, American University of Beirut, Lebanon

### **Lecturer**

*Gharzouzi, George*, MBA, 1984, University of Tulsa, USA (NLC)

### **Instructor**

*Kaassamany, Talie*, MBA, 2002, *Finance*, American University of Beirut, Lebanon (SC)

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## **Designing a professional BBA program at the Department of Finance, Accounting, Finance and Economics (DAFE)**

It is somewhat difficult to suggest a typical three years and a half program in Business, because each student's program should be specifically tailored to his or her needs and interest. This revised program in the DAFE lends itself easily to a certain degree of specialization, as is the recent trend with an increasing number of American Universities. Students considering graduate work in business, computer, law or engineering will find the training received in any of the different BBA degrees in the department to be quite valuable.

In Accounting, Finance, and Economics, the Department offers major Business/Economics elective courses for students who want to deepen and sharpen the focus of their major. In addition, students can pursue their course / job interest by working with their respective advisors on choosing faculty elective courses in the following areas: General Finance, Investment, Corporate Finance, Banking, Real Estate Finance, Financial Planning, Accounting Information Systems, General Accounting, Management Accounting and Control, Auditing, and Economics.

Graduate schools of business are now primarily looking for students' background that focuses on both writing and quantitative skills. Thus an appropriate business program would balance liberal arts and business contents, and the judicious use of mathematical concepts, methods, and techniques. The DAFE business curriculum provides such a program.

Not all courses listed in the suggested program below will necessarily be offered in any given semester, or year. New courses will be gradually offered when appropriate and when the human resources needs are secured.

In the required common courses, a new course, E-Business, is now added, a course which is a must for any business curriculum in these days. Also two Math courses for Business and Economics have been added because, as experience has shown, many of our incoming students are ill-prepared in Math.

### **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration – Finance, Accounting, Economics, Financial Engineering or Energy Economics Concentrations must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the common core and major requirements. These 106 credits are divided into: General Education Requirements, Common Core Requirements, Major Requirements, Faculty Electives, Free Electives. In addition, the passing grade for Principles of Accounting I and II, Principles of Microeconomics and Macroeconomics, and Principles of Financial Management I, is "C". The passing grade for remedial Math courses is "C". Students are strongly advised to plan in advance their courses for the entire program.

### **Admissions Requirements**

Applicants must pass the Lebanese Baccalaureate Part II (Any Strand) or its equivalent as identified by the Lebanese Ministry of Education. They are required to sit for an English Entrance Test (EET) or TOEFL. Mathematics Entrance Exam Test is required from all High School students. Upon the Entrance Exam results accepted students may be assigned MAT 001 and / or MAT 100 and / or MAT 105 by the Admissions Committee in light of their scores on the Math entrance exam.

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## **The Degree of Bachelor of Business Administration (BBA)**

### **Objectives**

The purpose of the Bachelor of Business Administration BBA is to provide students with the skills necessary to meet the Business demands of the future in a variety of organizational settings. Specifically, a graduate of this major should be able to:

- Develop initial thinking, analytical, problem solving, and decision making skills.
- Develop human relation skills and successfully apply those skills to a variety of business situations.
- Evaluate and use professional literature.
- Understand the international arena and its place in current business environment.
- Know the components of continuous business process improvement.
- Increase individual knowledge and understanding of self and other in the work environment.
- Develop the ability to plan, organize, direct and control within an organizational environment.
- Understand how modern business functions.
- Develop specific business skills (e.g. Economics, Accounting, Finance, etc...) critical to effective and efficient management.

### **General Description**

A degree in Bachelor of Business Administration in the Department of Accounting, Finance and Economics requires 106 credit hours. No minor or second major is required. A common body of knowledge is required of all students majoring in the Department of Accounting, Finance and Economics. Students are required to supplement the required courses with a number of Business and non-business elective courses. By carefully selecting these elective courses, students may develop a program of study that fits with their interests and career preparation needs. In order to maximize the benefits of their program, students are strongly encouraged to work closely with their assigned advisor in developing their program of study.

If students are unsure of career goals, as a Business Administration student you will have an opportunity to take a variety of business courses to see what type of work might appeal to you most.

### **Career Opportunities**

The career opportunities for Finance, Accounting and Economics majors are varied and challenging. The program of study prepares graduates for decision – making positions in both the public and private sectors. So many graduates accept positions within the banking industry, including local and international commercial banks and governmental agencies. The majority of these opportunities require indepth knowledge of finance and a solid foundation in analytical and communication skills. Graduates have also found career opportunities with major corporations and private enterprises here in Lebanon and specially in the Gulf countries. Below are just a few of the careers from which students may choose:

#### **Finance**

- Corporate Financial Manager
- Commercial Bank Officer
- Financial Planner
- Management Consultant
- Financial Analyst
- Investment Manager
- Bank Examiner

- Credit Analyst
- Loan Officer
- Real Estate Appraiser and Broker
- Estate Management Officer
- Real Estate Developer
- Real Estate Consultant
- Stockbroker
- Mortgage lending
- Insurance: sales representative
- Securities: sales representative
- Investment counselors

### **Accounting**

- Corporate Accountant
- Public Accountant
- Tax Accountant
- Auditor
- Accountant Consultant
- Tax Reporter and Planner
- Accounting System Designers
- Accounting System Auditors
- Industrial Accountants

### **Economics**

- Economics Department of Large Corporations
- Government and Government Agencies; Departments of treasury, agriculture and labor
- Career in Financial Institutions
- Career in Research and Consulting Firms
- Career in the Central Bank as bank examiner and the Public Sector inside and outside Lebanon such as Foreign Service

### **Energy Economics**

- Governments
- Utilities
- Energy companies
- Consulting firms
- Organizations concerned with energy

### **Financial Engineering**

- Financial Market as dealers
- Foreign Exchange Firms
- Financial Risk Analysis and Management
- Stock-Brokering
- Training Management
- Portfolio Management
- Mergers and Acquisitions
- Investment Analysis
- Central Banking
- Banking
- Financial Product Development
- Insurance Companies

- Diversified Financial Services Companies

### **Activities**

Faculty members at the Department of Accounting, Finance and Economics believe it is important to expose you to a variety of practical and theoretical aspects of business, then give you an opportunity to apply your newly gained knowledge in business situations.

For that reason, the Department along with the Student Affairs Office, sponsor student organizations. In addition the Department uses faculty help to place students in internships, and invites visiting executives and scholars to campus.

Being involved in organizations will allow students to plan, budget and share responsibilities for projects and events. You can learn to manage meetings, deal with conflict, motivate peers of different personalities, express opinions and follow through to the last detail. Student organizations also provide the opportunity to start networking with business professionals and to meet students with similar interests.

As students progress in their studies, they will participate in an internship. Internships give students an opportunity to apply classroom knowledge in a variety of part-time, business – related jobs. Students might be placed in an entry – level position in a bank, corporation or insurance company. Following graduation, some students find full-time positions with the companies that sponsor their internships.

### **General Education Requirements**

**30 cr.**

### **Required Common Core Courses**

**48 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, ACO 311, BAD 201, BAD 311, BAD 323, BAD 453, BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, MAT 205, STA 206, STA 207

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<sup>1</sup> Passing grade is “C”

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## The Degree of Bachelor of Business Administration – *Banking and Finance*

The major in Banking and Finance is designed to develop an understanding of the financial aspects of the contemporary economy, the operations of financial institutions and markets, and the financial management of business operations. The major develops analytical skills in the planning, management and control of financial resources to achieve the financial goals of the organization. Central to this task is the evaluation of the risk and return consequences of finance decisions. The major financial decisions studied are selection of assets, (equipment, buildings, inventories, securities, etc,...) and among financing alternatives (selling stock, borrowing from a bank, issuing bonds, etc...)

Banking and Finance majors will become familiar with computer applications in finance, and will know how to access and utilize financial information; they are increasingly taking and passing the Chartered Financial Analysts (CFA) examination and the Certified Financial Planner (CFP) examination. The program in Finance and related fields provide the practical and theoretical background needed to succeed in the dynamic and fascinating world of domestic and international finance.

### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Required Common Core Courses** **45 cr.**

**Major Requirements (MR)** **25 cr.**

BAF 312, BAF 315, BAF 321, BAF 433, BAF 438, BAF 450, BAF 481

Choose two (2) Faculty Elective Courses from the following:

BAF 317, BAF 319, BAF 325, BAF 352, BAF 421, BAF 452, BAF 444, BAF 461, BAF 485, ACS 310, ECN 313, ACO 411, BAD 425, ECN 431, ECN 435.

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the university.

**Note: In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.**

The Finance major highlights six (6) areas where students, along with their respective advisors, can develop their business elective courses in a way to meet their potential job / career requirements. The following six areas are:

- Investments Management (*IM*)
- Corporate Finance (*CF*)
- Real Estate Finance (*REF*)
- Banking (*B*)
- Personal Financial Planning (*PFP*)
- General Finance (*GF*)

All Banking & Finance majors must complete an Internship course which provides field experience prior to graduation.

*Investment Management (IM)* has been revolutionized by rapid advances in computerization. Modern investment theory of portfolio selection, asset pricing models, pricing of options and other derivative securities, and views on the efficiency of security markets have contributed to major improvements in investment management practice.

Other Finance majors can choose the elective courses to meet the requirements of career such as *Corporate Finance (CF)* Corporate financial officers oversee the efficient allocation of funds within enterprises and borrow funds on the most favorable terms possible through banks, corporate commercial papers, bonds, or new stock issue. Corporate financial managers examine corporate policies toward dividends, debt leverage, and agency conflicts between firm stakeholders.

The *Real Estate (RE)* courses deal with the acquisition, ownership and management of real assets such as shopping centers, office buildings, industrial parks, and housing. Majors acquire broad, multidisciplinary background designed to make them effective in controlling assets with significant wealth. Knowledge of financial management is initial to the success of any real estate activity – brokerage, development, property management or mortgage lending. Throughout the various areas of real estate and finance, there exists a natural interrelationship between the two disciplines. The Real Estate major prepares students for a broad range of international careers in consulting, trust and estate management, appraisal, brokerage, real estate development and government.

The banking industry has undergone massive transformations due to competition from non-bank financial institutions. The *Banking (B)* area of interest is established to provide the Banking community with timely Research and source of new employees who recognize the specialized needs of financial institutions and the banking industry.

NDU banking courses provide students with the necessary qualifications and preparation to meet the industry new demands. NDU students, with their knowledge of more than one language, are ideally qualified for employment in international banking. Banking and Finance graduates assume increasingly responsible positions over time and move up the management ranks.

Financial services are one of the most rapidly growing and dynamic fields in finance. It includes Banking, Securities, Insurance and Personal Financial Planning. *Personal Financial Planning (PFP)* is a new service industry which has sprung from its insurance, securities and banking roots to become an important link between a variety of individuals and businesses and the broad spectrum of finance information. Students interested in working directly with people to organize their finances and plan for their financial futures should consider a major in Personal Financial Planning. Students need to know about all areas of business and finance and they must be able to deal with quantitative measures and information, as well as understand sophisticated theoretical concepts.

In the *General Finance (GF)* field, students can choose courses among several courses. By carefully selecting these courses, students may develop a program of study that fits with their interests and career preparation needs. In order to maximize the benefit of their programs, students are strongly encouraged to work closely with their assigned advisor in developing their program of study.

**Bachelor of Business Administration – Banking and Finance  
Suggested Program (106 Credits)**

**Fall Semester I (15 cr.)**

ACO	201	Principles of Accounting I (CCR) <sup>1</sup>	3 cr.
BAD	201	Fundamentals of Management (CCR)	3 cr.
CSC	201	Computers and their use (GER) <sup>2</sup>	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 cr.)**

ACO	202	Principles of Accounting II (CCR)	3 cr.
ECN	212	Principles of Macroeconomics (CCR)	3 cr.
MAT	205	Math for Business & Economics II (CCR)	3 cr.
STA	206	Applied Statistics for Bus. & Econ. I (CCR)	3 cr.
ENL	230	English in Workplace	3 cr.

**Summer Module I (6 cr.)**

MRK	201	Fundamentals of Marketing (CCR)	3 cr.
ECN	211	Principles of Microeconomics (CCR)	3 cr.

**Fall Semester II (15 cr.)**

BAF	311	Principles of Financial Management I (CCR)	3 cr.
STA	207	Applied Statistics for Bus. & Econ. II (CCR)	3 cr.
BAD	323	Software Tools for Business Application (CCR)	3 cr.
ARB	211	Appreciation of Arabic Literature (GER)	3 cr.
or			
ARB	231	Technical Arabic (GER)	3 cr.
ENS	201	Introduction to Environmental Science (GER)	3 cr.

**Spring Semester II (15 cr.)**

BAF	312	Principles of Financial Management II (MR) <sup>3</sup>	3 cr.
BAF	315	Financial Institutions & Markets (MR) <sup>3</sup>	3 cr.
ECN	333	Managerial Economics (CCR)	3 cr.
NTR	201	Basic Human Nutrition (GER)	3 cr.
—	—	(GER)	3 cr.

**Summer Module II (9 cr.)**

BAD	311	Business Law (CCR) <sup>1</sup>	3 cr.
BAF	321	Fundamentals of Investments (MR)	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 cr.)**

ACO	311	Managerial Accounting (CCR)	3 cr.
BAF	433	International Business Finance (MR)	3 cr.
—	—	Faculty Elective	3 cr.
—	—	Faculty Elective	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (16 cr.)**

BAF	450	Futures & Options (MR)	3 cr.
BAF	438	Credit Analysis and Commercial Lending(MR)	3 cr.
BAD	453	E-Business (CCR)	3 cr.
—	—	Free Elective	3 cr.
BAF	481	Finance Internship (MR)	1 cr.
REG	212	Religion and Social issue (GER)	3 cr.
or			
REG	213	Catholicism (GER)	3 cr.

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<sup>1</sup>Common Core Requirements

<sup>2</sup>General Education Requirements

<sup>3</sup>Major Requirements

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**Minor in Finance (15 credits)**

A Minor in Finance will provide students with a broad understanding of the principles and practices needed to make financial decisions in corporations. The student who graduates with a minor in Finance will be able to:

- Master the current methods for analyzing, interpreting, and reporting financial information
- Estimate short-and-long terms financing needs
- Prepare and analyze capital budgeting projects
- Describe the different dimensions of international finance and trade
- Think critically, analyze information, and solve problems related to complex financial crises
- Use computers and financial software for financial analysis and presentation

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ACO 201	Principles of Accounting I	3	—
BAF 311	Principles of Financial Management I	3	ACO 202, STA 206
BAF 312	Principles of Financial Management II	3	BAF 311
	<b>CHOOSE TWO OF THE FOLLOWING</b>		—
BAF 321	Fundamentals of Investments	3	BAF 312, STA 207
BAF 315	Financial Institutions & Markets	3	BAF 311
BAF 352	Commercial & Investment Banking	3	BAF 312, BAF 315
BAF 421	Advanced Investment Finance	3	BAF 321
BAF 433	International Business Finance	3	BAF 311, ECN 212
BAF 438	Credit Analysis & Commercial Lending	3	BAF 312
BAF 450	Futures & Options	3	BAF 321
BAF 452	Financial Modeling	3	BAD 323, BAF 321
BAF 485	Advanced Corporate Finance	3	Senior standing
Total		15 cr	

**Suggested Program:**

First semester

ACO 201: Principles of Accounting I

Second semester

BAF 311: Principles of Financial Management I

Third semester

BAF 312: Principles of Financial Management II

Fourth semester

Two minor elective courses

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## Undergraduate Courses: Banking and Finance

**BAF 311 Principles of Financial Management I (3.0); 3 cr.** An introduction to the role of the financial manager and to the techniques for obtaining and using funds to maximize the value of the firm. Topics covered include: discounted cash-flow analysis; valuation methods; risk and rates of return; financial analysis and forecasting; financial planning and control; working-capital policy; cash and marketable securities management. The passing grade for this course is "C". *Prerequisites:* ACO 202, STA 206.

**BAF 312 Principles of Financial Management II (3.0); 3 cr.** This course is the continuation of BAF 311. Topics covered include: capital budgeting techniques; project cash flows and risk; the cost of capital, capital structure and leverage; dividend policy; common stock financing; long term debt; short-term financing; inventory and credit management. *Prerequisite:* BAF 311.

**BAF 315 Financial Institutions and Markets (3.0); 3 cr.** An introduction to the objectives and roles of various financial institutions and markets. Topics covered include: various financial intermediaries and their function in the economy; determination of interest rate levels; financial markets; financial claims; distribution channels for financial products; performance analysis and foreign exchange. *Prerequisite:* BAF 311.

**BAF 317 Personal Financial Planning: Concepts and Principles (3.0); 3 cr.** Designed to serve the personal finance needs of students regardless of their major fields. Practical applications in personal and family financial problems planning, including credit money management, buying, borrowing, banking, insurance, savings, investments, taxation, estate planning and home ownership. Discusses the method integrating these disciplines into an overall financial plan tailored to individual needs. *Prerequisite:* BAF 311, Junior Standing.

**BAF 319 Estate Planning Techniques (3.0); 3 cr.** This course, which is complementary to Personal Financial Planning, concentrates on taxation and estate planning. These concepts are applied to special situations and techniques are described for minimizing taxes and achievement of client objectives. Planning for retirement plan distributions also is explored. Tax system is described covering both estate and gift taxes.

Further management of property and its disposition is described with use of such tools as of wills and wills substitute such as life insurance. This course also reviews various business structuring and the special issues associated with creation, retention or disposition of a business interest in a family's financial planning. *Prerequisite:* BAF 317.

**BAF 321 Fundamentals of Investments (3.0); 3 cr.** Principles and practices involved in the field of investment. Topics covered include: sources and determination of holding period; determination of security prices; capital asset pricing models; portfolio selection problems; investment companies. *Corequisites:* BAF 312, STA 207.

**BAF 325 Real Estate Principles (3.0); 3cr.** Deals generally with urban real estate with emphasis on principles and practices of the real estate business. The course will include discussion of markets and methods of financing real property. An investment strategy will be developed. The real estate market in Lebanon will be emphasized. *Prerequisite:* BAF 312.

**BAF 352 Commercial and Investment Banking (3.0); 3 cr.** This course is designed to equip students with principles and tools which allow them to tackle realistic risk management problems associated with financial institutions. Another objective is to provide students with an understanding of the fundamental principles and concepts that underlie the Investment Banking process including market making, underwriting, and syndication. Also this course will examine recent trends in regulations and product innovation by both commercial and investment banks. This includes origination, underwriting, and distribution of new securities to the public. In addition formulation of objectives and policies of banks are discussed, including management of assets & liabilities, sources and uses of funds, administration of reports and loans and evaluation of bank performance. *Prerequisites:* BAF 312, BAF 315.

**BAF 421 Advanced Investment Finance (3.0); 3 cr.** An advanced level treatment of current theory and practice relating to contingent securities, speculative markets and portfolio management issues. Emphasis on recent innovations and developments in financial markets, including options, futures and portfolio insurance, etc... *Prerequisite:* BAF 321.

**BAF 433 International Business Finance (3.0); 3 cr.** Discussion of the environment and problems facing a financial manager in a multinational enterprise. Topics covered include: balance of payments; foreign exchange markets; transactions and operating exposure; financing of international trade; international financial markets; risk evaluation in foreign direct investments; international banking. *Prerequisites:* BAF 311, ECN 212.

**BAF 438 Credit Analysis and Commercial Lending (3.0); 3 cr.** Focuses on how organization of the commercial lending business contributes to bank profitability; covers the commercial lending process from the initial loan request through collection. Topics include loan interviewing and credit investigation, credit analysis, structuring and negotiation, documentation and closing, problem loans, and follow-up. Also examination of analytical techniques to assume the role of credit officer. *Prerequisite:* BAF 315 & BAF 321.

**BAF 444 International Banking (3.0); 3 cr.** Internationalization of banks to meet the global financial needs of multinational activities. Theory and practice of international banking; subjects include current international monetary and financial environment and typical problems of international banking from a management perspective. Interaction with international financial markets and financial centers. *Prerequisite:* BAF 312.

**BAF 450 Futures and Options (3.0); 3 cr.** Provides an introduction to financial futures such as currency futures, swaps and interest rate futures. Explore the markets on which they are traded. Also analyzes pricing of options and other derivative securities. Includes the leverage and risk aspects of options. *Prerequisite:* BAF 321.

**BAF 452 Financial Modeling (3.0); 3 cr.** This course is wrap-up of financial, statistical and computational concepts and techniques needed in the field of Financial Engineering and Computational Finance. Topics include: Introduction to Financial programming in VB, overview of statistical techniques used in Finance (Regression, Time Series, Sampling, Data Analysis), and overview of financial concepts, such as financial price simulation, and cash flow maps. *Prerequisites:* BAD 323, BAF 321.

**BAF 461 Special Topics in Finance (1.0 - 3.0); 1-3 cr.** Various topics in Finance are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offerings, offered only when faculty are available and sufficient student interest exists. *Prerequisite:* Senior Standing.

**BAF 481 Finance Internship; (1.0) 1 cr.** Interns will have the opportunity to develop new and practical skills by working under the direction and supervision of an experienced practitioner. The internship will be done in cooperating and department approved firms. A minimum of 150 hours of internship is required. *Prerequisite:* Senior Standing.

**BAF 485 Advanced Corporate Finance (3.0); 3 cr.** This course is about corporate financial management from the stand point of the general manager. Integration of financial operations with other operations of a business unit, including working capital management, financial planning and financial control, capital budgeting, the theory of corporate finance. *Prerequisite:* Senior Standing.

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## The Degree of Bachelor of Business Administration (BBA)

### Financial Engineering Emphasis

Financial Engineering is the application of the mathematical tools and computational methods commonly used in engineering to financial problems, especially the pricing and hedging of derivative instruments. It involves the development and creative application of financial theory and Financial instruments such as forwards, futures, swaps, options and related products to structure solutions to complex financial problems and to exploit Financial opportunity.

Financial Engineering is not a tool, It is a profession that uses tools, of which derivatives are one. Importantly, the term “Analysis” means to “decompose in order to understand”. The term “Engineering” means “Build”.

### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Common Core Requirements** **42 cr.**

ACO 201, ACO 202, ACO 311, BAD 201, BAD 323, BAD 453, BAF 311, ECN 211, ECN 212, ECN 333, MRK 201, MAT 205, STA 206, STA 207.

**Major Requirements** **34 cr.**

BAF 312, BAF 321, BAF 421, BAF 450, BAF 452, CSC 216, CSC 372, FEN 431, FEN 442, FEN 455, FEN 463, MAT 336.

*Note: In rare cases graduating students may petition to substitute one Business course for another if the required Business course is not offered in any semester.*

**Bachelor of Business Administration (BBA)**  
**Financial Engineering Emphasis Suggested Program (106 Credits)**

**Fall Semester I (15 cr.)**

ACO	201	Principles of Accounting I (CCR) <sup>1</sup>	3 cr.
BAD	201	Fundamentals of Management (CCR) <sup>1</sup>	3 cr.
ECN	211	Principles of Microeconomics (CCR) <sup>1</sup>	3 cr.
ENL	213	Sophomore Rhetoric (GER) <sup>2</sup>	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 cr.)**

ACO	202	Principles of Accounting II (CCR) <sup>1</sup>	3 cr.
ECN	212	Principles of Macroeconomics (CCR) <sup>1</sup>	3 cr.
ENL	230	English in Workplace (GER) <sup>2</sup>	3 cr.
MAT	205	Math for Business and Economics I (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Summer Session I (9 cr.)**

BAF	311	Principles of Financial Management I (CCR) <sup>1</sup>	3 cr.
STA	206	Applied Statistics for Business and Economics I (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Fall Semester II (15 cr.)**

ACO	311	Managerial Accounting (CCR) <sup>1</sup>	3 cr.
BAF	312	Principles of Financial Management II (MR) <sup>3</sup>	3 cr.
CSC	201	Computers and their use (GER) <sup>2</sup>	3 cr.
STA	207	Applied Statistics for Business and Economics I (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Spring Semester II (16 cr.)**

MAT	336	Numerical Methods for Finance (MR) <sup>3</sup>	3 cr.
MRK	201	Fundamentals of Marketing (CCR) <sup>1</sup>	3 cr.
BAF	321	Fundamentals of Investments (MR) <sup>3</sup>	3 cr.
CSC	216	Computer Programming I (MR) <sup>3</sup>	3 cr.
CSC	372	Mathematic Software Packages (MR) <sup>3</sup>	1 cr.
BAD	323	Software Tools for Business Applications (CCR) <sup>1</sup>	3 cr.

**Summer Session II (6 cr.)**

ECN	333	Managerial Economics (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Fall Semester III (15 cr.)**

BAF	421	Advanced Investment Finance (MR) <sup>3</sup>	3 cr.
BAF	450	Futures and Options (MR) <sup>3</sup>	3 cr.
BAF	452	Financial Modeling (MR) <sup>3</sup>	3 cr.
FEN	442	Financial Risk Management (MR) <sup>3</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Spring Semester III (15 cr.)**

BAD	453	E-Business (CCR) <sup>1</sup>	3 cr.
FEN	431	Fixed Income Securities (MR) <sup>3</sup>	3 cr.
FEN	455	Advanced Derivatives Model (MR) <sup>3</sup>	3 cr.
FEN	463	Computational Finance and Simulation (MR) <sup>3</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

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<sup>1</sup> Common Core Requirements

<sup>2</sup> General Education Requirements

<sup>3</sup> Major Requirements

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## Undergraduate Courses: Financial Engineering

**FEN 431 Fixed Income Securities (3.0); 3 cr.**

This course provides a quantitative approach to fixed income securities and bond portfolio management. Topics include: Bond Valuation, Duration, yield curve and term structure measurement and theory, mortgage backed securities, as well as interest rate models (Vasicek and Cox Ingersoll Ross). *Prerequisite:* Senior Standing.

**FEN 442 Financial Risk Management (3.0); 3 cr.**

This course explores various aspects of financial risk management, including credit risk, market risk and operational risk. Emphasis is on quantitative measurement techniques, covering value at risk, dynamic portfolio distribution and extreme value analysis. *Prerequisite:* Senior Standing.

**FEN 455 Advanced Derivatives Models (3.0); 3 cr.**

This course focuses of efficient

implementation of advanced derivative models aimed at pricing and hedging derivative securities. Pseudo codes and algorithms will be studied and programming application developed using VB. Topics include: Black-scholes implementation, trees construction (binomial and trinomial trees), Monte Carlo application to option pricing and implied volatility, and advanced interest rate models, (Ho and Lee, Hulland White, Black-Derman, Toy, Heath-Jarrow-Morton). *Prerequisites:* BAF 450, CSC 216.

**FEN 463 Computational Finance and Simulation (3.0); 3 cr.**

This course provides the computational skills required in the field of Financial Engineering. Students will learn how to program financial models and develop simulations using VB. *Prerequisites:* CSC 372, BAD 323.

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## The Degree of Bachelor of Business Administration – Accounting

The major in Accounting is designed to provide students with the opportunity to acquire the basic and advanced knowledge of accounting theory and practice in addition to the analytical skills and tools essential to a solid business education. Courses are designed to enable a student to understand the intellectual threads of modern accounting and its interrelationship to the various fields of business and management.

Accounting majors are increasingly taking and passing the Certified Public Accountant (CPA) Certified Management Accountant (CMA) and Certified International Audit (CIA) examinations through training in Accounting and related fields. It provides the practical and theoretical background needed to succeed in the dynamic and fascinating world of Accounting.

### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Required Common Core Courses** **45 cr.**

**Major Requirements** **25 cr.**

ACO 323, ACO 313, ACO 411, ACO 413, ACO 421, ACO 48, BAF 312,

Choose two (2) faculty elective courses from the following:

ACO 314, ACO 321, ACO 350, ACO 406, ACO 414, BAD 429, BAD 431, BAF 452, BAF 485, CSC 221, CSC 315, CSC 321

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the university.

*Note: In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.*

The accounting major highlights four (4) areas where students along with their respective advisors can develop their business elective courses in a way to meet their potential job / career requirements. The following four areas are::

- Accounting Information Systems (AIS)
- General Accounting (GA)
- Management Accounting & Control (MA&C)
- Auditing (A)

All Accounting majors must complete an internship course which provides field experience prior to graduation.

The *Accounting Information Systems (AIS)* field was developed in response to employers indicating an increased need for accounting majors with computer expertise.

The AIS program prepares students for career opportunities in the field of accounting systems design, accounting systems management and accounting systems auditing and other systems – related areas of accounting. Electronic processing of financial transactions is now the norm in small and large businesses alike. Accountants must be prepared to design, select, install and configure numerous accounting applications such as accounts receivable and billing systems, human resources management systems, and financial reporting systems.

Other Accounting majors may choose business elective courses meeting the track of *General Accounting (GA)*. This field is designed to provide graduates with the knowledge and skills necessary to enter professional careers leading to an accounting designation or entry – level positions in accounting. Students can expect to develop conceptual and technical accounting competence and analytical abilities.

The *Management Accounting & Control (MA&C)* field of concentration was established to better serve the needs of students interested in industry or government. Typically, careers begin in one area of a company but soon involve work in a number of different functions within the organization such as the Controller’s Department, Internal Audit, Treasury and Finance, Cost Accounting, planning and budgeting, etc... The purpose of the required courses in this track is to give students an understanding of these areas and the basic skills required to successfully enter the organization in any of these positions.

This track is distinct, because it gives an increased emphasis on understanding the role of Accounting and in assisting management with decision making and organizational control as well as producing necessary information for external reporting.

The *Auditing (A)* field of concentration is designed for students who desire to reach the top levels in public accounting. It provides the students with a strong technical and theoretical background which is helpful in solving today’s complex auditing and reporting problems.

**Bachelor of Business Administration – Accounting  
Suggested Program (106 Credits)**

**Fall Semester I (15 cr.)**

ACO	201	Principles of Accounting I (CCR) <sup>1</sup>	3 cr.
ENL	213	Sophomore Rhetoric (GER) <sup>2</sup>	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
STA	206	Applied Statistics for Business & Econ. I (CCR)	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15)**

ACO	202	Principles of Accounting II (CCR)	3 cr.
STA	207	Applied Statistics for Business & Econ. II (CCR)	3 cr.
ECN	212	Principles of Macroeconomics (CCR)	3 cr.
BAD	201	Fundamentals of Management (CCR)	3 cr.
MAT	205	Math for Business & Economics II (CCR)	3 cr.

**Summer Module I (9 cr.)**

ACO	311	Managerial Accounting (CCR)	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
ECN	211	Principles of Microeconomics (CCR)	3 cr.

**Fall Semester II (15 cr.)**

ACO	313	Intermediate Accounting I (MR) <sup>3</sup>	3 cr.
BAD	311	Business Law (CCR)	3 cr.
BAF	311	Fundamentals of Financial Management I (CCR)	3 cr.
BAD	323	Software Tools for Business Applications (CCR)	3 cr.
—	—	(GER)	3 cr.

**Spring Semester II (15 cr.)**

ACO	323	Accounting Information System (MR)	3 cr.
BAF	312	Fundamentals of Financial Management II (MR)	3 cr.
ENS	201	Introduction to Environmental Science (GER)	3 cr.
—	—	(GER)	3 cr.
—	—	Faculty Elective	3 cr.

**Summer Module II (9 cr.)**

ECN	333	Managerial Economics (CCR)	3 cr.
MRK	201	Fundamentals of Marketing (CCR)	3 cr.
ARB	211	Appreciation of Arabic Literature (GER)	3 cr.
or			
ARB	231	Technical Arabic (GER)	3 cr.

**Fall Semester III (15 cr.)**

ACO	421	Advanced Accounting (MR)	3 cr.
NTR	201	Basic Human Nutrition (GER)	3 cr.
ACO	413	Auditing I (MR)	3 cr.
—	—	Faculty Elective	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (13 cr.)**

ACO	481	Accounting Internship (MR)	1 cr.
BAD	453	E-Business (CCR)	3 cr.
ACO	411	Taxation (MR)	3 cr.
REG	212	Religion and Social Issues (GER)	3 cr.
or			
REG	213	Catholicism (GER)	3 cr.
—	—	Free Elective	3 cr.

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<sup>1</sup> Common Core Requirements

<sup>2</sup> General Education Requirements

<sup>3</sup> Major Requirements

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## Minor in Accounting (15 credits)

A Minor in Accounting will provide students with a broad understanding of the examination, organization, management, design and communication, accurate recording and reporting procedures of Financial and Business transactions. The student who graduate with a Minor in Accounting will be able to:

- Demonstrate a basic comprehension of Accounting principles, concepts and technical skills.
- Demonstrate through the evaluation and communication of financial information, the skills to provide information to internal and external users for decision making.
- Show ability to analyze, compare, and evaluate information to provide analysis for short and long term planning.
- Demonstrate knowledge of professional standards of ethics necessary for decision making.
- Use computers and financial software for financial analysis and presentation.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ACO 201	Principles of Accounting I	3	---
ACO 202	Principles of Accounting II	3	ACO 201
	<b>CHOOSE THREE OF THE FOLLOWING</b>		
ACO 311	Managerial Accounting	3	ACO 202
ACO 313	Intermediate Accounting I	3	ACO 202
ACO 314	Intermediate Accounting II	3	ACO 313
ACO 321	Cost Accounting	3	ACO 311
ACO 323	Accounting Information Systems	3	ACO 202,CSC 201
ACO 350	Corporate Financial Reporting	3	BAF 311
ACO 411	Taxation	3	Senior standing
ACO413	Auditing I	3	ACO 202
ACO 421	Advanced Accounting	3	Senior standing
Total		15 cr	

### Suggested Program

First semester

ACO 201: Principles of Accounting I

Second semester

ACO 202: Principles of Accounting II

Third semester

Two minor electives

Fourth semester

One minor elective

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## Undergraduate Courses: Accounting

**ACO 201 Principles of Accounting I (3.0); 3 cr.** Introduction to the basic principles, concepts, and techniques of financial accounting. Explanation of the basic techniques of measuring, classifying, summarizing, reporting, and interpreting financial information. The passing grade for this course is "C".

**ACO 202 Principles of Accounting II (3.0); 3 cr.** A continuation of ACO 201. Explanation and understanding of more advanced procedures of accounting for partnerships, corporations, long-term debts and marketable securities. Includes use of accounting software. The passing grade for this course is "C". *Prerequisite:* ACO 201.

**ACO 311 Managerial Accounting (3.0); 3 cr.** Fundamental managerial accounting procedures and techniques used in management decision-making. Topics covered include: cost types; cost behavior patterns; cost-volume-profit relationships; budgeting and planning; and performance evaluation. *Prerequisite:* ACO 202.

**ACO 313 Intermediate Accounting I (3.0); 3 cr.** An in-depth study of accounting theory and concepts. Topics covered include: issues related to recording revenues, assets, liabilities and equity structure. *Prerequisite:* ACO 202.

**ACO 314 Intermediate Accounting II (3.0); 3 cr.** This course is the continuation of ACO 313. Topics include: handling of long-term investments, stockholders' equity, accounting for leases, analysis of financial statements, and other accounting topics.

**ACO 321 Cost Accounting (3.0); 3 cr.** In-depth study of the procedures for gathering cost information. Topics covered include: mixed cost analysis; relevant costs; capital budgeting; and decision models. *Prerequisite:* ACO 311.

**ACO 323 Accounting Information Systems (3.0); 3 cr.** Examination of the systems for collecting and processing data necessary in planning, decision-making, and the control of business organizations. Includes use of accounting software packages. *Prerequisites:* ACO 202.

**ACO 350 Corporate Financial Reporting (3.0); 3 cr.** This course covers the financial reporting system, principal financial statements other sources of financial information, statement of cash flows, foundations of ratio and financial analysis, analysis of business combinations,

analysis of multinational operations, valuation and forecasting. *Prerequisite:* BAF 311.

**ACO 406 Government and Non-Profit Accounting (3.0); 3 cr.** Principles, procedures and ethics of financial reporting for non-profit organizations including state & local government. Includes the use of funds, budgets appropriations and encumbrances as means of control. *Prerequisite:* ACO 313.

**ACO 411 Taxation (3.0); 3 cr.** Application of the Lebanese income taxes to business entities and its reporting procedures. Also discussion of the issues related to the Lebanese accounting system such as multi-currency transactions, chart of accounts and closing procedures. *Prerequisite:* Senior Standing.

**ACO 413 Auditing I (3.0); 3 cr.** This course covers the functions and work of the independent auditor. Topics include: the auditing profession, the professional ethics auditor liabilities, overview of the audit process including the audit evidence, objective, audit program, working papers, planning audit, materiality and risk, post audit and reporting on audited income statement. *Prerequisite:* ACO 202.

**ACO 414 Auditing II (3.0); 3 cr.** This course is the continuation of Auditing I. This course provides a thorough understanding of the detailed audit procedure, audit planning, complete audit and post audit. The audit covers cash changes (cash flow) assets, inventory, accounts receivable, accounts payable, fixed assets, auditing revenue cycle, other services and reports and assurance services. *Prerequisite:* ACO 413.

**ACO 421 Advanced Accounting (3.0); 3 cr.** A comprehensive study of financial accounting for partnerships, branches, business combinations, and the reporting of consolidated financial statements. Also discussion of accounting for non-profit organizations. *Prerequisite:* Senior Standing.

**ACO 481 Accounting Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquiring practical skills. The internship will be done in cooperating and department approved firms. A minimum of 150 hours of internship is required. *Prerequisite:* Senior Standing.

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## **The Degree of Bachelor of Business Administration (BBA) - Economics**

The Economics Major is designed to provide the student with an understanding of the principles and institutions governing economic decisions made by Households, Businesses and Governments. This type of knowledge combined with studies in related areas, provides an appropriate background for employment in financial and non-financial business firms and governmental agencies. It also provides a solid basis for graduate study in economics, business and public administration, international studies, urban planning and law.

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Core Courses** **45 cr.**

**Major Requirements** **25 cr.**

ECN 313, ECN 321, ECN 323, ECN 431, ECN 436, ECN 439, ECN 481

Choose two (2) faculty elective courses from the following (6 credits.): ECN 314, ECN 325, ECN 327, ECN 432, ECN 434, ECN 435, ECN 437, BAF 312

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the university.

*Note: In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.*

**Bachelor of Business Administration – Economics  
Suggested Program (106 Credits)**

**Fall Semester I (15 cr.)**

ACO	201	Principles of Accounting I (CCR) <sup>1</sup>	3 cr.
BAD	201	Fundamentals of Management (CCR)	3 cr.
ECN	211	Principles of Microeconomics (CCR)	3 cr.
ENL	213	Sophomore Rhetoric (GER) <sup>2</sup>	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15)**

ACO	202	Principles of Accounting II (CCR)	3 cr.
ECN	212	Principles of Macroeconomics (CCR)	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
MAT	205	Mathematics for Business and Economics II (CCR)	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 cr.)**

MRK	201	Fundamentals of Marketing (CCR)	3 cr.
STA	206	Applied Statistics for Business and Economics I (CCR)	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 cr.)**

CSC	201	Computers and Their Use (GER)	3 cr.
BAD	311	Business Law (CCR)	3 cr.
BAF	311	Principles of Financial Management I (CCR)	3 cr.
ECN	321	Intermediate Microeconomics Analysis (MR) <sup>3</sup>	3 cr.
STA	207	Applied Statistics for Business and Economics II (CCR)	3 cr.

**Spring Semester II (15 cr.)**

ACO	311	Managerial Accounting (CCR)	3 cr.
BAD	323	Software Tools for Business Applications (CCR)	3 cr.
ECN	323	Intermediate Macroeconomics Analysis (MR)	3 cr.
ECN	313	Introduction to Econometrics (MR)	3 cr.
—	—	Free Elective	3 cr.

**Summer Module II (9 cr.)**

ENS	201	Introduction to Environmental Science (GER)	3 cr.
ECN	333	Managerial Economics (CCR)	3 cr.
—	—	Faculty Elective	3 cr.

**Fall Semester III (15 cr.)**

NTR	201	Basic Human Nutrition (GER)	3 cr.
ECN	436	Public Finance and Fiscal Policy (MR)	3 cr.
ECN	431	International Economics (MR)	3 cr.
ARB	211	Appreciation of Arabic Literature (GER)	3 cr.
OR			3 cr.
ARB	231	Technical Arabic (GER)	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (13 cr.)**

ECN	439	Economics of Developing Countries (MR)	3 cr.
ECN	481	Seminar in Economics (MR)	1 cr.
REG	212	Religion and Social Issues (GER)	3 cr.
OR			
REG	213	Catholicism (GER)	3 cr.
BAD	453	E-Business (CCR)	3 cr.
—	—	Faculty Elective	3 cr.

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<sup>1</sup> Common Core Requirements

<sup>2</sup> General Education Requirements

<sup>3</sup> Major Requirements

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## Minor in Economics (15 credits)

A Minor in Economics is to provide students with the analytical tools which will enable them to apply economic reasoning to problem solving in business, economic and political issues.

A Minor in Economics is an excellent choice for business, political science, public administration and diplomacy majors.

A student who graduates with a minor in economics should be able to :

- Understand the decision making mechanisms of households and firms.
- Understand and analyze economic data.
- Use computers and statistical packages to manipulate, read and interpret data.
- Evaluate the role of the government in the economy .

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ECN 211	Principles of Microeconomics	3	---
ECN 212	Principles of Macroeconomics	3	---
ECN 431	International Economics	3	ECN 211, 212
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
ECN 321	Intermediate Microeconomic Analysis	3	ECN 211, ECN 212
ECN 323	Intermediate Macroeconomic Analysis	3	ECN 211, ECN 212
ECN 313	Introduction to Econometrics	3	ECN 211, 212
ECN 325	Labor Economics	3	ECN 211, 212
ECN 327	History of Economic Thought	3	ECN 211, 212
ECN 333	Managerial Economics	3	ECN 211, STA 207
ECN 432	Urban Economics	3	Senior standing
ECN 434	Environmental natural Resource Economics	3	ECN 321
ECN 435	Monetary Theory and Policy	3	ECN 211, ECN 212
ECN 436	Public Finance and Fiscal Policy	3	ECN 321, ECN 323
ECN 437	Contemporary Economic Systems	3	ECN 211, ECN 212
ECN 439	Economics of Developing Co	3	ECN 211, ECN 212
Total		15 cr	

### Suggested Program:

First semester

ECN 211: Principles of Microeconomics

ECN 212: Principles of Macroeconomics

Second semester

Two minor elective courses

Third semester

One minor elective course

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## Undergraduate Courses: Economics

**ECN 200 Survey of Economics (3.0); 3 cr.** Survey of microeconomics and macroeconomics principles for non-Business Administration students. Students cannot receive credit for both ECN 200 and ECN 211 or ECN 212.

**ECN 211 Principles of Microeconomics (3.0); 3 cr.** An introduction to economic concepts, principles, and microeconomics analysis. Topics covered include: demand and supply analysis; consumers' choice; production and costs; price and output determination under different market conditions; and pricing of factors of production. The passing grade for this course for DFAE students only is "C".

**ECN 212 Principles of Macroeconomics (3.0); 3 cr.** An introduction to macroeconomics analysis. Topics covered include: national income determination; money and banking; unemployment and inflation; fiscal and monetary policy; international trade and finance. The passing grade for this course for DFAE students only is "C".

**ECN 313 Introduction to Econometrics (3.0); 3 cr.** The classical linear regression model and the multiple regression model in matrix form; the criteria for estimators; multicollinearity, serial correlation, heteroscedasticity; identification and estimation of simultaneous equation models and applications. *Prerequisites:* ECN 211, 212, STA 207, and MAT 205.

**ECN 314 Applied Econometrics and Time Series (3.0); 3 cr.** The main purpose of this course is to provide a comprehensive treatment of econometric techniques applied in time series models. Topics include: stationary and non-stationary time series models, modeling economic time series, multiequation time series models, notation and interpretation of ARIMA models, forecasting,... An interactive econometric software package is used: Data-Fit or TSP (Time Series Processing). *Prerequisite:* ECN 313.

**ECN 321 Intermediate Microeconomic Analysis (3.0); 3 cr.** Theory of the firm and consumer. Topics covered include: maximizing behavior of consumers; business firm behavior in price and output decisions under different types of market structures; factor price determination; welfare implications of marketplace performance. *Prerequisites:* ECN 211, ECN 212.

**ECN 323 Intermediate Macroeconomic Analysis (3.0); 3 cr.** Macroeconomics theory and policy. Topics covered include: measurement of aggregate economic activity; theories of inflation and unemployment; Monetarist-Keynesian-Rational Expectation controversy; business cycles; fiscal and monetary policies. *Prerequisites:* ECN 211, ECN 212.

**ECN 325 Labor Economics (3.0); 3 cr.** An analytic study of the labor market. Topics covered include: labor force participation and composition; human capital theory; wage determination; demand for and supply of labor; trade-unions; collective bargaining; public policy and unemployment; and the economics of discrimination. *Prerequisites:* ECN 211, ECN 212.

**ECN 327 History of Economic Thought (3.0); 3 cr.** A study of origins and development of economic thought from mercantilism to the present. *Prerequisites:* ECN 211, ECN 212.

**ECN 333 Managerial Economics (3.0); 3 cr.** Application of economic analysis to business problems. Topics covered include: risk analysis; theory of consumer choice; estimation and analysis of demand, production and cost functions; forms of competition; pricing techniques; profits; game theory. *Prerequisites:* ECN 211, STA207.

**ECN 431 International Economics (3.0); 3 cr.** Theoretical and policy approach to the study of international trade and finance. Topics covered include: trade theory; instruments of commercial policy; trade policy in developing countries; economic integration; foreign exchange markets; balance of payments; international monetary system; world debt crisis. *Prerequisites:* ECN 211, ECN 212.

**ECN 432 Urban Economics (3.0); 3 cr.** An introduction to the existence and growth of cities, and the application of economic principles to the major problems of the modern urban community. Topics covered include: reasons for the existence of cities; market forces in the development of cities; urban economic growth; land rent and land use; land use controls and zoning; causes of poverty and public policy; housing problems and policies; urban transportation; autos and highways; mass transit; education and crime; discrimination; programs

for alleviation or solution of urban problems. *Prerequisite:* Senior standing.

**ECN 434 Environmental and Natural Resource Economics (3.0); 3 cr.** An introduction to the natural resource and environmental economics, and sustainable development. Topics covered include: introduction to resource and environmental economics; ethical foundations of environmental economics; economic concepts and analysis for examining natural resource use; the valuation of environmental resources; the population problem; sustainability and sustainable development; depletable, recyclable, non-recyclable, replenishable, storable, renewable and reproducible resources; the efficient and optimal use of environmental resources; the economics of pollution and pollution control policy; international and global environmental pollution problems. *Prerequisite:* ECN 321.

**ECN 435 Monetary Theory and Policy (3.0); 3 cr.** A study of the development of monetary theory and policy. Topics covered include: demand for and supply of money; nature of the Monetarist-Keynesian-Rational Expectation controversy; policy coordination; government monetary policy; inflation and unemployment; international constraints; empirical verification of some theories. *Prerequisites:* ECN 211, ECN 212.

**ECN 436 Public Finance and Fiscal Policy (3.0); 3 cr.** This course examines the economics of the public sector. It has two broad topics: government expenditures and revenues. Topics

include: market failures and optimal taxation; cost/benefit analysis of government projects; income redistribution and poverty programs; political economy and voting; the economics of local governments; budget deficits, inflation and the lack of adequate financing in the developing countries; tax systems with special emphasis on the Lebanese case. *Prerequisites:* ECN 321.

**ECN 437 Contemporary Economic Systems (3.0); 3 cr.** An examination and comparison of the organization, operation and performance of contemporary economic systems. Also study of the changing pattern of ideologies and practices. *Prerequisites:* ECN 211, ECN 212.

**ECN 439 Economics of Developing Countries (3.0); 3 cr.** A study of the economics of developing countries. Topics covered include: meaning of underdevelopment; historical patterns of economic change in the developing countries; population problems; obstacles to development; role of industry and agriculture; inequality of income and wealth distribution; economic planning; foreign aid and indebtedness. *Prerequisites:* ECN 211, ECN 212.

**ECN 481 Seminar in Economics (1.0); 1 cr.** An in-depth study of a selected topic in theoretical or applied economic. Students have to present a term-paper on a Lebanese government economic institution. With the permission of the instructor, students may repeat this course if topics vary. *Prerequisite:* Senior standing.

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## **The Degree of Bachelor of Business Administration (BBA)**

### **Energy Economics Emphasis**

The energy sector is a large and very important component of the Lebanese and Middle Eastern economies. It encompasses many aspects such as exploration, development, processing, production, transportation, marketing and distribution of energy. Energy economics, which is a new of the existing brand of Economics at NDU, integrates the discipline of Economics with energy.

The program is intended to offer students a broad working knowledge of the energy industry and to provide them with the necessary tools to understand its structure and functional elements. In addition, the program provides the student with the historical and Institutional background and the basic tools necessary for an understanding of the operations of world energy markets.

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Common Core Requirements** **45 cr.**

**Major Requirements** **31 cr.**

ECN 313, ECN 321, ECN 431, ECN 434, ENR 201, ENR 305, ENR 401, ENR 405, ENR 410, ENR 452, ENR 461

*Note: In rare cases graduating students may petition to substitute one Business course for another if the required Business course is not offered in any semester.*

**Bachelor of Business Administration (BBA)**  
**Energy Economics Emphasis - Suggested Program (106 Credits)**

**Fall Semester I (15 cr.)**

ACO	201	Principles of Accounting I (CCR) <sup>1</sup>	3 cr.
BAD	201	Fundamentals of Management (CCR) <sup>1</sup>	3 cr.
ECN	211	Principles of Microeconomics (CCR) <sup>1</sup>	3 cr.
ENL	213	Sophomore Rhetoric (GER) <sup>2</sup>	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 cr.)**

ACO	202	Principles of Accounting II (CCR) <sup>1</sup>	3 cr.
ECN	212	Principles of Macroeconomics (CCR) <sup>1</sup>	3 cr.
ENL	230	English in Workplace (GER) <sup>2</sup>	3 cr.
MAT	205	Math for Business and Economics I (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Summer Session I (9 cr.)**

MRK	201	Fundamentals of Marketing (CCR) <sup>1</sup>	3 cr.
STA	206	Applied Statistics for Business and Economics I (CCR) <sup>1</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Fall Semester II (15 cr.)**

ACO	311	Managerial Accounting (CCR) <sup>1</sup>	3 cr.
BAF	311	Principles of Financial Management I (CCR) <sup>1</sup>	3 cr.
CSC	201	Computers and their use (GER) <sup>2</sup>	3 cr.
ECN	321	Intermediate Microeconomic Analysis (MR) <sup>3</sup>	3 cr.
STA	207	Applied Statistics for Business and Economics I (CCR) <sup>1</sup>	3 cr.

**Spring Semester II (15 cr.)**

BAD	311	Business Law (CCR) <sup>1</sup>	3 cr.
BAD	323	Software Tools for Business Applications (CCR) <sup>1</sup>	3 cr.
ECN	313	Introduction to Econometrics (MR) <sup>3</sup>	3 cr.
ENR	201	Introduction to Energy Economics (MR) <sup>3</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Summer Session II (9 cr.)**

ECN	333	Managerial Economics (CCR) <sup>1</sup>	3 cr.
ENR	305	Oil and Gaz: From Exploitation to Transportation (MR) <sup>3</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Fall Semester III (15 cr.)**

ENR	410	Solar and Water Energy Economics (MR) <sup>3</sup>	3 cr.
ECN	431	International Economics (MR) <sup>3</sup>	3 cr.
ENR	401	Petroleum in the World Economy (MR) <sup>3</sup>	3 cr.
ENR	405	The Economics of Natural Gas (MR) <sup>3</sup>	3 cr.
—	—	(GER) <sup>2</sup>	3 cr.

**Spring Semester III (13 cr.)**

BAD	453	E-Business (CCR) <sup>1</sup>	3 cr.
ECN	434	Environmental and Natural Resource Economics (MR) <sup>3</sup>	3 cr.
ENR	452	International Energy Institutions (MR) <sup>3</sup>	3 cr.
ENR	461	Selected Topics in Energy Economics (MR) <sup>3</sup>	1 cr.
—	—	(GER) <sup>2</sup>	3 cr.

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<sup>1</sup> Common Core Requirements

<sup>2</sup> General Education Requirements

<sup>3</sup> Major Requirements

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## Undergraduate Courses: Energy Economics

**ENR 201 Introduction to Energy Economics (3.0); 3 cr.** Introduction to energy markets, industry, and economics. Topics covered include: world energy industry; energy markets; industrial and household consumption of energy; trends in world energy markets; energy cycles and crises; energy and economic development; population growth and energy; valuation of energy sources; efficient and optimum use of energy. *Prerequisite:* ECN 321.

**ENR 305 Oil and Gaz: From Exploitation to Transportation (3.0); 3 cr.** The first part of the course is a survey of the basic principles, procedures, phases, and technologies of oil and gaz production. It deals with transforming crude oil and natural gaz into finished and semi-finished products. It also deals with the basics of refining process and technologies. The second part of the course is an overview of modes and equipments for local and international transportation of oil and gaz. The transportation industry is a wide and diversified fixed of knowledge. This course, however, will tackle specific areas, like time and cost efficient modes of transportation of oil and gaz, transportation regulatory environment, documentation, customs brokers, etc. *Prerequisite:* ENR 201.

**ENR 401 Petroleum in the World Economy (3.0); 3 cr.** Examination of the structure of the world petroleum industry. Topics covered include: introduction to petroleum industry; market structure; trends in world petroleum

markets; demand and supply of petroleum; cost of production of petroleum; petroleum prices; cartels; petroleum cycles and crises; petroleum policies and strategies. *Prerequisite:* ECN 321.

**ENR 405 The Economics of Natural Gas (3.0); 3 cr.** Examination of the structure of the world natural gas industry. Topics covered include: introduction to natural gas industry; market structure; trends in world natural gas markets; demand and supply of natural gas; natural gas prices; natural gas policies and strategies. *Prerequisites:* ENR 201, ECN 321.

**ENR 410 Solar and Water Energy Economics (3.0); 3 cr.** It gives familiarity with the terms, concepts, components, costs and economics of solar and water energy. Topics include: market structures, demand and supply, pricing and strategies. *Prerequisites:* ENR 201, ECN 321.

**ENR 452 Applied Energy Economics within International Energy Institutions (3.0); 3 cr.** Application of theoretical knowledge of energy economics in energy organizations and institutions concerned with Energy. It applied economic tools to analyze energy institutions like OPEC, OAPEC, GCC, WEC, and IEA.

**ENR 461 Selected Topics in Energy Economics (1.0); 1 cr.** Various topics in Energy are considered. They will vary upon recent development in the field. *Prerequisite:* Senior Standing.

## DEPARTMENT OF MANAGEMENT AND MARKETING

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**Chairperson:** *Dr. Atef Harb*

**Secretary:** *Mrs. Grace Kanaan*

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### **Associate Professors**

*IMehanna, Rock-Antoine*, Ph. D, 2000, *Business Policy and Strategy*, Southern University, USA

*Hasham, Elham*, Ph. D., 2003, *Management*, Educational Leadership, Management and Administration, Leicester University, United Kingdom.

### **Assistant Professors**

*Akhras, Caroline*, Ph.D., 2006, *Doctor of Education*, University of Leicester, UK

*Harb, Atef*, Ph.D., 1996, *Economics-Operations Research*, Ecole Polytechnique de Montreal, Canada

*Matar-Haddad, Dorine*, Ph.D., 2006, *Management*, University of Leicester, UK, (NLC)

### **Senior Lecturers**

*Barakat, Edgard*, M.B.A., 1981, *Marketing*, University of Dayton, USA

*Karam, Salim*, MBA, 1983, University of Detroit, USA

*Zakhour, Kamal*, M.B.A., 1982, *Marketing*, University of Pittsburgh, USA

*Nakhlé Vivianne*, M.S., 1993, *Business Administration*, Strayer College, Washington D.C.

*Menassa, Joyce*, M.S., 1994, *Marketing*, Beirut University College, Lebanon

### **Lecturer**

*Ghaleb, George*, MBA, 2002, *Management*, Notre Dame University-Louaize, Lebanon

*Sleilati, Esther*, 1997, *Master of Business Administration in Marketing*, Notre Dame University-Louaize, Lebanon

### **Instructor**

*Kaassamany, Talie*, MBA, 2002, *Finance*, American University of Beirut, Lebanon

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## The Degree of Bachelor of Business Administration (B.B.A.)

### Management Emphasis

The BBA-Management option is designed to provide students with an understanding of the processes and structures of organizations to enable them to be more effective managers. The courses taken in addition to the required common courses provide the students with proficiency in management skills and decision-making. The program prepares candidates for managerial responsibilities in both the private and public sectors.

### Graduation Requirements

Students seeking the degree of Bachelor of Business Administration must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the common core and major requirements. These 106 credits are divided into:

### Degree Requirements (106 credits)

#### General Education Requirements 30 cr.

##### Communication Skills

ENL 213, ENL 230

##### Computer Skills

CSC 201

##### Cultural Studies

9 credits in: Arabic, Art, Cultural Sequence, Music, Philosophy, Religion, Western Literature, etc.

A religion course shall always be part of any 9 credits of cultural studies.

Social Science Studies

3 credits in: Anthropology, Economics, History, Sociology, Political Science, Psychology, etc.

##### Basic Science Studies

6 credits in: Archeology, Astronomy, Biology, Environmental Science, Geology, Health, Nutrition, etc.

#### Required Common Courses 45 cr.

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, BAD 201, BAD 311, BAD 323, BAD 433, BAD 453, BAF311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, STA 206, STA 207, MAT 205

#### Required Major Courses 25 cr.

BAD 315, BAD 317, BAD 425, BAD 429, BAD 431, BAD 482, MRK 421

**Plus two additional courses from the following:** BAF 312, BAD 321, BAD 329, BAD 421, BAD 423, BAD 427, ACO 311

#### Free Electives 6 cr.

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<sup>1</sup> Minimum passing grade is C

**Bachelor of Business Administration (B.B.A.)  
Management Emphasis - Suggested Program ( 106 credits)**

**Fall Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
BAD	201	Fundamentals of Management	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.

**Summer Session I (9 Credits)**

MRK	201	Fundamentals of Marketing	3 cr.
STA	207	Applied Statistics for Business and Economics II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

MAT	205	Mathematics for Business and Economics II	3 cr.
ECN	333	Managerial Economics	3 cr.
BAD	315	International Business	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits.)**

BAD	311	Business Law	3 cr.
ACO	311	Managerial Accounting	3 cr.
BAD	317	Organizational Behavior	3 cr.
BAD	323	Software Tools for Business Applications	3 cr.
BAF	312	Principles of Financial Management II	3 cr.

**Summer Session II (7 Credits)**

BAD	482	Management Internship	1 cr.
—	—	GER	6 cr.

**Fall Semester III (15 Credits)**

MRK	421	Sales Management	3 cr.
BAD	453	E-Business	3 cr.
BAD	425	Quantitative Techniques for Management	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

BAD	429	Operations Management	3 cr.
BAD	431	Ethics in Business	3 cr.
BAD	433	Business Policy and Strategic Management	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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## Minor in Management (15 credits)

In response to great demand from our student body, the Department of Management and Marketing has designed a minor in **Management**. This minor is intended to enhance our students' area of expertise, through acquiring knowledge of management theory and its application, which will allow them to be successful members in the global environment. The world we live in is marked by rapid change. To cope with this rapid geometrically increasing flux, both managers and employees need to handle change as well as manage the day-to-day functions in the market-driven economy.

For those students who come from a business background, this minor will enhance their scope and depth in the managerial area. For those who come from another background, a minor in **Management** will expose them to the key managerial functions of planning, organizing, leading, and controlling, and, in doing so, will increase their level of efficiency and effectiveness in the work context.

### Learning Outcomes:

Having obtained a minor in Management, the student will now:

- Use analytic-thinking skills in evaluating management methods and practices, current literature in the management field, and contemporary management models and theories.
- Make effective use of planning, decision-making, and strategic skills in the context of efficient companies.
- Have a working knowledge of traditional organizations and the management practices to run them.
- Understand the importance of the contemporary organization structure, of leading, and of controlling in management.
- Become aware of the practical and intellectual benefits and drawbacks of using team-based management
- Apply basic management concepts in the case study method.

Students are required to use the following table:

Course#	Description	Credits	Prerequisite
BAD 201	Fundamentals of Management	3	None
BAD 317	Organizational Behavior	3	BAD 201
BAD 429	Operations Management	3	Senior Standing
	<b><i>CHOOSE TWO OF THE FOLLOWING</i></b>		
BAD 321	Managing a small Business	3	None
BAD 421	International Business Management	3	Senior Standing
BAD 423	Business Research	3	Senior Standing
BAD 433	Business Policy & Strategic Management	3	Senior Standing
BAD 453	e-Business	3	Senior Standing
MGT 202	Business Negotiations	3	MGT 201
MGT 411	Leadership, Quality, and Performance	3	Senior Standing
Total		15 cr.	

### Suggested Program

First semester: BAD 201

Second semester: BAD 317, and any elective course from the pool

Third semester: BAD 429, and any elective course from the pool

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## Undergraduate Courses: Business Administration

**BAD 101 Introduction to Business (3.0); 3 cr.** An orientation to the field of business. Topics covered include: types of business organizations; financing of businesses; marketing functions; management functions; human resources management; production management; accounting; international business.

**BAD 201 Fundamentals of Management (3.0); 3 cr.** An introduction to the basic elements of the managerial process and the basic theories of management. Topics covered include: management objectives; organizational structure; material and human resource utilization; human relations; decision making, planning, organizing, staffing, directing and controlling.

**BAD 311 Business Law (3.0); 3 cr.** Survey of Lebanese Commercial Law. Topics covered include: the nature of the law; the courts system; contracts; property sales and secured transactions; insurance; commercial papers; agency; business organizations; bailment; bankruptcy; banking operations; taxation.

**BAD 315 International Business (3.0); 3 cr.** An introduction to international business management principles and an overview of global organizations. Topics covered include: nature and importance of international business; human, cultural, political, economic and legal considerations in international business; commercial policies; international agreements; international trade and investment; the international monetary system. *Prerequisites:* BAD 201, ECN 212.

**BAD 317 Organizational Behavior (3.0); 3 cr.** An examination of the study of individual and group behavior in organizations. Topics covered include: perception; motivation; leadership; organizational development; communication; power politics; group behavior; conflicts; work design. *Prerequisite:* BAD 201.

**BAD 321 Managing a Small Business (3.0); 3 cr.** Procedures and techniques needed to start-up, purchase and manage a small firm. Emphasis on the differences between small and large firm environments and problems. Topics covered include: franchising; market research; site selection; sales and advertising; pricing and credit policies; managing human resources; financial planning; accounting and budgeting. *Prerequisite:* Junior Standing.

**BAD 323 Software Tools for Business Applications (3.0); 3 cr.** Application of software to business information processing and decision making in different business areas. *Prerequisite:* Junior Standing

**BAD 325 International Business Law (3.0); 3 cr.** An introduction to the legal aspects and ramifications of international trade. Topics covered include: international business transactions including sales contracts, agency and distribution contracts, investment contracts, licensing agreement, joint ventures; intellectual property; arbitration; dispute settlement before the WTO; problems in foreign investment; tariff regulation; taxation regulation; technology transfer. *Prerequisite:* BAD 311.

**BAD 329 Labor and Social Security Law (3.0); 3 cr.** Exploration of individual and collective aspects of employment in Lebanon. Topics covered include: employment contract; duties of employers and employees; impact of legislation providing for health, safety and welfare; workers' compensation; industrial disputes; strikes; social security law. *Prerequisite:* BAD 311.

**BAD 421 International Business Management (3.0); 3 cr.** An examination of management problems of organizations with international interests. Topics covered include: nature and role of international business management; impact of cultural, political, social and economic factors on management policies and practices; strategic planning; organizing international operations; human resource management in international corporations; managing foreign-exchange risk; production and marketing; asset management; ethics and social responsibility. *Prerequisite:* Senior Standing.

**BAD 423 Business Research (3.0); 3 cr.** An intensive study of the objectives and methodologies of research for business decisions. Topics covered include science and the scientific method; techniques of defining problems; research design; methods for collecting, analyzing and interpreting data. Includes presentation of a research proposal. *Prerequisite:* Senior Standing.

**BAD 425 Quantitative Techniques for Management (3.0); 3 cr.** Quantitative techniques in problem solving and decision making using mathematical methods and

modeling. Topics covered include: linear programming; network models; Markov analysis; queuing theory; decision theory; project management; simulation. *Prerequisite:* Senior Standing.

**BAD 427 Human Resource Management (3.0); 3 cr.** Theories, policies and practices of human resource management in a firm. Topics covered include: employee selection; training and development; performance appraisal and compensation; job analysis and design; benefits administration; labor-management relations. *Prerequisite:* BAD 317.

**BAD 429 Operations Management (3.0); 3 cr.** Introduction to the concepts, techniques and methodology of modern operations management. Topics covered include: forecasting; production planning and scheduling; facility location and layout; quality control; productivity; inventory systems; process design; maintenance and reliability. *Prerequisite:* Senior Standing.

**BAD 431 Ethics in Business (3.0); 3 cr.** A practical rather than philosophical approach to the ethical dimension of business actions. The course deals with the ethical problem and dilemmas of individuals, managers, and organizations. *Prerequisite:* Senior Standing.

**BAD 433 Business Policy and Strategic Management (3.0); 3 cr.** A capstone course in management. Understanding of strategies pursued by contemporary organisations.

Integration of concepts and skills previously learnt, utilizing readings, projects, simulations, and case studies. Emphasis on the strategic issues facing domestic and international firms. *Prerequisite:* Senior Standing.

**BAD 453 e-Business (3.0; 3 cr.** The course examines the history, foundations, tools, and major issues surrounding the electronic commerce. Students will develop skills and learn how the economic framework and electronic technology come together in actual business applications, and how these applications become operational in the global business environment. *Prerequisite:* Senior Standing.

**BAD 481 International Business Management Internship; 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

**BAD 482 Management Internship 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

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## **The Degree of Bachelor of Business Administration (B.B.A.) - *International Business Management***

Economic and business activity is becoming increasingly internationalized. There is a great demand for business students who are equipped with conceptual and analytical skills and can formulate feasible and effective management policies in a complex international setting. The objective of B.B.A. - International Business Management program is to answer this need.

The program provides useful preparation for careers in a variety of organizations, including local business firms with international trade, licensing or financial arrangements; headquarters or subsidiaries of multinational companies; banks and other international financial institutions; and various governmental organizations.

### **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration -International Business Management Concentration must complete a total of 107 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements. These 107 credits are divided into:

### **Degree Requirements (107 credits)**

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Required Common Courses</b> ACO 201 <sup>1</sup> , ACO 202 <sup>1</sup> , BAD 201, BAD 311, BAD 323, BAD 433, BAD 453, BAF 311 <sup>1</sup> , ECN 211 <sup>1</sup> , ECN 212 <sup>1</sup> , ECN 333, MRK 201, STA 206, STA 207, MAT 205	<b>45 cr.</b>
<b>Required Major Courses</b> BAD 315, BAD 317, BAD 421, ECN 431, BAF 433, MRK 423, BAD 481 <b>Plus <u>two</u> additional courses from the following:</b> BAD 325, ACO 311, BAD 427, BAD 429, BAD 431, ECN 439, MRK 425	<b>25 cr.</b>
<b>Free Electives</b>	<b>7 cr.</b>

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<sup>1</sup> Minimum passing grade is C

**Bachelor of Business Administration (B.B.A.) - International Business Management  
Suggested Program (107 Credits)**

**Fall Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
BAD	201	Fundamentals of Management	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	213	English in the Workplace (GER)	3 cr.

**Spring Semester I (15 Credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.

**Summer Session I (9 Credits)**

MRK	201	Fundamentals of Marketing	3 cr.
STA	207	Applied Statistics for Business and Economics II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

MAT	205	Mathematics for Business and Economics II	3 cr.
BAD	311	Business Law	3 cr.
ECN	333	Managerial Economics	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits.)**

BAD	315	International Business	3 cr.
BAD	317	Organizational Behavior	3 cr.
BAD	323	Software Tools for Business Applications	3 cr.
BAD	453	E-Business	3 cr.
—	—	Business Elective	3 cr.

**Summer Session II (7 Credits)**

BAD	481	International Business Management Internship	1 cr.
—	—	GER	6 cr.

**Fall Semester III (15 Credits)**

MRK	423	International Marketing	3 cr.
BAD	421	International Business Management	3 cr.
—	—	Business Elective	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

BAF	433	International Business Finance	3 cr.
ECN	431	International Economics	3 cr.
BAD	433	Business Policy and Strategic Management	3 cr.
—	—	Free Elective	4 cr.
—	—	GER	3 cr.

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## **The Degree of Bachelor of Business Administration (B.B.A.) - Marketing**

The marketing curriculum is organized around a managerial framework to provide students with an understanding of the operations and problems associated with getting the wide range of products and services required by modern society from the producer to the user. Students learn to successfully confront problems in a variety of areas and to make sound marketing decisions on the basis of careful analysis.

Marketing is a dynamic profession. There is a wide range of opportunities in marketing, including marketing management, marketing research, purchasing management, market analysis, product/brand management, retailing, sales promotion, and international marketing.

### **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration in Marketing must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements.

These 106 credits are divided into:

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, BAD 201, BAD 311, BAD 323, BAD 433, BAD 453, BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, STA 206, STA 207, MAT 205.

**Required Major Courses** **25 cr.**

MRK 313, MRK 321, MRK 423, MRK 311, MRK 431, MRK 433, MRK 481

**Plus two additional courses from the following:** ACO 311, BAD 317, BAD 431, MRK 315, MRK 323, MRK 325, MRK 421, MRK 425, MRK 372

**Free Electives** **6 cr.**

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<sup>1</sup> Minimum passing grade is C

**Bachelor of Business Administration (B.B.A.) – Marketing  
Suggested Program ( 106 credits)**

**Fall Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
BAD	201	Fundamentals of Management	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.

**Summer Session I (9 Credits)**

MRK	201	Fundamentals of Marketing	3 cr.
—	—	GER	6 cr.

**Fall Semester II (15 Credits)**

MAT	205	Mathematics for Business and Economics II	3 cr.
MRK	311	Consumer Behavior	3 cr.
STA	207	Applied Statistics for Business and Economics II	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits.)**

ECN	333	Managerial Economics	3 cr.
MRK	313	Principles of Selling	3 cr.
MRK	321	Promotional Strategy	3 cr.
BAD	323	Software Tools for Business Applications	3 cr.
BAD	311	Business Law	3 cr.

**Summer Session II (7 Credits)**

BAD	481	International Business Management Internship	1 cr.
—	—	GER	6 cr.

**Fall Semester III (15 Credits)**

MRK	423	International Marketing	3 cr.
MRK	431	Marketing Research	3 cr.
BAD	453	E-Business	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

MRK	433	Business Policy and Strategic Management	3 cr.
BAD	433	Business Policy and Strategic Management	3 cr.
—	—	Business Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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### Minor in Marketing Management (15 credits)

The Marketing Management minor was developed to allow students to broaden their intellectual base and increase their employment opportunities. Many university graduates obtain entry-level jobs which not only allow them to apply the knowledge obtained in their major field, but also require an understanding of marketing principles and practices as a prerequisite for success.

Students will be able to successfully confront problems in areas of marketing management, marketing research, purchasing management, market analysis, product management, retailing sales promotions and international marketing.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
MRK 201	Fundamentals of Marketing	3	None
MRK 311	Consumer Behavior	3	MRK 201
MRK423	International Marketing	3	MRK 201
	<b><i>CHOOSE TWO OF THE FOLLOWING</i></b>		
MRK 205	Principles of Channel Management	3	MRK 201
MRK 313	Salesmanship	3	MRK 311
MRK 321	Promotional Strategy	3	MRK 311
MRK 325	Services Marketing	3	MRK 311
MRK421	Sales Management	3	Senior Standing
MRK 431	Marketing Research	3	MRK 201, STA 207
ECN 212	Principles of Macroeconomics	3	None
MRK 425	Business to Business Marketing	3	MRK 423
Total		15 cr.	

#### Suggested Program

First semester: MRK 201

Second semester: MRK 311, MRK 423

Third semester: Any two courses from the pool

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**The Degree of Bachelor of Business Administration (B.B.A.)****Distribution and Logistics Management Emphasis****Degree Requirements  
(106 credits)**

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Required Common Courses</b> ACO 201 <sup>1</sup> , ACO 202 <sup>1</sup> , BAD 201, BAD 311, BAD 317, BAD 323, BAD 433, BAD 453, BAF 311 <sup>1</sup> , ECN 211 <sup>1</sup> , ECN 212 <sup>1</sup> , MRK 201, STA 206, STA 207, MAT 205.	<b>45 cr.</b>
<b>Required Major Courses</b> MRK 205, MRK 215, MRK 335, MRK 345, MRK 422, MRK 431, MRK 482.	<b>19 cr.</b>
<b>Plus <u>three</u> additional courses from the following:</b> MRK 311, MRK 315, MRK 323, MRK 372, MRK 404, MRK 421, MRK 423, MRK 425.	<b>9 cr.</b>
<b>One Free Electives</b>	<b>3 cr.</b>

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<sup>1</sup> Minimum passing grade is C

**Bachelor of Business Administration (BBA)**  
**Distribution and Logistics Management Emphasis - Suggested program (106 credits)**

**Fall Semester I (15 credits)**

ACO	201	Principles of accounting I	3 cr.
MRK	201	Fundamentals of Marketing	3 cr.
CSC	201	Computers and their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	222	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	235	Technical English for Business (GER)	3 cr.
—	—	GER	3 cr.
MRK	205	Principles of Channel Management	3 cr.

**Summer Session I (9 credits)**

BAD	201	Fundamentals of Management	3 cr.
MAT	205	Mathematics for Business and Economics II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 credits)**

BAD	311	Business Law	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.
BAD	323	Software Tools for Business Application	3 cr.
MRK	215	Fundamentals of Purchasing	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 credits)**

STA	207	Applied Statistics for Business and Economics II	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
MRK	335	Materials and Warehouse Management	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Summer Session II (9 credits)**

BAD	433	Business Policy and Strategic Management	3 cr.
—	—	GER	3 cr.

**Fall Semester III (16 credits)**

MRK	345	Logistics and Supply Chain Management	3 cr.
ECN	333	Managerial Economics	3 cr.
MRK	422	Packaging, Warehousing & Inventory Control	3 cr.
MRK	—	Major elective	3 cr.
MRK	482	Distribution and Logistics Management Internship	1 cr.
—	—	GER	3 cr.

**Spring Semester III (15 credits)**

MRK	431	Marketing Research	3 cr.
BAD	453	e-Business	3 cr.
MRK	—	Major elective	3 cr.
MRK	—	Major elective	3 cr.
—	—	GER	3 cr.

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## Minor in Distribution and Logistics Management (15 credits)

The following minor is designed to offer knowledge in a certain field of study and to build capacities that will increase the candidates' value vis-à-vis employment and/or promotion opportunities.

Upon completion of minor requirements candidates will be able to :

- Find the best way to distribute a product to customers .
- Manage product and information flows .
- Handle transportation warehousing, packaging, inventory control, supply scheduling, and order processing.

Distribution management activities are carried out by manufacturers, wholesalers, retailers, public warehouse firms, freight forwarders, and public and private transportation firms. Careers in distribution management provide an individual with the potential for rapid advancement within a firm.

Positions available to students are:

- In transportation
- Purchasing and logistics include physical distribution manager
- Inventory control manager
- Traffic manager
- Distribution center manager
- Distribution planning analyst
- Warehousing / operations manager, and customer service manager

As such, students will be required to take the three required courses along with another two from a pool of courses available to them as follows:

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
MRK 201	Fundamentals of Marketing	3	
MRK 205	Principles of Channel Distribution	3	MRK 201
MRK 335	Materials & Warehouse Management	3	MRK 205
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
MRK 215	Fundamentals of Purchasing	3	MRK 201
MRK 315	Import-Export Management	3	BAD 315 , MRK 311
MRK 323	Retail Management	3	MRK 205 , MRK 311
MRK 422	Packaging, Warehousing & Inventory Control	3	MRK 335
MRK 345	Logistics & Supply Chain Management	3	MRK 205
MRK 404	Transportation Management	3	MRK 345
MRK 425	Business to Business Marketing	3	MRK 423
Total		15 cr.	

### **Suggested program:**

First Semester: MRK 201

Second Semester: MRK 205, MRK 215

Third Semester: MRK 335, MRK 345

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## Undergraduate Courses: Marketing

**MRK 201 Fundamentals of Marketing (3.0); 3 cr.** Introduction to the marketing process in social, economic and legal environments. Topics covered include: consumer and institutional behavior patterns; market segmentation; product and service development; pricing strategy and promotion; channels of distribution; retailing and wholesaling; marketing research.

**MRK 205 Principles of Channel Management (3.0); 3 cr.;** This course surveys, organizes, and integrates theories and practices relative to current issues of marketing channel management, with a focus on key strategic marketing principles. Physical distribution is reviewed as a functional area within the firm and its interface with channel intermediaries is analyzed. Topics include retailing, wholesaling, industrial marketing, transportation, warehousing, location, inventory control, and channel design. *Prerequisite:* MRK 201.

**MRK 215 Fundamentals of Purchasing (3.0); 3 cr;** This course is designed to present the purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues. The focus of the course will be on the role and function of purchasing in the Logistics Management Process. *Prerequisite:* MRK 201.

**MRK 311 Consumer Behavior (3.0); 3 cr.** Concepts and theories to explain the decision making process of consumer and organizational buying. Attention is focused on economic, psychological, sociological and anthropological variables to understand, predict and control purchasing behavior. *Prerequisite:* MRK 201.

**MRK 313 Salesmanship (3.0); 3 cr.** Examination of persuasive techniques used in promotional presentations conducted on a person-to-person basis. Emphasis on effective selling techniques, understanding the company and its products, understanding the customer and the selling environment, recognizing selling opportunities, and planning, implementing, and control of the personal selling programs. *Prerequisite:* MRK 311.

**MRK 315 Import-Export Management (3.0); 3 cr.** Application of management theories to efficient management of an import-export business. Topics covered include: starting an import-export business; international trade; export financing; import-export documentation;

export promotion; tariffs and duties. *Prerequisites:* BAD 315, MRK 311.

**MRK 321 Promotional Strategy (3.0); 3 cr.** Introduction to various promotional strategies adopted by different companies and guidelines for determining a company's promotional mix. Topics covered include: advertising; personal selling; publicity and promotion; determination of objectives and budgets; situation analysis. Also, discussion of managerial issues and problems. *Prerequisite:* MRK 311.

**MRK 323 Retail Management (3.0); 3 cr;** Application of management and marketing theories to retailing. Topics covered include: Management, organization and control of retail outlets, consumer behavior, store location, financial management, promotion, presentation, pricing, control of inventories, advertising, personnel, and wholesaler-retailer relationship. *Prerequisites:* MRK 205, MRK 311.

**MRK 325 Services Marketing (3.0); 3 cr.** An introduction to the distinctive aspects of service marketing. Topics covered include: understanding services marketing; improving service quality and productivity; positioning a service in the marketplace; managing the customer portfolio; creating and delivering services; developing and managing the customer service function. *Prerequisite:* MRK 311.

**MRK 335 Materials and Warehouse Management (3.0); 3 cr.** This course covers the organization and operations of warehouses and distribution centers. Topics covered include the role, types and functions of warehouses and distribution centers, location analysis, facility layout and design, equipment handling, employee safety, public and private warehouses, computer control and tracking, conveyance equipment, and hazardous materials handling. *Prerequisite:* MRK 205.

**MRK 345 Logistics and Supply Chain Management (3.0); 3 cr.** This course develops an integrated approach to the analysis of physical distribution problems. It deals with transportation and assignment problems; application of network techniques to production; distribution systems design; optimal allocation of inventory; cost allocation methods; pricing policies; and power structure of shareholders within a firm. *Prerequisite:* MRK 205.

**MRK 372 Internet Marketing (3.0); 3 cr.** e-marketing is traditional marketing using electronic methods. It helps students develop the skills necessary to understand and integrate Internet technology and characteristics into marketing strategy. It helps students recognize and understand the implications of the Internet not only as a market place but also as a set of tools and opportunities. *Prerequisites:* MRK 201, BAD 323.

**MRK 404 Transportation Management (3.0); 3 cr.** This course includes an introduction to the principles of transportation with emphasis on transportation modal operations (rail, highway, air, pipeline, water transportation) and transportation management. Consideration is given to the economical, social and political aspects of the transportation industry and strategic issues in transportation management. *Prerequisite:* MRK 345.

**MRK 421 Sales Management (3.0); 3 cr.** Development, operation and control of a sales organization. Topics covered include: managing the sales force; selecting, training and compensating the sales force; forecasting sales and establishing budgets; structuring a sales organization; motivating salespeople. *Prerequisite:* Senior Standing.

**MRK 422 Packaging, Warehousing and Inventory Control (3.0); 3 cr.** The course deals with important supports for a modern material handling process. Among other things, it discusses packaging and carriers and their importance to logistics. Furthermore, it deals with systems and IT tools for material handling, such as warehouse management systems (WMS), bar codes and other identification systems, transport administration systems and systems for controlling material flows in logistical networks. The course also gives an overview of material handling equipment, such as forklifts, storage systems, bar code scanners etc. *Prerequisite:* MRK 335.

**MRK 423 International Marketing (3.0); 3 cr.** Analysis and strategies for marketing in an area with different social, political, legal and economic environment. Topics covered include: cross-national consumer behavior; direct foreign

investment; strategy of international product development, pricing, promotion and distribution policies; forms of international involvement. *Prerequisites:* MRK 201; ECN 212.

**MRK 425 Business-to-Business Marketing (3.0); 3 cr.** Development of principles of distribution of industrial goods and management of industrial marketing organizations. Topics covered include: industrial marketing system and organization buying behavior; management of industrial marketing mix; industrial market-research; planning, pricing, selling and advertising decisions; strategies for industrial markets. *Prerequisite:* MRK 423.

**MRK 431 Marketing Research (3.0); 3 cr.** Techniques and procedures of collecting and analyzing information to identify marketing problems and facilitate their solution. Topics covered include: marketing research design; questionnaire construction; sample design; data analysis. *Prerequisite:* MRK 201, STA 207.

**MRK 433 Marketing Strategies and Policies (3.0); 3 cr.** A capstone course in marketing. Emphasis on strategic and executional issues connected to marketing policy. Integration of materials previously taken, utilizing readings, projects and case studies. *Prerequisite:* Senior Standing.

**MRK 481 Marketing Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

**MRK 482 Distribution and Logistics Management Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills in logistics and distribution. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

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## The Degree of Bachelor of Business Administration (B.B.A.)

### Human Resources Management Emphasis

Theories, policies and practices of human resources management in a firm. Topics covered include employee selection, training and development, performance appraisal and compensation, job analysis and design, benefits administration, and labor-management relations.

#### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, BAD 201, BAD 311, BAD 317, BAD 323, BAD 433, BAD 453, BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, MRK 201, STA 206, STA 207, MAT 205.

**Required Major Courses** **25 cr.**

MGT 201, MGT 210, MGT 312, MGT 325, MGT 453, BAD 329, MGT 483, **Plus two additional courses from the following:** MGT 202, MGT 337, MGT 411, MGT 475, BAD 427, BAD 429, BAD 431.

**Free Electives** **6 cr.**

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<sup>1</sup> Minimum passing grade is C

**Bachelor of Business Administration (BBA)**  
**Human Resources Management Emphasis - Suggested Program (106 Credits)**

**Fall Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
BAD	201	Fundamentals of Management	3 cr.
CSC	201	Computers and their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	222	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	235	Technical English for Business (GER)	3 cr.
—	—	GER	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.

**Summer Session I (9 Credits)**

MRK	201	Fundamentals of Marketing	3 cr.
STA	207	Applied Statistics for Business and Economics II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

BAD	311	Business Law	3 cr.
MGT	201	Principles of Human Resources Management	3 cr.
BAD	323	Software Tools for Business Application	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

MAT	205	Mathematics for Business and Economics II	3 cr.
BAD	317	Organizational Behavior	3 cr.
BAD	329	Labor and Social Security Law	3 cr.
MGT	210	Organizational Staffing	3 cr.
—	—	Free Elective	3 cr.

**Summer Session II (6 Credits)**

BAD	433	Business Policy and Strategic Management	3 cr.
MGT	312	Training and Career Development	3 cr.

**Fall Semester III (16 Credits)**

MGT	325	Compensation and Reward System	3 cr.
BAD	453	e-Business	3 cr.
MGT	483	Human Resources Management Internship	1 cr.
—	—	GER	6 cr.
and one course and one course from elective to Major Courses			3 cr.
MGT	202	Business Negotiations	
MGT	337	Recruitment and Selection	
MGT	411	Leadership, Quality and Performance	

**Spring Semester III (15 Credits)**

MGT	453	Global Human Resources Management	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	6 cr.
and one course from elective to Major Courses:			3 cr.
MGT	475	Managing Employment Relations	
BAD	427	Advanced Human Resources Management	
BAD	431	Ethics in Business	
BAD	429	Operations Management	
MGT	201	Principles of Human Resources Management	

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## Minor in Human Resources Management (15 credits)

Human Resources play a key role in private and public-sector organizations. The minor in Human Resources Management is designed to provide students with the opportunity to broaden their capabilities to enter their chosen fields and/or enhance their career paths at some later time.

Students who graduate with a minor in Human Resources Management will be able to:

- Conduct effective human resource planning for technological innovation in a global environment.
- Describe the importance of internal and external organizational and the impact of their interrelationships on human resource function .
- Explain the processes of job analysis, staffing and compensation, career training, and development.
- Identify various performance appraisal systems and critically evaluate their pros and cons.
- Demonstrate cohesive team-management skills in decision making, communications, motivation, and interpersonal behavior the history of union/management relations and associated major federal, state, and local legislation; executive orders; and court decisions.
- Understand the processes and tools for bargaining, negotiating, and resolving disputes.
- Demonstrate information literacy through the use of commonly accepted quantitative and qualitative analytical research methods to evaluate human resource initiatives and to solve problems.
- Develop effective written and oral communication consistent with the business and professional environment.

Students are required to use the following table:

Course No.	Description	Credits	Prerequisite
MGT 201	Principles of Human Resources Management	3	None
MGT 210	Organizational Staffing	3	MGT 201
MGT 325	Compensation and Reward Systems	3	MGT 210
	<b><i>CHOOSE TWO OF THE FOLLOWING</i></b>		
MGT 202	Business Negotiations	3	MGT 201
MGT 312	Training and Career Development	3	MGT 210
MGT 337	Recruitment and Selection	3	MGT 210
MGT 411	Leadership, Quality and Performance	3	Senior Standing
BAD 317	Organizational Behavior	3	BAD 201
BAD 427	Human Resources Management	3	BAD 317
Total		15 cr.	

### Suggested Program

First semester: MGT 201

Second semester: MGT 210, and any elective course from the pool

Third semester: MGT 325. and any elective course from the pool

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## Undergraduate Courses: Human Resource Management

**MGT 201 Principles of Human Resources Management (3.0); 3 cr.** Theories, policies and practices of human resources management in a firm. Topics covered include employee selection, training and development, performance appraisal and compensation, job analysis and design, benefits administration, and labor-management relations.

**MGT 202 Business Negotiations (3.0); 3 cr.** Negotiation permeates human interactions. It affects the balance and distribution of resources among nations, organizations, families, and individuals. Students will understand the theory behind successful negotiation, recognize situations that call for negotiation, and study the utilization of alternative negotiating strategies and tactics. *Prerequisite:* Junior Standing.

**MGT 210 Organizational Staffing (3.0); 3 cr.** This course provides an in-depth examination of the organizational staffing process. Procedures for human resources needs assessment such as personnel audits and forecasting are discussed. Recruitment strategies and the process of organizational choice of candidates are explored. There is emphasis on understanding basic types of assessment tools and procedures for choosing new employees. *Prerequisite:* MGT 201.

**MGT 312 Training and Career Development (3.0); 3 cr.** The course is an advanced study of personnel training and development in contemporary organizations. Emphasis is placed on the identification of training needs, program design, selection of training methods, monitoring the process, and evaluating the results. *Prerequisite:* MGT 210.

**MGT 325 Compensation and Reward Systems (3.0); 3 cr.** This course provides the study of labor markets and examines the general structure of an organization and the rewards employees seek in exchange for their services and contributions to the firm. Topics covered include developing pay structure, measuring performance, providing employee benefits, rewards and a motivating work environment, and administering the compensation plan. *Prerequisite:* MGT 210.

**MGT 337 Recruitment and Selection (3.0); 3 cr.** The objective of this course is to describe to students how organizations search for prospective employees and influence them to apply for available jobs. It is an advanced study of recruitment and selection practices of organizations. *Prerequisite:* MGT 210.

**MGT 411 Leadership, Quality and Performance (3.0); 3 cr.** The purpose of this course is to focus on the major traits which come together in a leader to produce Leadership. Theory, Power, Motivation, and Communication, this course explores the causes and consequences of effective leadership in organizations. *Prerequisite:* Senior Standing.

**MGT 453 Global Human Resources Management (3.0); 3 cr.** This course is designed to help students develop skills as global managers and to provide them with an understanding of critical issues in the management of multinational organizations. Topics covered include international leadership skills, cross-cultural negotiations, ethical dilemmas in cross-cultural environments, and designing and managing multinational organizations. *Prerequisite:* Senior Standing.

**MGT 475 Managing Employment Relations (3.0); 3 cr.** This course provides an overview of the relationships between human resources and parties to employment. It considers contract negotiations, discipline and grievance procedures, and human resources department assistance in conflict resolutions. Special attention is given to the organizational structure of the parties and their diversified objectives. *Prerequisites:* MGT 210, BAD 329.

**MGT 483 Human Resources Management Internship (1.0); 1 cr.** The Internship program is designed to provide the Interns with the opportunity to develop professional skills related to their studies by working under the supervision of an experienced business practitioner. Internship is conducted under the supervision of a program director at NDU and in cooperation with the Interns employer. A minimum of 120 working hours are required. *Prerequisite:* Senior Standing.

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## **The Degree of Bachelor of Business Administration (B.B.A.)**

### **Health Care Management Emphasis**

#### **Health Care Management: Why?**

The health care industry size is growing worldwide and throughout the whole Middle East. Growth is driven by the following:

1. Increasing consumerism and health needs
2. Advancing technologies
3. Changing regulation
4. Aging Population

In addition to providing effective care, today's health care organizations urgently need to be effectively managed in terms of organizational issues, human resources, and costs. The health care management program at NDU provides students with business management skills and knowledge of healthcare delivery system needed to work in this growing field.

Business orientation is essential and the health care profession's tracks need preparation and exposure to the health care industry.

There is a real market demand for graduates that are well educated in this field.

#### **Program Objective**

The BBA- Health Care Management option is designed to provide students with an understanding of the processes and structures of Health Care Organizations to enable them to be more effective managers. The courses taken in addition to the required common courses provide the students with proficiency in appropriate-management skills and decision-making.

This program has an innovative approach whereby the first year is common to all our faculty programs and the concentration courses start in the second semester of the second year. It has a unique market-oriented approach to curriculum design and course administration. All concentration courses will be taught by professionals having a thorough experience in the health care industry.

#### **Careers in health care management**

This program prepares candidates for managerial responsibilities in both the private and public sectors of the health care industry. Health care management majors will be qualified for making a career in:

- Long- term care facilities
- National and international pharmaceuticals firms and medical suppliers
- Insurance companies
- Government and non governmental organizations (NGO)

#### **Admissions Requirements**

Applicants must pass the Lebanese Baccalaureate Part II (Any Strand) or its equivalent as identified by the Lebanese Ministry of Education. They are required to sit for an English Entrance Test (EET) or TOEFL and a Mathematics Test.

## **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the common core and major requirements. The passing grade for all Required Major (HCM) Courses is C. These 106 credits are divided into:

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **48 cr.**

ACO 201, ACO 202, BAD 201, BAD 315, BAD 317, BAD 323, BAD 433, BAD 453, BAD 427, BAD 429, BAF 311, ECN 211, ECN 212, MRK 201, STA 206, STA 207

**Required Major Courses** **28 cr.**

HCM 301, HCM 302, HCM 401, HCM 402, HCM 403, HCM 404, HCM 405, HCM 406, HCM 407, HCM 408.

**Bachelor of Business Administration (BBA)**  
**Health Care Management Emphasis - Suggested Program (106 Credits)**

**Fall Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
BAD	201	Fundamentals of Management	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

ACO	202	Principles of Accounting II	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
BIO	203	Discover Biology	3 cr.
STA	206	Applied Statistics for Business and Economics I	3 cr.

**Summer Session I (9 Credits)**

MRK	201	Fundamentals of Marketing	3 cr.
STA	207	Applied Statistics for Business and Economics II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

BAD	315	International Business	3 cr.
BAD	317	Organizational Behavior	3 cr.
BAF	311	Principles of Financial Management I	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

HCM	301	Introduction to Health Care Management	3 cr.
HCM	302	Health Care Economics	3 cr.
BAD	323	Software Tools for Business Applications	3 cr.
ENS	312	Environmental Health (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session II (7 Credits)**

HSM	408	Health care Internship	1 cr.
BAD	427	Human Resource Management	3 cr.
BAD	433	Business Policy and Strategic Management	3 cr.

**Fall Semester III (15 Credits)**

HCM	401	Management of Health Care Organizations I	3 cr.
HCM	406	Health Care Legal Environment	3 cr.
HCM	404	Health Care Marketing Management	3 cr.
BAD	429	Operations Management	3 cr.
BAD	453	e-Business	3 cr.

**Spring Semester III (12 Credits)**

HCM	402	Management of Health Care Organizations II	3 cr.
HCM	403	Health Care Strategic Management	3 cr.
HCM	405	Health Care Financial Management	3 cr.
HCM	407	Seminars and Topics in Health Care Management	3 cr.

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## Undergraduate Courses: Health Care Management

**HCM 301 Introduction to Health Care Management (3.0), 3 cr.** This course provides an overview of the evolution, structure and current issues in the health care system. It examines the unique features of health care as a product, and the changing relationships between patients, physicians, hospitals, insurers, employers, communities, and government. The course examines three broad segments of the health care industry: payers, providers, and suppliers. Within the payer segment, the course examines the sources and destinations of spending, MOH, CNSS, insurance, technology assessment and renewal, and payer strategy. Within the provider segment, the course examines the impact of cost containment and competition on hospitals and integrated HC delivery systems, and physicians' relationships. Within the supplier segment, the course will examine developments in the biotechnology, pharmaceutical, medical devices (equipment and supplies), genomic and IT industries.

**HCM 302 Health Care Economics (3.0), 3 cr.** This course is designed to build an understanding of the healthcare delivery system from an applied economics perspective. The application of these skills will be drawn from examples that illustrate the production of and demand for health. The economic analysis of health care delivery is based on microeconomic theory: elasticity of demand, price sensitivity, etc. As the managed care model develops, greater emphasis is being placed on individual choice and responsibility as determinants of healthcare utilization. This trend has resulted in greater emphasis on the use of economic theory to both plan and evaluate the healthcare setting. Insurance is a major economic lever of these trends. The rationale for government intervention in medical markets as well as the effectiveness and efficiency of various health policies, including: MOH medical aid, CNSS coverage, price regulation of hospitals, physician payment reform, are surveyed. *Prerequisite:* ECN 212.

**HCM 401 Management Of Health Care Organizations I (3.0), 3 cr.** The purpose of this course is to prepare you for managing health care organizations within an environment of cost containment and quality management of health care services. In Module I, we will first focus on the profession of health care management. This will present a picture of the daily tasks health

care managers faces and knowledge, skills, and abilities needed to be successful. The second focus is on the management of health care teams. This section will equip the student to participate in and successfully manage, coach and/or mentor teams of clinicians, managers, and others. *Prerequisites:* ENS 312 HCM 301, HCM 302.

**HCM 402 Management Of Health Care Organizations II (3.0), 3 cr.** The purpose of this course is to prepare you for managing health care organizations within an environment of cost containment and quality management of health care services. In Module II, we will focus on quality improvement since many health care facilities are turning to total quality management concepts and processes as they strive for efficiency in operations and improvement of medical care delivered. Cost containment programs will be discussed with an emphasis on supply chain management and IT driven processes. *Prerequisite:* HCM 401.

**HCM 403 Health Care Strategic Management (3.0), 3 cr.** This course provides an introduction to how healthcare organizations (Payers, Providers, Suppliers) identify, create, and market their services within the context of a long-term strategic plan. The course will analyze the evolution of strategic management within the healthcare industry, and how it has responded to individuals in need of healthcare services. The class will also examine the core components of a strategic management approach, including situation analysis, formulation of a strategy, implementation, and follow-up relative to the mission and vision of the healthcare organization. As an adjunct to these concepts, the class will review real world cases studies from throughout the healthcare industry. Finally, the communication of the organization's mission, vision, and overall strategic management plan will be discussed. *Prerequisites:* HCM 301, HCM 302.

**HCM 404 Health Care Marketing Management (3.0), 3 cr.** This course focuses on strategic and tactical marketing issues facing health systems including: payers, providers and suppliers. The course requires a basic understanding of what is marketing. Emphasis is placed on analyzing market and patient needs and on understanding branding, service line marketing, patient retention, patient satisfaction, measuring marketing effectiveness, internet

marketing and marketing implementation programs. The course explores the practical application of these marketing concepts on major industry players: Hospitals, Insurers, Medical Device Suppliers, and Pharmaceutical companies. *Prerequisites:* MRK 201, HCM 301, HCM 302.

**HCM 405 Health Care Financial Management (3.0), 3 cr.** This course examines the tools and methods of financial management in health care organizations with emphasis on allocation and use of funds in managing the components of health care delivery systems. Analysis of cost drivers and constraints of alternative source of funds, and the application of financial decision instruments and their effect on operational management and market value of the entity, including valuation methodology and risk management, are covered. Modeling profitability analysis and planning for health care providers and payers is surveyed. *Prerequisites:* BAF 311, HCM 301, HCM 302.

**HCM 406 Health Care Legal Environment (3.0); 3 cr.** This course provides a description of the legal framework in which Health Care Services operate. The course focuses on the national legislation at the level of the Ministry of Health, the National Social Security Fund and the Ministry of Labor to focus on citizens' rights, patients' rights and the duties, responsibilities and obligations of Health Care professionals, complemented with an overview of the laws surrounding the activities of private health care insurance providers. Professional orders will also be covered to complete the review at the local level. Moreover globally, the course will investigate the statutes of the United

Nations World Health Organization and its relationship with national Health Care Services entities. Ethical issues will be discussed to emphasize the particular nature of Health Care provision.

**HCM 407 Seminars and Topics in Health Care Management (3.0); 3 cr.** Health care organizations are under continued pressure to contain costs while maintaining high quality health care. The purpose of this course is twofold: (1) to help you learn about the many controversial issues facing the healthcare industry; and (2) to prepare you for analyzing the issues affecting health care institutions, including payers, providers, and suppliers. You will learn how the various sectors of the health care delivery system deal with conflicting demands from an assortment of stakeholders, including governments, insurers, suppliers, employers, health care professionals, and patients. *Prerequisites:* HCM 401, HCM 402, HCM 403.

**HCM 408 Health Care Internship Program (1.0); 1 cr.** This course is required of all students in the Health Care Management Program. The course is designed to give students first hand experience in a health care setting. Students receive practical experience under the supervision of a qualified professional. In collaboration with the preceptor, students define a complex problem in the assigned firm/facility and in the area of responsibility, conduct an analysis of the problem and conceptualize a project to resolve the problem. In addition, upon completion of the course students should have the tools to effectively search for their first job. *Prerequisites:* HCM 301, HCM 302.

## **DEPARTMENT OF HOSPITALITY AND TOURISM MANAGEMENT**

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**Chairperson:** *Mr. Ghassan Beyrouthy*

**Secretary:** *Mrs. Dunia Akiki*

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### **Assistant Professor**

*Zgheib, Yussef*, Ph.D. 2002, *International Hospitality Management*, University of Strathclyde, Scotland, UK

### **Senior Lecturer**

*Assaf, Carole*, M.B.A., 1995, Notre Dame University-Louaize, Lebanon

### **Lecturer**

*Beyrouthy, Ghassan*, Doctorate (abd), 2008, Economics, Université de Québec à Montréal, Canada

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## **The Degree of Bachelor of Hotel Management and Tourism**

Hospitality, travel and tourism are rapidly growing industries. The NDU program of Bachelor of Hotel Management and Tourism is designed to prepare students for successful professional and executive careers in the hospitality and tourism industries by allowing them to specialize in one of the following four concentrations: Hospitality Services Management, Food & Beverage Operations Management, Travel and Tourism Management, as well as Hospitality Events Management.

The various concentrations provide a sound foundation in hotel, restaurant management, tourism administration and Events Management, through focused academic coursework, hands-on work experience, and intense interaction with the industry. They also provide relevant educational opportunities for persons currently employed in these industries and wishing to upgrade their skills.

Hospitality and Tourism Management students at NDU benefit from a rare opportunity to learn the international management techniques for success in the hospitality and tourism field, while also seeking knowledge more adapted to their professional career orientations and specializations.

In 2006 NDU's Department of Hospitality and Tourism Management signed a unique educational venture partnership with SHMS<sup>1</sup>, a leading Swiss Hotel Management School. This collaboration intends to combine the Swiss art of *hôtellerie* and the more American science of management in practice at NDU. It comprises exchange of know how, faculty and students, industry consultancy, and leads to a potential dual diploma-degree in Hospitality Management.

### **Graduation Requirements**

Students seeking the degree of Bachelor of Hotel Management and Tourism must complete a total of 103 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the major and concentration requirements. The passing grade for all courses is "D" except for ENL 105, ENL 110 whereby it is "C". These 103 credits are divided into:

**Degree Requirements  
(103 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **51 cr.**

TTM 201, TTM 204, HSM 205, HSM 211, HSM 224, HSM 226, TTM 237,  
HSM 281, HSM 311, FBM 313, HSM 314, FBM 315, HSM 319, FBM 324,  
TTM 326, FBM 351, HSM 411, HSM 451, HSM 459

**Concentration Requirements** **19 cr.**

Food and Beverage Management Emphasis  
Hospitality Management Emphasis  
Travel and Tourism Management Emphasis  
Hospitality Events Management Emphasis

**Free Electives** **3 cr.**

Halfway through their university education, students majoring in hotel management and tourism are provided with the opportunity to choose one of four concentration schemes. These options allow graduates to enhance their expert knowledge in one of the four most englobing fields of hospitality and tourism, thus differentiate themselves from their peers and improve their potentials for professional success.

**A - Food and Beverage Management Emphasis (19 cr.):**

**Major Requirements** **10 cr.**

FBM 332, FBM 381, FBM 413, FBM 424

**A choice of 3 courses from the following** **9 cr.**

HSM 334, FBM 335, FBM 343, FBM 349, HSM 412, HSM 432, HSM 437,  
HSM 439, TTM 440, FBM 444, FBM 446, HSM 447, HSM 449, FBM 464,  
HSM 450, HSM 485, MAT 204, STA 206, STA 207, ECN 211, COA 252, BAF  
312, NTR 212, GEM 202 or ITL 202 or SPN 202

**B - Hospitality Management Emphasis (19 cr.):**

**Major Requirements** **7 cr.**

FBM 381 or TTM 382, HSM 432, HSM 437

**A choice of 4 courses from the following** **12 cr.**

FBM 332, HSM 334, TTM 342, FBM 343, TTM 344, TTM 346, FBM 349,  
HSM 412, FBM 424, HSM 439, TTM 440, FBM 444, TTM 445, FBM 446,  
HSM 447, HSM 449, HSM 450, HSM 460, HSM 485, MAT 204, STA 206,  
STA 207, ECN 211, COA 252, BAF 312, NTR 212, GEM 202 or ITL 202 or  
SPN 202

**C - Travel and Tourism Management Emphasis (19 cr.):**

**Major Requirements** **10 cr.**

TTM 342, TTM 345, TTM 382, TTM 445

**A choice of 3 courses from the following****9 cr.**

HSM 334, TTM 341, FBM 343, TTM 344, TTM 346, FBM 349, HSM 412, HSM 432, HSM 437, HSM 439, TTM 440, FBM 444, FBM 446, HSM 447, HSM 449, HSM 450, TTM 454, TTM 462, HSM 485, MAT 204, STA 206, STA 207, ECN 211, COA 252, BAF 312, NTR 212, GEM 202 or ITL 202 or SPN 202, ARP 567

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**D- Hospitality Events Management – HVM****19 cr.****I- Overview:**

The events industry has significantly grown over the last ten years on both the household as well as the corporate or firm level. Thus, events management is increasingly becoming a need as a specialized field of study.

Events Management is a very diverse field that can range from a small in-house private function to a large scale event with possibly an international dimension such as: exhibition, convention, festival, artistic event, tournament, religious event, ceremony, music concert, wedding, funeral, conference, seminar, training, sports event, fashion-show, movie fair, festival, etc.

In Lebanon, the demand for Events Management has exponentially augmented over the past few years, since the concept of events is progressively being incorporated in the business and social environments. Among other examples: the vast majority of weddings are organized by wedding planners; launching of new establishments and especially touristic and hospitality institutions are mostly handled by events and public relations companies; children birthdays are always animated by clowns cartoon figures and magicians; the trend in funerals is to outsource food, service, flowers and communication to specialized service companies; exhibitions and conferences are mostly managed by event companies to secure lodging, translation, transportation, staging, F&B, TV & press releases, and marketing exposure.

In conclusion, the events concept has already been and will further be in the near future, integrated in the business and social way of life of Lebanese household and corporate institutions

**Major requirements:****13 cr.**

- 5 courses will be required as major core courses:
  1. HVM 201 (3 cr.): Introduction to the International Events Industry.
  2. HVM 301 (3 cr.): Events Management Operations and Logistics.
  3. HVM 311 (3cr.): Events Sponsorship, Fundraising and Partnership.
  4. HVM 431 (3 cr.): Event Management Project.
  5. HVM 382 (1cr.): Internship

**Major Electives:****6 cr.**

- A choice of two courses from the following
  1. HVM 401 (3cr.): Contemporary Issues and Best Practices in Events Management.
  2. HVM 414 (3cr.): Events Production and Technical issues.
  3. HVM 416 (3cr.): Risk and Safety in Events Management.
  4. HVM 420 (3cr.): Protocol and Etiquette in Event Management.
  5. HVM 422 (3cr.): M.I.C.E (meetings, incentives, conferences, & exhibitions)  
MGT

6. HVM 425 (3cr.): Casino and Entertainment Management.
7. HVM 430 (3cr.): Recreational, Leisure and Sports Events Management.

**Sample Concentration Contract Sheet:**

FACULTY OF BUSINESS ADMINISTRATION & ECONOMICS

Department of Hospitality and Tourism Management

GRADUATION REQUIREMENTS

CONCENTRATION: **EVENTS MANAGEMENT**

ID: \_\_\_\_\_

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Major Requirements Courses (13 cr.)

Course No.	Cr.	Grade			Course No.	Cr.	Grade		
HVM 201	3				HVM 311	3			
HVM 301	3				HVM 431	3			
HVM 382	1								

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Major Elective Courses For Events (6 cr.)

Course No.	Cr.	Grade			Course No.	Cr.	Grade		
HVM 401	3				HVM 422	3			
HVM 414	3				HVM 425	3			
HVM 416	3				HVM 430	3			
HVM 420	3								

Free Elective From Any Faculty (3 cr.)

Course No.	Cr.	Grade			Course No.	Cr.	Grade		
	3								

NB: Clarification of acronyms and symbols used:

FBM Food and Beverage Management  
HSM Hospitality Services Management  
TTM Travel and Tourism Management  
HVM Hospitality Events Management

**Bachelor of Hotel Management and Tourism**  
**Food and Beverage Management Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

TTM	201	Introduction to Tourism and Hospitality Management	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
HSM	205	Principles of Hospitality Financial Accounting	3 cr.
—	—	GER	3 cr.

**Spring Semester I (16 Credits)**

HSM	211	Hospitality and Tourism Law	3 cr.
HSM	224	Front Office Operations and Management <sup>1</sup>	3 cr.
HSM	226	Housekeeping Operations and Management <sup>1</sup>	1 cr.
ENL	230	English in the Workplace (GER)	3 cr.
TTM	237	Hospitality and Tourism Marketing	3 cr.
—	—	GER	3 cr.

**Summer Session I (4 Credits)**

HSM	281	Internship I: Rooms Division Operations	1 cr.
—	—	GER	3 cr.

**Fall Semester II (16Credits)**

HSM	311	Hospitality Managerial Accounting	3 cr.
FBM	313	Food Production <sup>2</sup>	3 cr.
FBM	315	Food Production Lab <sup>2</sup>	1 cr.
FBM	324	Restaurant Operations and Floor Management <sup>2</sup>	3 cr.
HSM	314	Human Resources Management in the Hospitality Industry	3 cr.
—	—	GER	3 cr.

**Final deadline to declare concentration choice.**

**Spring Semester II (15 Credits.)**

TTM	204	Economics of Tourism	3 cr.
FBM	332	Catering Functions and Banqueting Management	3 cr.
HSM	319	Information Technology in the Hospitality Industry	3 cr.
FBM	351	Food, Beverage and Labor Cost Control	3 cr.
—	—	GER	3 cr.

**Summer Session II (7 Credits)**

FBM	381	Internship II: Food and Beverage Operations	1 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

FBM	424	Restaurant Development and Management	3 cr.
FBM	413	Advanced Food Production	3 cr.
HSM	411	Hospitality Managerial Finance	3 cr.
HSM	451	Hospitality Management	3 cr.
—	—	Major Elective	3 cr.

**Spring Semester III (15 Credits)**

TTM	326	Domestic Travel and Tourism Development	3 cr.
TTM	459	Hospitality and Tourism Strategic Management	3 cr.
—	—	Major Elective	6 cr.
—	—	Free Elective	3 cr.

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<sup>1</sup> HSM 224, 226 should be taken concurrently.

<sup>2</sup> FBM 313, 315, 324 should be taken concurrently.

## Minor in Food and Beverage Management (17 credits)

This minor is designated to students who intend to be involved in the food & beverage, restaurant or catering business. The scope of this minor is to give a broad professional understanding to students to the world of restaurants, pubs, catering companies, and the like.

After the completion of this minor the student should:

- Have learned principles, concepts and practices of the F&B industry
- Have ability to understand the functioning of the main F&B institutions
- Have a basic skills to conduct the basic operations in the F&B institutions

Students are required to use the following table:

Course #	Description	Credits	Pre/Co-requisite
FBM 313	Food Production	3	—
FBM 315	Food Production Lab	1	FBM 313
FBM 324	Restaurant Operations & Floor Management	3	—
FBM 351	Food, Beverage & Labor Cost Control	3	FBM 313
FBM 381	Internship II: Food & Beverage Operations	1	FBM 324
<b>CHOOSE TWO OF THE FOLLOWING</b>			
FBM 332	Catering, Functions & Banqueting Management	3	FBM 313
FBM 335	Institutional & Contract Foodservice Management	3	FBM 324
FBM 343	Purchasing for Hospitality Operations	3	FBM 313
FBM 349	International Cuisine	3	FBM 313
FBM 413	Advanced Food Production	3	FBM 313
FBM 424	Restaurant Development & Management	3	FBM 324
FBM 444	Alcoholic Beverages Appreciation	3	
FBM 446	Bartending & Beverage Operations Management	3	Senior Standing
FBM 464	Special Topics in Food & Beverages	3	
HSM 449	Meetings, Conventions, Exhibitions & Events Mgt	3	
Total		17 cr.	

### Suggested Program:

First semester

FBM 313      Food Production  
 FBM 315      Food Production Lab

Second semester

FBM 324      Restaurant Operations & Floor Management  
 FBM 351      Food, Beverage & Labor cost control

Third semester

Choice of two minor electives

Summer

FBM 381      Internship II: Food & Beverage Operations

**Bachelor of Hotel Management and Tourism**  
**Hospitality Management Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

TTM	201	Introduction to Tourism and Hospitality Management	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
HSM	205	Principles of Hospitality Financial Accounting	3 cr.
—	—	GER	3 cr.

**Spring Semester I (16 Credits)**

HSM	211	Hospitality and Tourism Law	3 cr.
HSM	224	Front Office Operations and Management <sup>1</sup>	3 cr.
HSM	226	Housekeeping Operations and Management <sup>1</sup>	1 cr.
ENL	230	English in the Workplace (GER)	3 cr.
TTM	237	Hospitality and Tourism Marketing	3 cr.
—	—	GER	3 cr.

**Summer Session I (4 Credits)**

HSM	281	Internship I: Rooms Division Operations	1 cr.
—	—	GER	3 cr.

**Fall Semester II (16Credits)**

HSM	311	Hospitality Managerial Accounting	3 cr.
FBM	313	Food Production <sup>2</sup>	3 cr.
FBM	315	Food Production Lab <sup>2</sup>	1 cr.
FBM	324	Restaurant Operations and Floor Management <sup>2</sup>	3 cr.
HSM	314	Human Resources Management in the Hospitality Industry	3 cr.
—	—	GER	3 cr.

**Final deadline to declare concentration choice.**

**Spring Semester II (15 Credits.)**

TTM	204	Economics of Tourism	3 cr.
HSM	437	Hospitality Sales and Promotional Techniques	3 cr.
HSM	319	Information Technology in the Hospitality Industry	3 cr.
—	—	Major Elective (TTM 342 if planning to take 382)	3 cr.
—	—	GER	3 cr.

**Summer Session II (7 Credits)**

FBM	381	Internship II: Food and Beverage Operations	1 cr.
or			
TTM	382	Internship III: Travel Agency and Tour Operations	3 cr.
—	—	GER	
—	—	GER	

**Fall Semester III (15 Credits)**

FBM	351	Food, Beverage and Labor Cost Control	3 cr.
HSM	432	Hospitality Property Management	3 cr.
HSM	451	Hospitality Management	3 cr.
—	—	Major Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

HSM	411	Hospitality Managerial Finance	3 cr.
HSM	459	Hospitality and Tourism Strategic Management	3 cr.
—	—	Major Elective	6 cr.
—	—	Free Elective	3 cr.

<sup>1</sup> HSM 224, 226 should be taken concurrently.

<sup>2</sup> FBM 313, 315, 324 should be taken concurrently.

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## Minor in Hospitality Services Management (17 credits)

This minor introduces the student to the hospitality branch of the tourism industry, i.e., the world of hotels, clubs, casinos, service institutions, and all other accommodation facilities. After the completion of this minor the student should:

- Have learned the basic principles, concepts and skills required in the hospitality field
- Have a general understanding of the practical functioning of the hospitality institutions
- Have a basic comprehension of the operations of the relative main stakeholders

Students are required to use the following table:

Course #	Description	Credits	Pre/ Co-requisite
TTM 201	Introduction to Tourism & Hospitality Management	3	
HSM 224	Front Office Operations & Management	3	TTM 201
HSM 226	Housekeeping Operations & Management	1	HSM 224
HSM 319	Information Technology in the Hospitality Industry	3	HSM 224
HSM 281	Internship I: Rooms Division Operations	1	HSM 224
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
HSM 205	Principles of Hospitality Financial Accounting	3	TTM 201
HSM 211	Hospitality & Tourism Law	3	TTM 201
HSM 311	Hospitality Managerial Accounting	3	HSM 205
HSM 314	Human Resources Mgt in the Hospitality Industry	3	TTM 201
HSM 334	Resort & Receptions Management	3	
HSM 411	Hospitality Managerial Finance	3	HSM 311
HSM 432	Hospitality Property Management	3	
TTM 237	Hospitality and Tourism Marketing	3	TTM 237
HSM 437	Hospitality Sales & Promotional Techniques	3	TTM 237
HSM 447	Advanced Hospitality & Tourism Marketing	3	
HSM 449	Meetings, Conventions, Exhibitions & Events Mgt	3	
HSM 450	Hospitality Project Planning & Facilities Design	3	
HSM 451	Hospitality Management	3	
HSM 459	Hospitality & Tourism Strategic Management	3	HSM 314
Total		17 cr.	

### Suggested Program:

First semester

TTM 201 Introduction to Tourism & Hospitality Management  
HSM 224 Front Office Operations & Management

Second semester

HSM 226 Housekeeping Operations & Management  
HSM 319 Information Technology in the Hospitality Industry

One minor elective

Third semester

HSM 281 Internship I: Rooms Division Operations

One minor elective

**Bachelor of Hotel Management and Tourism**  
**Travel and Tourism Management Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

TTM	201	Introduction to Tourism and Hospitality Management	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
HSM	205	Principles of Hospitality Financial Accounting	3 cr.
—	—	GER	3 cr.

**Spring Semester I (16 Credits)**

HSM	211	Hospitality and Tourism Law	3 cr.
HSM	224	Front Office Operations and Management <sup>1</sup>	3 cr.
HSM	226	Housekeeping Operations and Management <sup>1</sup>	1 cr.
ENL	230	English in the Workplace (GER)	3 cr.
TTM	237	Hospitality and Tourism Marketing	3 cr.
—	—	GER	3 cr.

**Summer Session I (4 Credits)**

HSM	281	Internship I: Rooms Division Operations	1 cr.
—	—	GER	3 cr.

**Fall Semester II (16Credits)**

HSM	311	Hospitality Managerial Accounting	3 cr.
FBM	313	Food Production <sup>2</sup>	3 cr.
FBM	315	Food Production Lab <sup>2</sup>	1 cr.
FBM	324	Restaurant Operations and Floor Management <sup>2</sup>	3 cr.
HSM	314	Human Resources Management in the Hospitality Industry	3 cr.
—	—	GER	3 cr.

**Final deadline to declare concentration choice.**

**Spring Semester II (15 Credits.)**

TTM	204	Economics of Tourism	3 cr.
TTM	345	Passenger Operation Services	3 cr.
HSM	319	Information Technology in the Hospitality Industry	3 cr.
TTM	342	Travel Agency and Tour Management	3 cr.
—	—	GER	3 cr.

**Summer Session II (7 Credits)**

TTM	382	Internship III: Travel Agency and Tour Operations	1 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

FBM	351	Food, Beverage and Labor Cost Control	3 cr.
HSM	451	Hospitality Management	3 cr.
TTM	326	Domestic Travel and Tourism Development	3 cr.
TTM	445	Sustainable Tourism	3 cr.
—	—	Major Elective	3 cr.

**Spring Semester III (15 Credits)**

HSM	411	Hospitality Managerial Finance	3 cr.
HSM	459	Hospitality and Tourism Strategic Management	3 cr.
—	—	Major Elective	6 cr.
—	—	Free Elective	3 cr.

<sup>1</sup> HSM 224, 226 should be taken concurrently.

<sup>2</sup> FBM 313, 315, 324 should be taken concurrently.

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### Minor in Travel and Tourism (16 credits)

This minor is intended to introduce the student to the world of Travel and Tourism through travel agencies, airports, tour operators, tourism destinations, and among others sustainable tourism. After the completion of this minor the student should:

- have a general understanding of the functioning of the tourism industry
- have a basic comprehension of the operations of the main stakeholders in the industry
- have learned the basic principles, concepts and skills pertaining to this particular branch in the tourism industry

Students are required to use the following table:

Course #	Description	Credits	Pre/ Co-requisite
TTM 201	Introduction to Tourism & Hospitality Management	3	—
TTM 326	Domestic Travel & Tourism Development	3	Junior standing
TTM 342	Travel Agency & Tour Management	3	Junior standing
TTM 382	Internship III: Travel Agency & Tour Operations	1	TTM 342
	<b><i>CHOOSE TWO OF THE FOLLOWING</i></b>		
TTM 204	Economics of Tourism	3	—
TTM 237	Hospitality & Tourism Marketing	3	TTM 201
TTM 341	International Air Law	3	—
TTM 344	International Travel & Tourism	3	—
TTM 345	Airline Passenger Services	3	Junior standing
TTM 346	Automated Travel System	3	TTM 342
TTM 440	Tourism & Multicultural Management	3	—
TTM 445	Sustainable Tourism	3	—
TTM 454	Strategic Airline Business Operations	3	—
TTM 462	Special Topics in Travel & Tourism	3	—
Total		16 cr.	

#### Suggested Program:

First semester

TTM 201: Introduction to Tourism & Hospitality Management

Second semester

TTM 326: Domestic Travel & Tourism Development

TTM 342: Travel Agency & Tour Management

Third semester

Choice of two minor electives

Fourth semester

TTM 382: Internship III: Travel Agency & Tour Operations

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## Undergraduate Courses: Hotel Management and Tourism

**TTM 201 Introduction to Tourism & Hospitality Management (3.0); 3 cr.** A comprehensive overview of the tourism and hospitality global industry. The course is a broad introduction of the industry's scope, supply and demand components, socio-economic and environmental impacts, operations, career opportunities and requirements for success. Students further gain exposure to the basic managerial functions and how they relate to the tourism and hospitality industry.

**TTM 204 Economics of Tourism (3.0); 3 cr.** This course applies economic principles to the tourism and hospitality industry. Special emphasis is placed on supply and demand and the determination of prices. It also discusses the impact of the GDP, growth and fluctuations on the Tourism industry. The course further focuses on the contribution of tourism to the overall performance of the economy.

**HSM 205 Principles of Hospitality Financial Accounting (3.0); 3 cr.** Hospitality accounting principles, concepts and practices pursuant to the industry's systems of accounts. Careful consideration is given to practical transaction analysis, flow of accounting data to the financial statements and their implications with respect to cash flow, revenues, expenses, assets, liabilities and equity management. *Corequisite:* TTM 201.

**HSM 211 Hospitality and Tourism Law (3.0); 3 cr.** A study of the legal responsibilities affecting the operations of the hospitality and tourist industries, including aspects of innkeeping, occupier's liability, trades practices, licensing, health, taxation and employment. Other topics include: corporation legislation, the law of contract, the role of ethics and a comparative approach to foreign legislations relating to hospitality and tourism industries. *Prerequisite:* TTM 201.

**HSM 224 Front Office Operations and Management (3.1); 3 cr.** The course acquaints the student with the operations and procedures involved in managing the guest services area of a lodging operation. Functions covered deal with the guest cycle from reservations through checkout including the night audit and their interaction with other operations. Intensive lab applications. *Prerequisite:* TTM 201.

**HSM 226 Housekeeping Operations and Management (1.3); 1 cr.** This course is a guide

to various aspects of housekeeping in a lodging industry from cleanliness, hygiene, maintenance and aesthetic upkeep of the property. It deals with duties from those of executive housekeeper to room attendant. Intensive lab applications. *Corequisite:* HSM 224.

**TTM 237 Hospitality and Tourism Marketing (3.0); 3 cr.** An introduction to the concept, principles and practices of contemporary marketing as they apply to the specialized needs of the hospitality industry. Subjects covered are marketing concepts and environment, segmentation and positioning, consumer behavior and marketing mixed strategies. The development of a practical marketing plan for an actual hospitality business is a special feature of this course. *Prerequisite:* TTM 201.

**HSM 281 Internship I: Rooms Division Operations 1 cr.** A supervised on-the-job work experience in the lodging business. Arranged with a Department approved cooperating institution. This field experience - of no less than 500 hours - emphasizes front office and housekeeping operations and management tasks. Student must check course guidelines before registering. *Prerequisites:* HSM 224, HSM 226.

**HSM 311 Hospitality Managerial Accounting (3.0); 3 cr.** This course focuses on the use of accounting information for management decision-making and control. Topics include costing, management control systems and performance measurement. Emphasis is on cost-volume analysis, budgeting and pricing decisions. *Prerequisite:* HSM 205.

**FBM 313 Food Production (3.0); 3 cr.** An introduction to food production techniques and management. The course is designed to familiarize students with food composition and properties, commercial food preparation, safety and sanitation. Students will develop the ability to standardize recipes, plan menus and manage potential production problems. Practical involvement in food production is included. Intensive lab applications.

**HSM 314 Human Resources Management in the Hospitality Industry (3.0); 3 cr.** Knowledge of the human resources management function in the context of hospitality organizations is developed. In addition to personnel management techniques, exposure will focus on the HRM activities aimed at

attracting, retaining and motivating hospitality employees. *Prerequisite:* TTM 201.

**FBM 315 Food Production Lab (0,3); 1 cr.** Practical implementation of the culinary concepts and techniques taught in Food Production (FBM 313). (*Corequisite:* FBM 313 for HTM students only).

**HSM 319 Information Technology in the Hospitality Industry (3.1); 3 cr.** This course aims to provide students with a competence in the computerized property management systems used in hotels and restaurants. Information processing concepts, equipments and systems with respect to front office and restaurant automation are introduced. Applied software programs are used intensively. Intensive lab applications. *Corequisite:* HSM 224.

**FBM 324 Restaurant Operations and Floor Management (3.1); 3 cr.** An extensive theoretical and practical exposure to dining room operations and management. Students learn and practice different service and functions concepts as well as learn to manage scheduling, hosting, selling, cashiering, sanitation and safety, and operational performance. Service and related software labs are intensely used.

**TTM 326 Domestic Travel and Tourism Development (3.0); 3 cr.** The course provides a complete description and geography of domestic tourism from the view-point of the traveler and the travel/tourism entrepreneur. Students will gain a solid practical understanding of local travel and tourism development and potentials from a specific destination and potentials. Field trips and projects are part of this course. *Junior Standing*

**FBM 332 Catering, Functions and Banqueting Management (3.0); 3 cr.** Course leading to a thorough understanding of the different catering concepts for special functions. Lectures and demonstrations focus on menu planning, working methods, catering equipment, kitchen and service layout, service, events preparation and execution, sales, and human resources organization. The course will equip students to operate and manage different types of food and beverage service, on and off premises. *Corequisite:* FBM 313.

**HSM 334 Resort & Recreations Management (3.0); 3 cr.** Resorts & Recreation systems include the environmental, social, managerial resources and the methods for development of full service resorts and recreations. Comparison

of specialized requirements for different types of resorts based on location, climate, activities, human resources and life style. The goal of this course is to help students develop a related understanding of the principles of project development, construction, supervision, pre-opening requirements and operations.

**FBM 335 Institutional and Contract Foodservice Management (3.0); 3 cr.** Administration of foodservice operations in noncommercial, convenience and contract-managed facilities. Characteristics and operations of specialty businesses such as health-care, cafeteria, industrial, foodservice vending and in-flight catering are studied. Field Trips and projects supplement classroom sessions. *Corequisite:* FBM 324.

**TTM 341 International Air Law (3.0); 3 cr.** This course establishes a solid core of knowledge of the principal instruments of international air law. It will allow the student to understand interpret and apply the main rules and regulations of air law. It will also explain the legal framework governing aircraft security, interception of aircraft & piracy, alliances & their impact, and the legal issues surrounding the airline distribution.

**TTM 342 Travel Agency and Tour Management (3.0); 3 cr.** A thorough examination of the services and functions of retail and wholesale travel agencies. Specifically covered are agency organization, automation and operations as well as wholesale package planning, implementation and evaluation. Field trips and actual projects will supplement classroom discussions. *Junior Standing*

**FBM 343 Purchasing for Hospitality Operations (3.0); 3 cr.** A comprehensive exposure to the basic principles of purchasing food, beverage, equipment, supplies and contract services. Specific topics include product specifications and ordering, supplier selection, store management and negotiations. Field Trips included. *Corequisite:* FBM 313.

**TTM 344 International Travel and Tourism (3.0); 3 cr.** A complete description and geography of international travel, notably current trends and cultural behavior, popular destinations, and international tourism organizations as well as major international travel transportation modes and routes. A comparative approach and evaluation of national

and international destinations organization, management and marketing.

**TTM 345 Airline Passenger Services (3.0); 3 cr.** An introduction to the most important air transport service and safety skills essential to maintain traveller satisfaction. The course enables students to understand the application of international air transport standards relating to passenger and baggage handling functions. Practical working knowledge of airport passenger service functions will be acquired.

*Junior Standing*

**TTM 346 Automated Travel System (3.0) 3 cr.** A comprehensive, hands-on computer learning experience. Students will progress from the characteristics and development of automation in the retail travel agency to practical applications in computerized reservations and back-office systems. *Corequisite:* TTM 342.

**FBM 349 International Cuisine (3.1); 3 cr.** Broadens students knowledge of menus and the popular national cuisines riding the international trendy wave. Emphasis is placed on concepts, cultural contexts, food preparation and service characteristics. Managerial perspective is also used related to nutrition, menu adaptability, architectural layouts, costing and marketing. Course is heavily application oriented. *Prerequisite:* FBM 313.

**FBM 351 Food, Beverage and Labor Cost Control (3.0); 3 cr.** This fundamental course is designed to familiarize the student with the theory and practice of internal cost controls in the hospitality industry. A comprehensive and thorough understanding of quality assurance versus cost impact on profitability management is provided. Practical financial problems and actual operational techniques of functioning systems of internal control are studied. The focus is to provide future hospitality managers with the ability to handle the diverse issues regarding service quality, employee morale and cost management. *Prerequisites:* FBM 313.

**FBM 381 Internship II: Food and Beverage Operations 1 cr.** A supervised on-the-job work experience in the food and beverage business, particularly restaurants and catering. Arranged with a Department approved cooperating institution, this field experience - of no less than 500 hours - emphasizes operations and management functions in service, production, inventory and cost control. Student must check

course guidelines before registering. *Prerequisite:* FBM 324.

**TTM 382 Internship III: Travel Agency and Tour Operations 1 cr.** A supervised on-the-job work experience in the travel and tourism business, particularly travel agency and tour operations. Arranged with a Department approved cooperating institution, this field experience - of no less than 500 hours - emphasizes agency and group travel operations and management functions. Student must check course guidelines before registering. *Corequisites:* TTM 342.

**HSM 411 Hospitality Managerial Finance (3.0); 3 cr.** Understanding the role of the hospitality financial controller through the application of accounting, finance and cost control principles, aimed at maximizing the organization value. Focus areas include: preparation of financial statements, bond and stock valuation, working capital management, short-term financing, capital budgeting and alternative financing arrangements. *Prerequisite:* HSM 311.

**HSM 412 Intermediate Business Finance (3.0); 3 cr.** Building on the concepts developed in HSM 411, this course focuses on corporate financial management including risk analysis, security markets operations and international finance. *Prerequisite:* HSM 411.

**FBM 413 Advanced Food Production (1.3); 3 cr.** The course aims to examine latest techniques and production systems in the food service industry. Commercialized innovations in forms of food, techniques in production, storing and serving, and new technological developments in food service equipments are explored. *Prerequisite:* FBM 313.

**FBM 424 Restaurant Development and Management (3.0); 3 cr.** Students systematically plan and develop a restaurant from concept to operations. The course comprises concept analysis, feasibility study, menu development and pricing, technical and architectural planning, staffing, and pre-opening, opening and operational administration. An applied project approach is used. *Prerequisite:* FBM 324.

**HSM 432 Hospitality Property Management (3.0); 3 cr.** This course provides an understanding of the peculiar responsibilities of the engineering and maintenance department. It includes a basic technical understanding of the

major building operating systems (HVAC, sound, water, safety and security), landscaping as well as the related operating energy and cost management. Field property visits included.

**HSM 437 Hospitality Sales and Promotional Techniques (3.0); 3 cr.** An analysis of hospitality buyers' motivations and behavior, and the related effective promotional and sales techniques. This partly experiential course provides the opportunity to develop and practice promotional and personal-selling skills. *Prerequisite:* TTM 237

**HSM 439 Market and Feasibility Studies (3.0) 3 cr.** Study of the techniques used to conduct standard market and feasibility studies for hospitality properties and tourism developments. Analysis include supply, demand, site evaluation, risk assessment and operational and financial projections. *Prerequisite:* TTM 237, STA 206.

**TTM 440 Tourism and Multicultural Management (3.0) 3 cr.** In-depth examination of differences in culture, customs and behaviors in the hospitality/tourism industry. Students will focus on cultural differences and the varying needs of international tourists. This course addresses the significance of art, customs, traditions, and visitor management to educate the traveler and preserve cultural diversity.

**FBM 444 Alcoholic Beverages Appreciation (3.0); 3 cr.** This course provides knowledge and appreciation of the major alcoholic beverage from cultural background to production, evaluation purchasing, storing and service etiquette. Wine, whiskey, arak, beer and spirits are emphasized. A further introduction to coffee, tea and non-alcoholic beverages is provided. Evaluation by tasting is an integral part of the course. Laboratory fee.

**TTM 445 Sustainable Tourism (3.0); 3 cr.** A deeper understanding and analysis of the business-society interface. Policy guidelines to bring both hospitality business and society towards sustainable, workable and mutually beneficial solutions are studied. Topics investigated: ecotourism, corporate policy and social responsibility, ethics and values in business, business interests and community issues, business and media relations, corporation and government relations.

**FBM 446 Bartending and Beverage Operations Management (3.1); 3 cr.** The course deals specifically with the operations and

administration of beverage businesses. Students acquire valuable practical knowledge in planning, mixology, cost control, loss prevention, creative merchandising and alcohol liability. The course is highly application oriented. Laboratory fee. Senior Standing

**HSM 447 Advanced Hospitality and Tourism Marketing (3.0) 3 cr.** This elective course builds on the student's previous exposure to the principles and practices of marketing. The key feature is the comprehensive and in-depth coverage of global market analysis for business opportunities and sustainable competitive advantage. A strong emphasis is placed upon the development of a greater appreciation of consumer behavior and competition analysis, selling and communication strategies and management as well as business negotiations. The course is heavily case oriented. *Prerequisite:* TTM 237.

**HSM 449 Meetings, Conventions, Exhibitions and Events Management (3.0); 3 cr.** Introduction to the environment and characteristics of the meetings, conventions and exhibitions segments of the hospitality industry. Emphasis is on managerial decisions involved in targeting, planning, organizing, selling and servicing. Applied case analysis and field projects.

**HSM 450 Hospitality Project Planning and Facilities Design (3.0) 3 cr.** An introduction to project management from concept and feasibility planning to space and architectural design then construction and procurement management. Emphasis is on setting appropriate facilities requirement, layout and detailed design them, the implementation of properties decisions within a balanced design, operations and financial framework.

**HSM 451 Hospitality Management (3.0); 3 cr.** Analysis of hospitality operating practices and policies and their managerial implications on the individual and group behavior in the organizational setting. The focus is on the acquisition and implementation of leadership styles to enhance organizational effectiveness and individual well being. The course includes the study of group behavior, attitudes and stress management, communication, motivation, leadership, power politics, conflict and organizational culture. Life case discussions and field projects are included. *Prerequisite:* HSM 314.

**TTM 454 Strategic Airline Business Operations (3.0); 3 cr.** This course aims at emphasizing the strategic airline business planning through the development of key airline success factors and how to influence them. The student is introduced to Airline economics, bilateral agreements, contemporary issues, product specification and distribution that are necessary to formulate integrated and effective plans.

**HSM 459 Hospitality and Tourism Strategic Management (3.0); 3 cr.** This capstone course in hospitality and tourism features the integration of business theories and practices into strategic decision making. Focus is on external and internal analysis for business opportunities, organizing for market competitive orientation, quality assurance and sustainable competitive advantage. The course is heavily case-oriented to bring forward realism, and develop critical thinking and decision making ability.

**HSM 460 Special Topics in Hospitality (3.0); 3 cr.** Selected readings and case studies referring to current topics and developments within the lodging and food service industries. The purpose is to expose students to recent developments, current challenges and future trends affecting the industry. Studied during the course is the impact of change on hotel and food service management. This is a seminar and case study course.

**TTM 462 Special Topics in Travel and Tourism (3.0); 3 cr.** An overview and analysis of current developments, trends and challenges in travel and tourism. Studied during the course are the impact and decision challenges faced by management due to macro and micro environmental changes with the resulting shifts of tourism destinations and expectations. This is a seminar and case study course.

**FBM 464 Special Topics in Food and Beverages (3.0); 3 cr.** This course provides students discussion and problem solving in major and current topics in the F&B field. Topics are announced in the term schedule

**HSM 485 Seminar in Hospitality and Tourism Management (3.0); 3 cr.** Individual and group studies of a hospitality and tourism business in an area of special interest. It is an in-depth dissection of the managerial functions of the business concern. Findings and decisions are

reported and discussed in class. *Corequisite:* HSM 451.

**HVM 201 Introduction to the International Events Industry (3.0); 3 cr.** This course is the initiation of the international events industry. The students throughout this course will gain understanding of the scope and purposes of the wide variety of events. The different components, timeline, and major integral parts that constitute an event will be emphasized. Appropriate skills and knowledge will be developed, to adequately perform and assume responsibility of the management of an event. Practical exposure to case studies, field visits, and guest speakers will be part of this course.

**HVM 301 Events Management Operations and Logistics (3.0); 3 cr.** This course is comprehensive that examines the details of event planning, management & operations. The students go through the nuts & bolts of events operations in terms of timeline, logistics, budget control, resources, stakeholders, laws & regulations methodologies in order to organize successful fly plan and management events. *Prerequisite:* HVM 201

**HVM 311 Event Sponsorship, Fundraising and Partnership (3.0); 3 cr.** This course develops the students' research planning skills, to develop effective financial plans and feasibility studies, as well as to identify source and secure fund raising, sponsorship, and partnership opportunities. Applied case studies that investigate the above issues in the private, public, and non-profit sectors will be used intensively. *Prerequisite:* HVM 201

**HVM 431 Events Management Project (3.0); 3 cr.** In this course, experiential learning opportunity will be given to the students to apply theoretical, knowledgeable, and practical skills acquired in class to organize and manage public events (from pre-planning concept phase, to executive & post evaluation phases). *Prerequisite:* HVM 301

**HVM 382 Internship 1 cr.** A supervised on the job work experience in the events industry, particularly MICE, Arranged with a Department approved cooperating institution. This field experience - of no less than 500 hours - emphasizes operational involvement in the planning and execution of events. Students must follow the course's pre-set guidelines. *Co-requisite:* HEM 414.

**HVM 401 Contemporary Issues and Best Practices in Events Management (3.0); 3 cr.**

This course is a highly interactive course that is destined to identify major trends, contemporary issues, and best practices in the events management industry. Through intensive use of case studies drawn from real life events. Students will have the opportunity to discuss and conduct post-event evaluations to identify success and failure factors, winning strategies, and potential challenges will be outlined. Thus, students will learn to develop alternative planning scenarios. *Prerequisite:* HVM 201

**HVM 414 Events Production and Technical Issues (3.0); 3 cr.**

This course conveys advanced knowledge of key production & technical issues including: design, layout, printed material, power, lights, sound, audiovisual, information technology, special effect, music, colors, decoration, and costumers. As an event manager, the student will combine the theoretical & practical applications in the above issues to employ methods that are effective & cost efficient. *Prerequisite:* HVM 301

**HVM 416 Risks and Safety in Events Management (3.0); 3 cr.**

A frame work of contingency procedures will be elaborated to respond to possible safety and security risks that can hinder an event execution. Legal, logistics, financial, risk assessment, and operational safe guards to ensure protection against failures, losses, damage, and injury will be emphasized. *Prerequisite:* HVM 201

**HVM 420 Protocol and Etiquette in Events Management (3.0); 3 cr.**

This course outlines the importance of protocol and etiquette in events management. The student will enhance his manners and savoir vivre skills in conducting events and business transactions. Areas like: the knowledge of agenda & time management, verbal & written communication, guest management, media management, dressing codes, postures and gestures, table manners will be emphasized. The outcome of the course is a student that carefully and professionally deals with both: known situations and difficult or unfamiliar situations to avoid social any “faux pas” that could ruin a perfectly good business deal. *Prerequisite:* HVM 201

**HVM 422 M.I.C.E (meetings, incentives, conferences, and exhibition) Management (3.0); 3 cr.**

This course serves as an overview of the Size and scope of the MICE industry. Upon completion, Students will acquire specialized managerial skills required to package, plan, execute and evaluate these product segments. The management of such events incorporate the determination of the purpose, the message, the budget, the selection of site, the negotiation of contracts, the prospection for attendees, the setting of dates & timelines, the management of exhibit spaces, the lodging services, the procurement of food and beverages, the telecommunications & audiovisual requirements, the transportation, the recruitment of labor & material, the measures of safety & security, the assessment of the event’s success and all other related necessities. *Prerequisite:* HVM 201

**HVM 425 Casino and Entertainment Management (3.0); 3 cr.**

A specialized course that provides a blend of technical, operational and managerial knowledge that pertains to the gaming and entertainment businesses. The content emphasizes ethical and regulatory issues, technological and operational expertise, site and property management, security and surveillance systems, financial and marketing management, behavior-metrics and the relationship of the casino and entertainment industries to the overall tourism and socio-cultural environments. *Prerequisite:* HVM 201

**HVM 430 Recreational, Leisure and Sports Events Management (3.0); 3 cr.**

This course covers the guidelines and principles of managing, executing and evaluating recreational leisure and sport events. Students will broadly consider the different forms that these events can take; with a focus on the ones that are most popular. On top of the standard planning, logistics, funding, operations, design, maintenance, risk and safety tasks; Students will also learn to manage the interaction of the different stakeholders involved from a psychological and sociological perspectives. Patterns of behavior, control techniques, safety & environmental concerns, and demographic characteristics will be examined. *Prerequisite:* HVM 201

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## **The Degree of Bachelor of Hotel Management and Tourism**

### **Management of Event Production Emphasis**

#### **Overview**

Tourism, playing a major role in the economical development worldwide; Lebanon, being the country of services, hospitality and entertainment for the surrounding regions; both created a need for further investments in Artistic production. The professional and accurate Lebanese people who provided events on worldwide scale competing with the most famous channels programs labeled Lebanon with a brand: “The Country of Art and Entertainment”. The need for Business Producers is increasing with the increase in demand for products and with the unemployment rate of labor in this field.

#### **Objective**

This program is meant to equip the students with a managerial background for Art. The type of education offered will enhance their capabilities in properly joining the business academics to the art practicum. A diversified undergraduate program educating hard working and motivated students will adapt these latter to the market place where competition in such field will only be fair to the persons who chose such education for a differentiation.

This bachelor degree will be valid for a period of five years enabling our faculty to measure the demand for such major and to assess the market need for an undergraduate program.

#### **Typical Entry-Level Jobs Available**

- Event Management
- TV Production Management
- Theater Production Management (musical, play, etc.)
- Exhibition Management
- Assistant event Management
- Assistant TV Production Management
- Assistant Theater Production Management
- Assistant Exhibition Management
- Supervisory for any of the above

#### **Courses Identification System**

Courses offered under this degree, will bear the identification mark: EPM followed by a three-digit number (sample EPM 210, EPM 325, EPM 420).

Courses are numbered as follows: Sophomore 200, Junior 300, Senior 400.

All the courses are 3 credits, only internship is 1 credit.

#### **Graduation Requirements**

Students seeking the degree of bachelor of Hotel Management And Tourism must complete a total of 103 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the major and concentration requirements. The passing grade for all courses is D except for ENL 105 and ENL 110 whereby it is C.

#### **Admission Requirements**

Faculty of Business Administration and Economics (FBAE)

Applicants must:

- Pass the Lebanese Baccalaureate part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education.
- Sit for an English Entrance Exam (EET or TOFEL) and a Mathematics test.

Only those applicants (General Sciences or Life Sciences) who score an overall average of at least 14/20 on the Official Baccalaureate Exam are exempted from the Mathematics Test.

**Degree Requirements  
(103 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **57 cr.**

EPM 201, EPM 202, EPM 203, EPM 205, EPM 206, EPM 211, EPM 207, EPM 215, EPM 301, EPM 302, EPM 303, EPM 311, EPM 321, EPM 323, EPM 330, EPM 332, EPM 401, EPM 402, EPM 403

**Minor Concentrations** **10cr.**

*Theater:* EPM 480, EPM 430, EPM 433, EPM 490

*Event:* EPM 481, EPM 434, EPM 435, EPM 491

*Television/Movie:* EPM 482, COA 430, EPM 437, EPM 492

**Major Electives** **6 cr.**

EPM 216, EPM 217, EPM 315, COA 225, EPM 317, EPM 336, EPM 415

**Bachelor of Hotel Management and Tourism**  
**Management of Event Production Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

EPM	201	The Management of Accounting in Event Production	3 cr.
EPM	202	Marketing in Event Production	3 cr.
APM	203	Manangement of Event Production	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

EPM	205	Costume design, make-up and hairdressing Management	3 cr.
EPM	206	Management of sound, light and setting	3 cr.
EPM	207	Economics in Event Production	3 cr.
EPM	211	Law and Arts	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 Credits)**

EPM	215	Business Communications	3 cr.
EPM	303	Management of Event Production II	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15Credits)**

EPM	301	Financial Management	3 cr.
EPM	302	Principles of Sales Management for EP	3 cr.
EPM	321	Labor Relations	3 cr.
EPM	323	Managing the Production Processes	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits.)**

EPM	311	Contracts Law	3 cr.
EPM	330	Directing and Acting for Production Managers	3 cr.
EPM	332	Planning the Scene Design	3 cr.
EPM	—	Major Elective	3 cr.
—	—	GER	3 cr.

**Summer Session II (4 Credits)**

EPM	48_	Internship Management	1 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

EPM	401	Financial Management of Art	3 cr.
EPM	402	Critique in Artitstic and Event Production Management	3 cr.
EPM	403	Strategic Planning Conceptual Feasibility	3 cr.
EPM	—	Major Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III – Theater (15 Credits)**

EPM	430	Popular Theater and Commercial Aspects	3 cr.
EPM	433	Theater Safety	3 cr.
EPM	490	The Production Manager’s Senior Project Theater	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III – Event (15 Credits)**

EPM	434	Show Business	3 cr.
EPM	435	Control Systems for Live Entertainment	3 cr.
EPM	491	The Production Manager's Senior Project Event	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III – TV/Movie (15 Credits)**

COA	430	Management of Acting for Camera	3 cr.
EPM	437	Management of Television and Programs	3 cr.
EPM	492	The Production Manager's Senior Project TV/Movie	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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## Undergraduate Courses: Management of Event Production

**EPM 201 The Management of Accounting in Event Production (3.0); 3 cr.** An introduction to corporate financial accounting concepts and procedures. Financial statements are stressed throughout the course, while attention is paid to developing procedural skills, including accounting controls. The basic financial statements are introduced: balance sheet, income statement, statement of cash flows, and statement of retained earnings. Accounting for assets, liabilities, and owners' equity.

**EPM 202 Marketing in Event Production (3.0); 3 cr.** The process of Marketing the Artistic Production in social, economic and legal environments. Topics covered include: Artistic Production as a product and service development, pricing strategies, channel of distributions specified for this industry.

**EPM 203 Management of Event Production (3.0); 3 cr.** An introduction to the basic elements of the managerial process in Artistic Production. Topics covered are: Planning in Artistic production, decision making, organizing, staffing employees (actors, singers, technicians, etc...) related to the type of production, Leading the production, and controlling processes.

**EPM 205 Costume design, make-up and hairdressing Management (3.0); 3 cr.** A course for designers in the techniques of preparing a scene design for production in a shop. Drafting techniques, sheet layout, conventions, and symbols are stressed. Detailed practical experience in the preparation of costumes for the stage, including sketches for projected designs and plans for their execution.

**EPM 206 Management of Sound, Light, and Setting (3.0); 3 cr.** An introduction to the aesthetics and the process of scenic design through critique and discussion of weekly projects. This course prepares students for the demanding artistic and practical situations to be faced in the professional background. Large-scale and somewhat complex production problems, such as multiset plays, musical comedies, operas, ballets, events, and repertory situations may be addressed by students for presentation and critique.

**EPM 211 Law and the Arts (3.0); 3 cr.** An overview on the legal rights and responsibilities of artists and artistic institutions. The course includes topics about: laws of intellectual

property, laws related to theater and T.V., moral rights, personality rights (defamation, publicity, and privacy) and freedom of expression. The course also introduces the structure and the language of contractual agreements and includes discussions of several types of contracts employed in the theater, show and TV. Other legal issues relating to nonprofit arts organizations may also be discussed.

**EPM 207 Economics in Event Production (3.0); 3 cr.** This course applies economic principles to the Artistic production industry. Special emphasis is placed on supply and demand and the determination of prices. It also discusses the impact of the GDP, growth and fluctuations on the Artistic Production industry. The course further focuses on the contribution of Artistic Production to the overall performance of the economy. Topics include: Money and banking; unemployment and inflation; national income determination; fiscal and monetary policy related to Artistic Production Industry.

**EPM 215 Business Communication (3.0); 3 cr.** Through a series of exercises in written and oral communication, the course seeks to enhance students' ability to express themselves clearly and effectively. It provides students with the practical technical skills required for professional business communication.

**EPM 216 Music and Sound for the Theater (3.0); 3 cr.** This applied course provides a laboratory for conceiving and realizing music and sound for the theater. A primary objective is the development of a strong and dynamic relationship between the director, sound designer, and/or composer. Through a series of projects based on scripts and themes, participants explore the vast potential of designed sound while building an aural vocabulary and a critical ear.

**EPM 217 British, American, and Modern Event Production Management (3.0); 3cr.** An overview of organizational practice in the British, American, and modern professional Artistic Production. Starting from historic precedent, the course surveys the commercial production and the nonprofit production as organizational models. Topics include limited partnerships, nonprofit corporate structure, staff organization, and budgeting.

**EPM 301 Financial Management (3.0); 3 cr.** A study of the broad role of financial management in the realization of organizational goals. Topics include management control, resource allocation, analysis, funds acquisition and management, and elementary investment alternatives. *Prerequisite:* EPM 201.

**EPM 302 Principles of Sales Management of Event Production (3.0); 3 cr.** This course explores the fundamentals of marketing and public relations in Artistic Production and the interrelation of these two functions. It offers a practical guide to such marketing techniques as planning subscription campaigns, writing advertising copy, managing telemarketing campaigns, and targeting potential audiences. The basic tools of public relations are also covered, including dealing with journalists, writing press releases, pitching feature stories, and managing photo calls. Topics include economics of marketing, consumer behavior, matching of services with demand, efficient distribution, pricing, and effective communications.

**EPM 303 Management of Event Production II (3.0); 3 cr.** Applications of management techniques and organizational principles to technical production. Emphasis is placed on leadership and interpersonal skills as well as on organization, planning, and facilities utilization. Assignments provide further exploration of related topics in the form of written and/or presented material. *Prerequisite:* APM 203.

**EPM 311 Contracts Law (3.0); 3 cr.** Intends to teach how to read, write, and administer individual employment contracts. Topics covered include artistic employment contracts, duties of employer and employees; impact of legislation providing for safety, and welfare.

**EPM 315 Theater Planning and Characteristics (3.0); 3 cr.** This course introduces the process of planning and building a performing arts facility. Emphasis is placed on the planning process as practiced in architecture, with stress on space allocation, budgeting, functional layout, and construction procedures. The course also surveys the standard phases of architectural planning, bidding and project management, construction, building and fire code requirements, and the effect of architectural design considerations on performing arts facility design.

**EPM 317 Planning Sound (3.0); 3 cr.** Detailed experience in the preparation of sound, including sketches for projected designs and plans for their execution. This course is meant to enable the student know the use of the needed material in Event, Theater, and TV. *Prerequisite:* EPM206.

**EPM 321 Labor Relations(3.0); 3 cr.** An investigation of employee relations, with emphasis on the collective bargaining process. Topics discussed include wages and hours, personnel policy, grievances, negotiation of individual contracts, employment discrimination, union negotiations, and contract administration.

**EPM 323 Managing the Production Processes (3.0); 3 cr.** An investigation of the relationship between the artistic director and the managing director. This course explores the role of a managing director in the production process of regional theater, including season planning, artistic budgeting, contract negotiations, artist relationships, and production partnering.

**EPM 330 Directing and Acting for Production Managers (3.0); 3 cr.** An examination of the director's process and techniques, this course is intended to explore the relation of script requirements to the development of production style. Areas of focus include an overview of the process, conceptual beginnings, the design process, working with the script, and the acting process throughout rehearsals and performance. *Prerequisites:* EPM 205, EPM 206.

**EPM 332 Planning the Scene Design (3.0); 3 cr.** An introduction for all non-design students to the aesthetics and the process of scenic design through critique and discussion of weekly projects. Emphasis is given to the examination of the text and the action of the play, the formulation of design ideas, the visual expression of the ideas, and especially the collaboration with directors and all other designers. *Prerequisites:* EPM 205, EPM 206.

**EPM 336 Design Studio (3.0); 3 cr.** This course introduces different types of studios in Event, Theater, and TV. The student should be able to identify needed equipment and material for the above stated types.

**EPM 401 Financial Management of Art (3.0); 3 cr.** A study of the broad role of financial management in the realization of organization goals. Topics include management control, resource allocation, analysis, funds acquisition

and management, and elementary investment alternatives. A study of the broad role of financial management in the realization of organizational goals. Topics include management control, resource allocation, analysis, funds acquisition and management, and elementary investment alternatives. *Prerequisite:* EPM 301.

**EPM 480 Internship Management – Theater (1.0); 1 cr.** A supervised on-the-job work experience in the Artistic Production business. Being in theater, The student must arrange the job with the department and approve it with the related institution. Minimum 90 hours. *Prerequisites:* EPM 330, EPM 332.

**EPM 481 Internship Management – Event (1.0); 1 cr.** A supervised on-the-job work experience in the Artistic Production business. Being in event, The student must arrange the job with the department and approve it with the related institution. Minimum 90 hours. *Prerequisites:* EPM 330, EPM 332.

**EPM 482 Internship Management–Television/Movie (1.0); 1 cr.** A supervised on-the-job work experience in the Artistic Production business. Being in television, The student must arrange the job with the department and approve it with the related institution. Minimum 90 hours. *Prerequisites:* EPM 330, EPM 332

**EPM 402 Critique in Artistic and Event Production Management (3.0); 3 cr.** An in depth analysis of several readings, plays, events, films, etc... This course will enable the students reason clearly towards the choice of any Artistic Production, identify and screen any project while allocating properly resources. It provides a workshop in critical writing in which the student's work is analyzed and discussed by the class and the instructor. The class is divided into sections.

**EPM 403 Strategic Planning and Conceptual Feasibility (3.0); 3 cr.** Strategy is the match between a theater organization's qualifications and the opportunities afforded by a changing environment. It provides a guide to allocating human and financial capital when times are good, and to seeing opportunities for progress when times are bad. In seven four-hour sessions consisting primarily of case discussions, this course shows how to identify the organization's mission, analyze its internal and external environments, identify its strategy, resolve

tensions between mission and strategy, analyze organizational culture, and adapt the culture in order to implement robust strategies. *Prerequisite:* EPM 303.

**EPM 415 Planning Scene Design II (3.0); 3 cr.** Criticism of design problems for plays, musicals, ballet, and opera. This course continues the work started in EPM 332, carrying it a step further and focusing on design realization. *Prerequisites:* EPM 332.

**EPM 430 Popular Theater and Commercial Aspects (3.0); 3 cr.** This seminar surveys the business aspects of producing. Relationships examined include those with the author, director, cast, other personnel, the theater owner, unions, and agents. Other topics include financing, touring, and press relations.

**EPM 433 Theater Safety (3.0); 3 cr.** An introduction to theater safety and occupational health. Topics include chemical and fire hazards, accident and fire prevention, code requirements, emergency procedures, and training and certification in first aid and CPR.

**EPM 434 Show Business (3.0); 3 cr.** Describes the type of shows the processes used and adapted for each type. It helps the students learn internationally and locally about current and potential events that can be created.

**EPM 435 Control Systems for Live Entertainment (3.0); 3 cr.** The rapidly developing field of "show control" is the focus of this course. Show control is the convergence of entertainment, computing, networking, and data communication technologies.

**EPM 437 Management of Television and Programs (3.0); 3 cr.** It enables the student with advanced knowledge about television. An in-depth studies about television departments and probable creation of programs.

**EPM 490 The Production Manager's Senior Project Theatre (3.0); 3 cr.** Through practice auditions of varied material and visits from Theater industry professionals (working actors, agents, casting agents, and directors), third-year actors acquire the information and skills they need to make the transition into the professional world. In their final term, students choose and rehearse scenes, which are presented to agents, casting agents, and producers. *Co-requisite:* EPM 330, EPM 403.

**EPM 491 The Production Manager's Senior Project Event (3.0); 3 cr.** Through practice auditions of varied material and visits from Event industry professionals (working actors, agents, casting agents, and directors), third-year actors acquire the information and skills they need to make the transition into the professional world. In their final term, students choose and rehearse events, which are presented to agents, casting agents, and producers. *Co-requisite:* EPM 330, EPM 403.

**EPM 492 The Production Manager's Senior Project TV/Movie (3.0); 3 cr.** Through practice auditions of varied material and visits from Television industry professionals (working actors, agents, casting agents, and directors), third-year actors acquire the information and skills they need to make the transition into the professional world. In their final term, students choose and rehearse scenes, which are presented to agents, casting agents, and producers. *Co-requisite:* EPM 330, EPM 403.

## **GRADUATE PROGRAMS**

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**Administrative Assistant:** *Miss Maya Rashed*

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### **The Degree of Master of Business Administration (MBA)**

The MBA Program consists of four parts:

#### ***1. Preparatory Courses***

Applicants to a graduate degree program who do not have a BBA or its equivalent will be required to take up to four preparatory courses. These courses provide a management base upon which students can build the courses required for a graduate degree.

These courses are in addition to the MBA degree requirements. MBA candidates should score a minimum of “B” in each preparatory course; The grades of these courses are not included in the GPA. Only upon successful completion of these courses candidates join the regular MBA program.

The preparatory courses are:

- |            |   |
|------------|---|
| a. ACO 500 | Fundamentals of Financial Accounting      |
| b. ECN 500 | Fundamentals of Micro and Macro Economics |
| c. BAF 500 | Fundamentals of Financial Management      |
| d. BAM 500 | Fundamentals of Management and Marketing  |

#### ***2. Required Common Core Courses (18 cr. if research project or 21 cr. if thesis option):***

All candidates for the graduate degree, irrespective of their area of concentration, must complete the following six required common core courses. These courses develop an understanding of the modern business organizations and their functioning, in addition to a strong foundation in principles and theories of business, upon which students can build a variety of specializations within the degree program.

These core courses are thought not as separate and independent disciplines but as integrated and coordinated basic set of tools for managerial decision making, that can be applied in a broad range of professional settings in private and public sectors.

The Required Common Core Courses are:

1. Managerial Finance (3 cr.)
2. Managerial Accounting (3 cr.)
3. Managerial Economics (3 cr.)
4. Business and Marketing Management (3 cr.)
5. Business Research Methods (3 cr.)
6. Research Project (3 cr.) or Thesis (6 cr.)

#### ***•3. Concentration courses (18 cr. if research project or 15 cr. if thesis option)***

After completing the core courses, degree candidates build further skills and depth of knowledge in their choice of concentration in one particular area of business. See below the curriculum of each area of concentration. A student may choose 6 out of a list of courses if he / she chooses the research project option, or 5 of the concentration courses if he/she chooses the thesis option.

The Concentration Courses are:

##### **Finance and Economics**

1. Applied Econometrics

2. Urban Economics
3. Political Economy
4. Economic Development
5. Derivatives
6. Asset Pricing
7. International Money and Finance
8. Economics of Financial Markets
9. International Business Law

**Project and Operations Management**

1. Operations and Quality Management
2. Project Planning and Inventory Control
3. Logistics and Supply Chain Strategies
4. Leadership and Change Management
5. Global Logistics and Supply Chain Management
6. Transportation Strategy
7. Customer Relationship Management
8. Management Information Technology
9. Special Topics in Logistics and Supply Chain Management
10. International Business Law

**Management and Marketing**

1. Organizational Behavior
2. Leadership and Change Management
3. Entrepreneurship and Small Business Management
4. Intercultural Management
5. Consumer Behavior and Rights
6. Retail Management
7. Customer Relationship Management
8. Sales Force and Sales Promotion
9. Special Topics in Management and Strategy/Marketing
10. International Business Law

**Human Resources Management**

1. Organizational Behavior
2. Recruitment, Selection and Performance Management
3. Labor Management Relations
4. Strategic Human Resources Development
5. Intercultural Management
6. Leadership and Change Management
7. Management Information Technology
8. Special Topics in Human Resources
9. International Business Law

**•4. Faculty Elective Course (3 cr.)**

**The faculty elective course should be selected from the other 3 areas of concentration**

**Therefore, the MBA program is structured as follows:**

**Option 1: Research Project**

18 credits (Required Core Courses)  
 18 credits (Concentration Courses)  
 3 credits (Faculty Elective Course)

**Option 2: Thesis**

21 credits (Required Core Courses)  
 15 credits (Concentration Courses)  
 3 credits (Faculty Elective Course)

**The Curriculum of MBA  
 Finance and Economics Emphasis - Degree Requirements  
 (39 credits)**

**I. Required Common Core Courses (18 cr. if research project or 21 cr. if thesis option)**

- ACO 602	Managerial Accounting	3 cr.
- BAD 602	Business and Marketing Management	3 cr.
- BAF 602	Managerial Finance	3 cr.
- BRM 612	Business Research Methods	3 cr.
- ECN 602	Managerial Economics	3 cr.

Option

- BAD 680	Research Project	3 cr.
or		
- BAD 690	Thesis	6 cr.

**II. Concentration Courses (18 cr. if research project or 15 cr. if thesis option)**

- ECN 604	Applied Econometrics	3 cr.
- ECN 606	Urban Economics	3 cr.
- ECN 608	Political Economy	3 cr.
- ECN 610	Economic Development	3 cr.
- BAF 604	Economics of Financial Markets	3 cr.
- BAF 606	Asset Pricing	3 cr.
- BAF 608	International Money and Finance	3 cr.
- BAF 610	Derivatives	3 cr.
- IBL 604	International Business Law	3 cr.

**III. Faculty Elective Course (3 cr.):**

**The faculty elective course should be selected from the other 3 areas of concentration**

**The Curriculum of MBA  
 Project and Operations Management Emphasis - Degree Requirements  
 (39 credits)**

**I. Required Common Core Courses (18 cr. if research project or 21 cr. if thesis option)**

- ACO 602	Managerial Accounting	3 cr.
- BAD 602	Business and Marketing Management	3 cr.
- BAF 602	Managerial Finance	3 cr.

- BRM 612	Business Research Methods	3 cr.
- ECN 602	Managerial Economics	3 cr.

Option

- BAD 680	Research Project	3 cr.
or		
- BAD 690	Thesis	6 cr.

**II. Concentration Courses (18 cr. if research project or 15 cr. if thesis option)**

- BAD 606	Leadership and Change Management	3 cr.
- BAD 612	Management Information Technology	3 cr.
- MRK 608	Customer Relationship Management	3 cr.
- POM 604	Operations and Quality Management	3 cr.
- POM 606	Project Planning and Inventory Control	3 cr.
- POM 608	Logistics and Supply Chain Strategies	3 cr.
- POM 610	Global Logistics & Supply Chain Management	3 cr.
- POM 612	Transportation Strategy	3 cr.
- POM 620	Special Topics in Logistics & Supply Chain Management	3 cr.
- IBL 604	International Business Law	3 cr.

**III. Faculty Elective Course (3 cr.):**

The faculty elective course should be selected from the other 3 areas of concentration

**The Curriculum of MBA  
Management and Marketing Emphasis - Degree Requirements  
(39 credits)**

**I. Required Common Core Courses (18 cr. if research project or 21 cr. if thesis option)**

- ACO 602	Managerial Accounting	3 cr.
- BAD 602	Business and Marketing Management	3 cr.
- BAF 602	Managerial Finance	3 cr.
- BRM 612	Business Research Methods	3 cr.
- ECN 602	Managerial Economics	3 cr.

Option

- BAD 680	Research Project	3 cr.
or		
- BAD 690	Thesis	6 cr.

**II. Concentration Courses (18 cr. if research project or 15 cr. if thesis option)**

- BAD 604	Organizational Behavior	3 cr.
- BAD 606	Leadership and Change Management	3 cr.
- BAD 608	Entrepreneurship & Small Business Management	3 cr.
- BAD 610	Intercultural Management	3 cr.

-	BAD 620	Special Topics in Management, Strategy, and/or Marketing	3 cr.
-	MRK 604	Consumer Behavior and Rights	3 cr.
-	MRK 606	Retail Management	3 cr.
-	MRK 608	Customer Relationship Management	3 cr.
-	MRK 610	Sales Force and Sales Promotion	3 cr.
-	IBL 604	International Business Law	3 cr.

**III. Faculty Elective Course (3 cr.):**

**The faculty elective course should be selected from the other 3 areas of concentration**

**The Curriculum of MBA  
Human Resources Management Emphasis - Degree Requirements  
(39 credits)**

**I. Required Common Core Courses (18 cr. if research project or 21 cr. if thesis option)**

-	ACO 602	Managerial Accounting	3 cr.
-	BAD 602	Business and Marketing Management	3 cr.
-	BAF 602	Managerial Finance	3 cr.
-	BRM 612	Business Research Methods	3 cr.
-	ECN 602	Managerial Economics	3 cr.

Option

-	BAD 680	Research Project	3 cr.
	or		
-	BAD 690	Thesis	6 cr.

**II. Concentration Courses (18 cr. if research project or 15 cr. if thesis option)**

-	BAD 604	Organizational Behavior	3 cr.
-	BAD 606	Leadership and Change Management	3 cr.
-	BAD 610	Intercultural Management	3 cr.
-	BAD 612	Management Information Technology	3 cr.
-	HRM 604	Recruitment, Selection & Performance Management	3 cr.
-	HRM 606	Labor Management Relations	3 cr.
-	HRM 608	Strategic Human Resources Development	3 cr.
-	HRM 620	Special Topics in Human Resources	3 cr.
-	IBL 604	International Business Law	3 cr.

**III. Faculty Elective Course (3 cr.):**

**The faculty elective course should be selected from the other 3 areas of concentration**

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## Preparatory Courses

**ACO 500 Fundamentals of Financial Accounting (3.0); 3 cr.** This course focuses on the basic financial accounting principles and more advanced procedures of accounting for sole proprietorships, partnerships and corporations. It explains the techniques of measuring, classifying, summarizing, reporting and interpreting financial information. Accounting software is used.

**BAM 500 Fundamentals of Management and Marketing (3.0); 3 cr.** This course introduces the basic principles and theories of management and marketing. It discusses management objectives, organizational structures, material and human resource utilization, decision making, planning, organizing, marketing principles, marketing mix strategies, and consumer behavior.

**BAF 500 Fundamentals of Financial Management (3.0); 3 cr.** This course shows a

condensed version of financial management including the role of the financial manager and the techniques for obtaining and using funds to maximize the value of the firm. Topics covered include discounted CF analysis, valuation methods, risk and return, financial analysis, financial planning and control, working capital management, cost of capital, capital structure, common stock and long term debt financing, and credit management.

**ECN 500 Fundamentals of Micro and Macro Economics (3.0); 3 cr.** This course covers the basic principles, theories, and policies in both Micro- and Macro- Economics. At the Micro level, it covers demand and supply analysis, consumer theory, production costs, and market structure. At the Macro level, it covers national income and output determination, money and banking, unemployment and inflation, and fiscal and monetary policies.

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## Required Common Core Courses

**ACO 602 Managerial Accounting (3.0); 3 cr.** This course shows that the foundation of an effective decision-making process is quality information, and that management accounting is indispensable for managers to produce financial and operating information regarding the economic condition of the organization. The course highlights management accountants as team players in decision-making and corporate management, rather than as bean counters confined to back offices.

**BAD 602 Business and Marketing Management (3.0); 3 cr.** This course examines the business environment and the strategic marketing decisions that top management faces. It presents the key concepts of planning, organizing, leading, and controlling which are essential to efficient and effective business management; moreover, it covers market orientation, market analysis, marketing mix strategies, strategic marketing, marketing planning, and developing an integrated marketing plan which are the basis of modern marketing.

**BAD 680 Research Project (3.0); 3 cr.** This course is an application of research methodology. Students may choose to take a

research project related to their area of concentration after the accomplishment of 30 credits.

**BAD 690 Thesis (6 cr.)** Students may choose to write a thesis (6 cr.) on a significant problem in business administration selected from their area of concentration, after completing 30 graduate credits.

**BAF 602 Managerial Finance (3.0); 3 cr.** This course provides a comprehensive and contemporary coverage of financial management. It focuses on shareholder wealth maximization and cash flow management, as well as on the international aspects of financial management. In addition, it covers financial analysis and financial decisions, capital budgeting decisions under risk, and capital structure theory. *Pre-requisite:* ACO 602.

**BRM 612 Business Research Methods (3.0); 3 cr.** This course develops an intensive and advanced study of the objectives and methodologies of research for business decisions and how to design and report experiments. Topics include techniques for defining problems; research design; research proposal; how to write a research paper; fundamentals of data manipulation: analysis and interpretation

using the statistical package SPSS; multiple regression; time series and cross sectional analysis; MANOVA; principal components analysis; factor analysis; and canonical correlation. **This course must be taken after completing 12 credits.**

**ECN 602 Managerial Economics (3.0); 3 cr.** This course applies economic theory and methodology to managerial decision-making problems within various organizational settings

such as firms or government agencies. The emphasis will be on demand analysis and estimation, production and cost analysis under different market conditions, and forecasting and decision-making under conditions of uncertainty. Students should have had some exposure to economics and basic algebra; knowledge of calculus is helpful although not necessary.

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## Concentration Courses

**BAD 604 Organizational Behavior (3.0); 3 cr.** This course studies organizational behavior across all levels of organizational life: individual, interpersonal, group, organizational, and societal. Problems discussed and dealt with include motivation, communications, leadership, group dynamics, power, organizational structures and design, and various types of environmental constraints including competition, markets, and governmental regulations. Lecture, discussion, group problem solving and project reports are included in instructional methodology.

**BAD 606 Leadership and Change Management (3.0); 3 cr.** This course explores the reasons and contexts of the rise of the modern manager as creative individual business leader in organizations with innovative management structures, values, and motivation. The course also explores consumer's culture and expectations and the required strategies and organizational structures in the framework of a more competitive and fast-changing global business and economy environment. During continuous change and in turbulent times, the *management of change* requires the preparation of *new managers* equipped to deal with all possible scenarios that may arise.

**BAD 608 Entrepreneurship and Small Business Management (3.0); 3 cr.** This course focuses on the role of the *entrepreneur* in facing the challenges of starting and managing a successful enterprise (or re-vitalizing an established one) in an increasingly global, technologically innovative and competitive business environment. Students are expected to develop a complete business plan. The dynamic framework of the *family business's* entrepreneurial role, corporate governance, family culture, values, motivation, harmony and

conflicts will also be discussed, evaluated, and integrated.

**BAD 610 Intercultural Management (3.0); 3 cr.** This course covers advanced strategies and tactics that international managers use to design, operate, control, and implement business activities in the modern world by emphasizing various functions of international business including distribution and logistics, production, global sourcing, export strategies and sales, strategies alliances and international human resources management. The course also examines the multinational organizational behavior and its implication for home and host countries. A variety of advanced topics will be investigated such as the analysis of organizational strategy, economic impact of multinationals, and differences across cultures.

**BAD 612 Management Information Technology (3.0); 3 cr.** Information systems are one of the major tools available to business managers for achieving operational excellence, developing new products and services, improving decision making, and achieving competitive advantage. The objective of this course is to prepare students for the real world of global business and information technology. Covering both, the technology and the management of information systems, this course explores how businesses use information systems to improve performance. The course also covers how information systems help in enhancing the different types of decisions that managers make.

**BAD 620 Special Topics in Management, Strategy, and/or Marketing (3.0); 3 cr.** This course examines selected topics in Management and Strategy with emphasis on real-world examples, case studies, and current issues.

**BAF 604 Economics of Financial Markets (3.0); 3 cr.** The module is one of the building blocks of the program. It familiarizes students with key concepts in the field of finance and provides an introduction to the functioning of financial markets. The module follows by exploring money and capital markets and explaining different investment instruments traded therein. An important part of the course entertains the role of interest rates in debt markets and the no-arbitrage valuation of bonds. The module finishes with the introduction of financial derivatives. This includes understanding no-arbitrage pricing techniques for swaps, forwards and futures derived from debt markets, and for stock options from equity markets. *Pre-requisite:* BAF 602

**BAF 606 Asset Pricing (3.0); 3 cr.** The course provides an overview of the central topics in Asset Pricing and the Portfolio Theory, with a particular focus on the relationship between asset pricing and macroeconomic issues. *Pre-requisite:* BAF 602

**BAF 608 International Money and Finance (3.0); 3 cr.** This module is designed to extend and deepen students' understanding of key issues relating to finance in open economy contexts. Many of the issues covered, such as the impact of financial market integration on a country's monetary autonomy are of vital importance to policy makers and an advanced exposure to these issues will help prepare students for the challenges of careers in the financial industry as well as in government and multilateral bodies. *Pre-requisite:* BAF 602

**BAF 610 Derivatives (3.0); 3 cr.** This course focuses on options and / or futures, derivatives, and/ or risk management at an advanced level. It presents a detailed but flexible coverage of options, futures, forwards, swaps, and risk management - as well as a solid introduction to pricing, trading, and strategy - and offers an outstanding blend of institution material, theory, and practical applications. *Prerequisite:* BAF 602

**ECN 604 Applied Econometrics (3.0); 3 cr.** The course applies the most important econometrics techniques to data in Economics and Finance using computer packages. It covers applications to "Simultaneous Equation Models", "Time Series Analysis", "Panel Data", "Non-Linear Regression", "Vector Autoregression" and Simulation Techniques. It

presents too the most important forecasting methods to firms.

**ECN 606 Urban Economics (3.0); 3 cr.** The course studies the development and growth of urban areas and examines specific urban issues such as pollution, housing, land use, telecommunication and public transportation. The course provides an economic framework to analyze the structure of economic activity within the urban and regional context, including the role of government. Topics include the determinants of industrial, commercial and residential location, as well as the economics of land markets.

**ECN 608 Political Economy (3.0); 3 cr.** The course studies the determinants of the size and form of distributive programs, the extent and type of public goods provision and the burden of taxation across alternative tax bases. It discusses several related areas including the origins of the state, comparative political systems, economic reforms, fiscal problems, rule of law, privatization, elections and the economy.

**ECN 610 Economic Development (3.0); 3 cr.** The course studies the major economic and non-economic determinants of development in developing countries and the theories and models of development. It discusses the economic underpinnings of the financial issues that affect developing countries. It discusses too issues related to agriculture, industrial development, health, nutrition, productivity, gender bias, education and technology adoption.

**HRM 604 Recruitment, Selection and Performance Management (3.0); 3 cr.** This course addresses human planning, recruitment policies and practices, pre-employment selections, interviewing and testing, developing training human resources, and personnel appraisal in terms of evaluating employee performance.

**HRM 606 Labor Management Relations (3.0); 3 cr.** This course discusses the relationships between unions, workers, management and government. Topics include collective bargaining, labor disputes resolution, strikes, arbitration, wages, employment security, and labor legislation.

**HRM 608 Strategic Human Resources Development (3.0); 3 cr.** This course covers part of the strategic management process of a given organization, since the organization is dependent on effectively utilizing and enhancing

all of its sources to cope with current and future contingencies. It is about human resources development strategies, which can contribute to the overall directions of the organization.

**HRM 620 Special Topics in Human Resources (3.0); 3 cr.** This course examines selected topics on human resources, such as manpower planning, human resources information, action systems, organizational development, human resources and technological change, performance measurement and reward systems, labor and industrial relations.

**IBL 604 International Business Law (3.0); 3 cr.** The course examines the international framework of business transactions including: the legal conditions for mergers and acquisitions, joint ventures, franchising, licensing, transport contracts, copyrights, patents, litigations, contracts performance, breach of contract and their extinction, bankruptcy, arbitration, letter of intent, conformity rules, confidentiality, and technology transfer.

**MRK 604 Consumer Behavior and Rights (3.0); 3 cr.** This course examines the many forms of consumer behavior, the principles explaining why consumers behave the way they do, the implications for marketing and advertising, and the methodologies and research techniques used for studying consumer behavior. It focuses on the main rights of the consumer and the different means to protect them.

**MRK 606 Retail Management (3.0); 3 cr.** This course provides a comprehensive approach to all aspects of retailing and the fundamental elements of retail management and retail organizations' activities, so that the student will have a solid platform on Total Retail Experience (TRE). The course also introduces and evaluates various retail strategies and tactics that help retailers create a competitive advantage over competitors. It adopts various tools focusing on customer delight and retention, such as Value Chains, CRM, and other tools.

**MRK 608 Customer Relationship Management (3.0); 3 cr.** This course displays an enterprise approach to understanding customer acquisition, customer retention, and customer value through building and maintaining long-term relationships with the right customers. The use of information

technology enables organizations to build integrated databases and exchange relevant information with their current and potential customers. Students are introduced to CRM as a variety of systems that can be packaged together, such as sales force automation, call center operations, service systems, and so forth.

**MRK 610 Sales Force and Sales Promotion (3.0); 3 cr.** The course shows how to enhance selling effectiveness, sales organization, and sales management decision problems. It presents the different stages of behavioural communication policy, and the techniques for measuring promotional results.

**POM 604 Operations and Quality Management (3.0); 3 cr.** This course covers operations strategy, product and process designs, the choice of technology, quality control systems, scheduling, supply chain management, production cycle, etc. The course deals with the management problems encountered in the context of both manufacturing and service enterprises. It also discusses the policy of *optimal inventory*. Focus will be on the problem of *Quality Management* that leads to *business excellence*, as reflected in customers' and employees' satisfaction, efficient processes, and high performance in the domestic and global markets.

**POM 606 Project Planning and Inventory Control (3.0); 3 cr.** This course deals with the tools of project planning, selection, implementation, and evaluation. It examines topics such as teamwork, budgeting, scheduling, resource allocation, task crushing, warehousing strategies, inventory management, and cost control. Examples will be drawn from product type companies, service companies and retailers by covering the majority of issues that are unique to each of these industries. A software package will be used.

**POM 608 Logistics and Supply Chain Strategies (3.0); 3 cr.** This course focuses on the value created by each and all firms involved in the procurement, production, distribution, and marketing of a given product from the raw material stage to the final consumer stage. The course approaches these issues through analytical integration of the contributions of procurement and operations management, logistics, and marketing. This analytical approach culminates in developing effective chain strategies. Concepts such as risk-pooling,

integrated planning and inventory placement will also be discussed and utilized.

**POM 610 Global Logistics and Supply Chain Management (3.0); 3 cr.** This course aims at presenting the theories and applications of global logistics and supply chain management encompassing both practical and strategic perspectives. It takes a global perspective, recognizing the trans-national nature of logistics activities in today's world. It also presents the dynamic and evolving role of supply chain management among multinational firms.

**POM 612 Transportation Strategy (3.0); 3 cr.** This course examines the five modes of transportation, costs and pricing in transportation, and how to choose the best model

and carrier for a shipment. Real-world examples and case studies are analyzed dealing with the current trends in various industries and markets.

**POM 620 Special Topics in Logistics and Supply Chain Management (3.0); 3 cr.** This course examines selected topics in logistics and Supply Chain Management with emphasis on real-world examples, case studies and current issues.

The following are the possible substitutions from old to new contract sheet in the Marketing Concentration ONLY:

Marketing Concentration	
Old Contract Sheet	Substitutions (New Contract Sheet)
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
BAD 627 E-Marketing and Business Models	<sup>3</sup> MRK 608 Customer Relationship Management
MRK 603 Product Development and Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
MRK 611 Marketing Research	BRM 612 Business Research Methods
MRK 621 Sales Force and Sales Promotion	MRK 610 Sales Force and Sales Promotion
<b>Faculty Free Electives (3-6 cr.)</b>	
BAD 605 Intercultural Management	<sup>2</sup> BAD 610 Intercultural Management
BAD 609 Managing Information Technology	BAD 612 Management Information Technology
BAD 621 Personality Theory	<sup>2</sup> BAD 610 Intercultural Management
MRK 605 Interactive Marketing	<sup>3</sup> MRK 608 Customer Relationship Management
MRK 613 Brand Management	MRK 606 Retail Management
MRK 615 Consumer Behavior and Rights	MRK 604 Consumer Behavior and Rights
MRK 619 Customer Relationship Management	<sup>3</sup> MRK 608 Customer Relationship Management

<sup>1</sup> BAD 620 could be a substitute for either BAD 601 or MRK 603

<sup>2</sup> BAD 610 is equivalent to BAD 605, but could be a substitute for BAD 621 upon petitioning

<sup>3</sup> MRK 608 is equivalent to MRK 619, but could be a substitute for MRK 605 and MRK 627 upon petitioning

The following are the possible substitutions from old to new contract sheet in the Finance Concentration ONLY:

Finance Concentration	
Old Contract Sheet	Substitutions (New Contract Sheet)
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
BAF 603 Investment and Portfolio Analysis	BAF 604 Economics of Financial Markets
BAF 605 Commercial Bank Financial Management	
BAF 619 Corporate Financial Analysis Globally	
BAF 625 Derivatives	BAF 610 Derivatives
<b>Faculty Free Electives (3-6 cr.)</b>	
BAF 607 Investment Valuation	BAF 606 Asset Pricing
BAF 609 Entrepreneurial Finance	<sup>1</sup> BAF 608 International Money and Finance
BAF 613 Short Term Financial Management	
BAF 615 Financial Engineering	
BAF 617 Investment Banking	
BAF 621 Capital Budgeting	
BAD 639 Financial Criminal Law	IBL 604 International Business Law
ECN 615 International Economics	<sup>1</sup> BAF 608 International Money and Finance

<sup>1</sup>BAF 608 could be a substitute for either BAF 609 or ECN 615, the faculty electives in the **Finance** Concentration.

The following are the possible substitutions from old to new contract sheet in the Economics Concentration ONLY:

Economics Concentration	
Old Contract Sheet	Substitutions (New Contract Sheet)
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
ECN 603 Micro & Macro Theory II	
ECN 607 Public Finance and Fiscal Policy	
ECN 609 Econometrics	ECN 604 Applied Econometrics
ECN 615 International Economics	
<b>Faculty Free Electives (3-6 cr.)</b>	
BAD 617 Corporate Governance	BAD 604 Organizational Behavior
ECN 605 Monetary Economics	BAF 608 International Money and Finance
ECN 611 Economics and Politics	ECN 608 Political Economy
ECN 619 E- Commerce Economics	
ECN 629 Economic Development	ECN 610 Economic Development
ECN 631 Environmental and Natural Res. Econ.	ECN 606 Urban Economics
ECN 635 Behavioral Economics	
ECN 639 Labor Economics	

The following are the possible substitutions from old to new contract sheet in the Project and Operations Management Concentration ONLY:

<b>Project and Operations Management Concentration</b>	
<b>Old Contract Sheet</b>	<b>Substitutions (New Contract Sheet)</b>
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
PRM 601 Project and Operations Management	POM 604 Operations and Quality Management
PRM 603 Project Planning and Control	POM 606 Project Planning and Inventory Control
PRM 605 IT Tool for Project Management	BAD 612 Management Information Technology
BAF 607 Investment Valuation	BAF 606 Asset Pricing
<b>Faculty Free Electives (3-6 cr.)</b>	
BAD 639 Financial Criminal Law	IBL 604 International Business Law
BAF 609 Entrepreneurial Finance	<sup>1</sup> BAD 608 Entrepreneurship & Small Business Management
BAF 613 Short Term Financial Management	
BAF 615 Financial Engineering	
BAF 621 Capital Budgeting	
BAF 617 Investment Banking	
ECN 615 International Trade Theory and Policy	BAF 608 International Money and Finance
ECN 639 Labor Economics	

<sup>1</sup>BAD 608 could be a substitute for BAF 609, the faculty elective in the **Project and Operations Management Concentration**.

The following are the possible substitutions from old to new contract sheet in the Human Resources Management Concentration ONLY:

<b>Human Resources Management Concentration</b>	
<b>Old Contract Sheet</b>	<b>Substitutions (New Contract Sheet)</b>
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
BAD 623 Strategic Human Resources Development	<sup>2</sup> HRM 608 Strategic Human Resources Development
BAD 625 Aligning Human Resources and Business Strategy	HRM 604 Recruitment, Selection & Performance Mgt
BAD 630 Organization Theory and Design	BAD 604 Organizational Behavior
BAD 642 Management Leadership	BAD 606 Leadership and Change Management
<b>Faculty Free Electives (3-6 cr.)</b>	
BAD 605 Intercultural Management	<sup>1</sup> BAD 610 Intercultural Management
BAD 609 Managing Information Technology	BAD 612 Management Information Technology
BAD 621 Personality Theory	<sup>1</sup> BAD 610 Intercultural Management
BAD 631 Strategic Management	<sup>2</sup> HRM 608 Strategic Human Resources Development
BAD 634 Labor Management Relations	HRM 606 Labor Management Relations

<sup>1</sup> BAD 610 is equivalent to BAD 605, but could be a substitute for BAD 621 upon petitioning

<sup>2</sup> HRM 608 is equivalent to BAD 623, but could be a substitute for BAD 631 (the faculty elective in the **Human Resources Management** Concentration).

The following are the possible substitutions from old to new contract sheet in the Management and Strategy Concentration ONLY:

<b>Management and Strategy Concentration</b>	
<b>Old Contract Sheet</b>	<b>Substitutions (New Contract Sheet)</b>
<b>Required Common Courses (18 cr.)</b>	
ACO 603 Financial and Managerial Accounting	ACO 602 Managerial Accounting
BAD 601 Contemporary Management	<sup>1</sup> BAD 620 Special Topics in Management, Strategy, and/or Marketing
BAF 601 Financial Management	BAF 602 Managerial Finance
ECN 601 Microeconomic & Macroeconomic I	ECN 602 Managerial Economics
MRK 601 Marketing Strategy	BAD 602 Business and Marketing Management
RMC 605 Research Methodology	BRM 612 Business Research Methods
<b>Concentration Requirements (12 cr.)</b>	
BAD 603 Management of Organizations	BAD 604 Organizational Behavior
BAD 611 Entrepreneurship I	<sup>1</sup> BAD 608 Entrepreneurship & Small Business Management
BAD 631 Strategic Management	<sup>1</sup> BAD 608 Entrepreneurship & Small Business Management
BAD 645 Operations Management	POM 604 Operations and Quality Management
<b>Faculty Free Electives (3-6 cr.)</b>	
BAD 605 Intercultural Management	BAD 610 Intercultural Management
BAD 609 Managing Information Technology	BAD 612 Management Information Technology
BAD 615 Entrepreneurship II	
BAD 617 Corporate Governance	BAD 604 Organizational Behavior
BAD 621 Personality Theory	BAD 610 Intercultural Management
BAD 639 Financial Criminal Law	IBL 604 International Business Law
MRK 613 Brand Management	MRK 606 Retail Management
PRM 601 Project and Operations Management	

<sup>1</sup> BAD 608 could be a substitute for either BAD 611 or BAD 631 (the Concentration requirement in the **Management and Strategy** Concentration).

<sup>2</sup> BAD 610 is equivalent to BAD 605, but could be a substitute for BAD 621 upon petitioning.

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## The Degree of Master of Business Administration and Master of Science In International Business

### THE EXECUTIVE MBA/MIB JOINT PROGRAM

#### Program Features

- Conceived as an executive program specializing in International Business, the MBA-MIB jointly offered by Notre Dame University and Bordeaux Management School (or Bordeaux Management School—BEM) offers a unique opportunity to enhance both professional development and global corporate exposure.
- The program is taught entirely in English by a renowned international faculty from NDU, Europe and the US. The program is scheduled over an 10-month period of teaching at NDU campus. Courses are offered in the evening and, exceptionally, on Saturday mornings.
- To complete their academic experience participants are required to do a *Global Corporate Experience (GCE)*, which will further enhance their hands-on experience of global organizations.
- Throughout the academic year, participants will work in groups in the elaboration of a *Global Business Plan (GBP)* on a company they would like to create or on an existing one.
- To meet the requirements of the program, participants need to submit a thesis and defend it in front of a jury. The deadline for the thesis defense is 6 months after completing the courses. Exceptionally, an additional 6 months could be granted.
- The program starts at the beginning of October and ends in July. For those participants who require it, the preparatory period will take place during the last two weeks of September.
- ***Graduates will receive two degrees: the MBA from Notre Dame University (NDU) and the Master of Science (MS) from Bordeaux Management School (BEM) in France.***

#### Program Details

- It is a high-quality Executive program leading to both a Lebanese degree (MBA) and a French degree (MIB).
- The Master of International Business (MIB) is an internationally accredited degree by the *Grandes Ecoles* system in France.
- Bordeaux Management School possesses the accreditations (EQUIS, AMBA) of the best European Business Schools, and (AACSB) of the best American Business Schools.
- Through the Bordeaux Management School, this global joint Executive MBA program is affiliated with the *Bordeaux Chamber of Commerce and Industry*.
- Participants having successfully completed the MBA-MIB program may apply for a doctoral program in any university in Europe or overseas.
- The program is conducted 100% in English.
- It specializes in International Business with a strong focus on the geo-political and cultural environment of international business.
- Participants have the opportunity to attend seminars in Bordeaux or in any of the program partners such as Wuhan University in China.
- It is a practice-oriented program with hands-on teaching objectives.
- The teaching methodology includes both individual and teamwork.

- The faculty team is made up of a highly qualified international faculty from NDU, BEM, and other major international universities. Professors enrich the program with their global corporate experience, outstanding academic background, and complementary teaching styles.
- Courses are divided into the following teaching units:
  - Accounting
  - Business Law
  - Corporate Finance, Economics
  - Negotiation, Communication
  - Strategy, Marketing
  - Human Resources, Business Ethics
  - International Business
  - Production, Operations, Logistics
- The *Global Corporate Experience (GCE)* is intended to enhance participants' exposure to the global challenges of organizations. The *GCE* could take the form of attendance to a Corporate Seminar either in Lebanon or abroad. It could also be the result of a short experience in a company, preferably other than the one where the participant is currently working. Participants will submit a report on their *GCE*. The Academic Committee will approve participants' choice of *GCE*.
- For the *Global Business Plan (GBP)* participants will choose a company they would like to create or an existing one seeking to expand its international operations. The *GBP* will be presented at the end of the year and is intended to improve participants' entrepreneurial, organizational, and decision-making skills.
- Graduates from this joint executive program will benefit from the global network of both NDU and BEM Alumni Associations.

### Program Highlights

- The program mainly attracts executives seeking to enhance their global corporate exposure.
- Participants come from different backgrounds and a wide range of economic sectors (e.g., business, engineering, law, sciences, arts, social sciences, health care, etc.)
- There is a strong linkage between the program and the corporate world.
- The program's Advisory Board is made up of key business actors from major international companies based in Lebanon and overseas.
- The program is international and cross-disciplinary.
- Free discussions from a global and strategic perspective are an essential part of the teaching methodology.
- There is intensive commitment from both participants and faculty.
- Professors are evaluated by students.

### **REGULAR PROGRAM** (Starts first week of October)

#### **Accounting**

<b>Course Title</b>	<b>Hours</b>
Managerial Accounting	18

**Business Law**

<b>Course Title</b>	<b>Hours</b>
International Business Law and Property Rights	18
International Business Transactions	18

**Corporate Finance, Economics**

<b>Course Title</b>	<b>Hours</b>
Economic Analysis: Prices and Markets	12
Monetary Systems and Capital Markets	12
International Financial Analysis	18
International Trade and Public Policies	18
Corporate Finance	18
Financial Instrument and Risk Management	18
Portfolio Management	18
Islamic Banking and Finance	12

**Negotiation, Communication**

<b>Course Title</b>	<b>Hours</b>
Organizational Leadership and Team Development	12
International Commercial Negotiations	18
Business Communication	12

**Strategy, Marketing**

<b>Course Title</b>	<b>Hours</b>
Marketing Management	12
Mergers, Acquisitions and Strategic Alliances	16
International Marketing	18
Strategic Risk Management	16
Corporate Strategy	12
International Corporate Strategy	12
Business Simulation	30

**Human Resources, Business Ethics**

<b>Course Title</b>	<b>Hours</b>
International Organizational Behavior and HR Management	18
Business Ethics	12

**International Business**

<b>Course Title</b>	<b>Hours</b>
Global Business Environment	18
Doing Business in the Middle East	18
Intercultural Management	18
Global Political Economy: China and India	12
Global Political Economy: The Arab World	12
Geo-economy and Competitive Intelligence	18

**Production, Operations, Logistics**

<b>Course Title</b>	<b>Hours</b>
Operations Management	18
Business Research and Case Methodology	18
International Supply Chain Management	18
Management Information Technology and E-business	18

**Auxiliaries**

<b>Course Title</b>	<b>Hours</b>
Global Corporate Experience and Report	25
Global Business Plan	25
MS thesis	N/A

**TOTAL NUMBER OF HOURS:****586****Summer Preparatory Program**

Applicants having little or no background in business or economics are required to attend a two-week Preparatory Session from mid September until the end of it. Courses will take place during the evening.

<b>Course Title</b>	<b>Hours</b>
Management and Marketing	12
Accounting	12
Economics	12
Quantitative Methods for Decision Makers	12

# FACULTY OF ENGINEERING (FE)

Dr. Elias Nassar, *Dean*

DEPARTMENT OF CIVIL AND ENVIRONMENTAL  
ENGINEERING

Dr. Jacques Harb, *Chairperson*

DEPARTMENT OF ELECTRICAL AND COMPUTER AND  
COMMUNICATION ENGINEERING

Dr. Semaan Georges, *Chairperson*

DEPARTMENT OF MECHANICAL ENGINEERING

Dr. Michel El-Hayek, *Chairperson*

## FACULTY DIRECTORY

### **Office of the Dean**

Engineering Building, 3rd floor,  
Room E 311  
Tel: 09-218-950/51/52 Extension 2028  
e-mail: enassar@ndu.edu.lb

### **Department of Civil and Environmental Engineering**

Engineering Building, 3rd floor,  
Room E 308  
Tel: 09-218-950/51/52 Extension 2029  
e-mail: jharb@ndu.edu.lb

### **Department of Electrical and Computer and Communication Engineering**

Engineering Building, 3rd floor,  
Room E 302  
Tel: 09-218-950/51/52 Extension 2174  
e-mail: ageorges@ndu.edu.lb

### **Department of Mechanical Engineering**

Engineering Building, 3rd floor,  
Room E 306  
Tel: 09-218-950/51/52 Extension 2232  
e-mail: me@ndu.edu.lb

# FACULTY OF ENGINEERING

## LIST OF FULL-TIME FACULTY MEMBERS

### Professors Emeritus

<sup>1</sup>*Assaf, Walid*, Ph.D., 1965, *Nuclear Engineering*, Iowa State University, USA

<sup>1</sup>*Khoury, Shahwan*, Ph.D, 1965, *Electrical Engineering (Applied Space Science)*, Carnegie Institute of Technology, CMU, USA

### Associate Professors

*Asmar, Ghazi*, Ph.D., 1998, *Mechanical and Aerospace Engineering*, University of Missouri, USA

*El-Hayek, Michel*, Docteur Européen, 1997, *Sciences Appliquées*, Faculté Polytechnique de Mons, Belgium

*Elmurr, Sami*, Ph.D., 1986, *Electrical Engineering*, Mississippi State University, USA

*Georges, Semaan*, Ph.D., 2001, *Electrical Engineering*, Ecole de Technologie Supérieure, Canada

*Hamad, Mustapha*, Ph.D., 1995, *Electrical Engineering*, University of South Florida, USA

*Harb, Jacques*, Ph.D., 1996, *Civil Engineering*, Northeastern University, USA

*Nassar, Elias*, Ph.D., 1997, *Electrical Engineering*, The Ohio State University, USA

### Assistant Professors

*Atallah, Jad*, Ph.D., 2008, *Electronic and Computer Systems*, Royal Institute of Technology (KTH), Sweden

*Azzi, Marwan*, Ph.D., 2008, *Materials Engineering*, McGill University, Canada

*Bou-Mosleh, Charbel*, Ph.D., 2005, *Aerospace Engineering Sciences*, University of Colorado, Boulder, Colorado, USA

*Bou Sanayeh, Marwan*, Dr.-Ing., 2008, *Electrical Engineering*, University of Duisburg-Essen, Germany

*Chakar, Elie*, Docteur, 1994, *Sciences et Techniques du Bâtiment*, Ecole Nationale des Ponts et Chaussées, France

*El Berbari, Racha*, Doctorate, 2009, *Signal et Images*, Ecole Nationale Supérieure de Telecommunications, France

*El Moucary Chady*, Doctorate., 2000, Lab De Génie Electrique de Paris (LGEP), France (NLC)

*Francis, Francis*, Ph.D., 2003, *Mechanical Engineering*, University of New South Wales, Australia

*Hassoun, George*, Ph.D., 1996, *Electrical and Electronic Engineering*, University of Adelaide, Australia

*Jawad, Dima*, Ph.D., 2003, *Civil Engineering*, Rutgers, The State University of New Jersey, USA

*Kassem, Abdallah*, Ph.D., 2005, *Electrical Engineering*, Ecole Polytechnique de Montreal, Canada

*Keyrouz, Fakhredine*, Dr.-Ing., 2008, *Electrical Engineering*, Technische Universitat Munchen, Germany

*Kraidy, Ghassan*, Docteur, 2007, *Electronics and Communications Engineering*, Ecole Nationale Supérieure des Télécommunications , France

*Matta, Alain*, Ph.D., 2004, *Civil Engineering*, The Johns Hopkins University, USA

*Mendalek, Nassar*, Ph.D., 2003, *Electrical Engineering*, Ecole de Technologie Supérieure, Canada

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<sup>1</sup> Professor Emeritus

**Metni, Najib**, Docteur, 2006, *Automatique et Traitement du Signal et des Images*, Université de Nice – Sophia Antipolis, France

**Salem, Talal**, Docteur, 2007, *Civil Engineering*, Institut National des Sciences Appliquées de Lyon, France

**Youssef-Abdel-Massih, Dalia**, Doctorate, 2007, *Civil Engineering Geotechnics*, University of Nantes, France

**Zgheib, Charbel**, Doctorate, 2005, *Physics of Condensed Matter*, University of Montpellier 2, France (SC)

### **Laboratory Instructors**

**Breidy, George**, M.B.A., 2004, *Business Administration*, Notre Dame University-Louaize, Lebanon

**Zakhem, Walid**, M.S., 1992, *Electrical Engineering*, Southern Illinois University, USA (NLC)

### **Laboratory Assistants**

**Daou, Wissam**, B.E., 2000, *Mechanical Engineering*, Notre Dame University-Louaize, Lebanon

**El-Turkey, Nisrine**, B.E., 2003, *Computer & Communication Engineering*, Notre Dame University-Louaize, Lebanon

**Haddad, Wissam**, B.E., 2002, *Civil Engineering*, Lebanese American University, Lebanon

**Siranossian, Aline**, B.E., 2001, *Electrical Engineering*, Notre Dame University-Louaize, Lebanon

### **List of Staff Members**

**Elias, Jeanette**, M.A., *Media Studies-Advertising*, 2006, Notre Dame University-Louaize, Lebanon, *Administrative Assistant*, Office of the Dean

**Lahoud, Elie**, *Laboratory Technician*, Civil and Environmental Engineering Laboratories

**Hobaïter, Jacqueline**, *Secretary*

**Khoury, Ghada**, *Secretary*

**Turc, Nancy**, B.A., *International Business Management*, 2008, Notre Dame University-Louaize, Lebanon, *Secretary*

# FACULTY OF ENGINEERING

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**Dean:** *Dr. Elias Nassar*

**Administrative Assistant:** *Miss Jeanette Elias*

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## HISTORICAL OVERVIEW

In 1993, a project for establishing the Faculty of Engineering (FE) was submitted to the Lebanese Government; in 1996 the FE was established by Decree no 9278. The four majors in the initial decree were: Civil Engineering (150 credits) Architecture (202 credits) Mechanical Engineering (150 credits) Electrical Engineering (150 credits), Computer Engineering (150 credits). After one year, in 1997, Computer Engineering program started at NDU-NLC. The first Engineering degrees were awarded in Spring 1998.

The name of the Computer Engineering degree was changed to Computer and Communication Engineering in 1999, by Decree No. 1948. In 2001, Computer and Communication Engineering program started at NDU-Shouf Campus; In 2006, the name of the Civil Engineering Department changed to Civil and Environmental Engineering.

## Deans of the Faculty of Engineering

Late Dr. Fares Helou (Acting Dean) 1996-1997

Late Dr. Fares Helou 1997-2000

Dr. Shahwan Khoury 2000-2006

Dr. Elias Nassar 2006-Present

## MISSION, VISION AND VALUES

### Mission

The Faculty of Engineering at Notre Dame University endeavors to graduate engineers who understand the ethical, social, economic and environmental context of their profession and who apply their knowledge with judgment and responsibility in order to develop ways to utilize the materials and forces of nature for the benefit of mankind. In its commitment to the education of the whole person and through its applied undergraduate curricula, research and extra-curricular activities, the Faculty of Engineering encourages its students to pursue lives of global citizenship, community service, life-long learning and exemplary leadership.

### Vision

To be recognized as a regional center of excellence for engineering education where highly qualified faculty and outstanding students pursue knowledge in a context of ethical and social values. This distinguished education will enable our students to contribute in a socially responsible manner to the development of Lebanon and the region.

### Values

Excellence in education and scholarship: highly qualified faculty educate students through theory and hands-on instruction using the latest available technologies. High quality research addresses problems of relevance to the community and enhances classroom instruction.

Life-long learning: Our students will be equipped with the tools and skills that enable them to keep up to date in their field.

Service: our students will be encouraged to use their knowledge for the service of the community through engineering projects and extra-curricular activities.

Faith and integrity: In keeping with the tradition of the Maronite Mariamite Order, we aim to graduate students that are rooted in their faith in God. This faith expresses itself in respect for God's creation and integrity in their daily professional and social interactions.

## **FACULTY PROFILE**

The programs in civil, computer and communication, electrical and mechanical engineering prepare the students to enter immediately the professional practice upon graduation and to pursue graduate study.

The curricula of the Engineering Departments share three basic tenants: scientific and technological competence, balance between theory and practice, and commitment to self-maintained and enduring personal and professional development.

Courses are enhanced by excellent computing facilities and by extensive hands-on state-of-the-art laboratory experiences that are integrated throughout the five-year curricula.

Class and laboratory enrollment is maintained at small class sizes to ensure personal attention by a faculty that is committed to outstanding instruction as well as close student-faculty interaction both within and outside the classroom.

The Faculty supports and counsels on-campus chapters of international professional organizations that engage in a variety of activities to provide the students with national and international exposure.

### **Academic Departments and Programs**

The Faculty of Engineering (FE) consists of the following departments:

- Department of Civil and Environmental Engineering
- Department of Electrical and Computer and Communication Engineering
- Department of Mechanical Engineering

and offers programs in Civil Engineering (CE), Mechanical Engineering (ME), Electrical Engineering (EE), and Computer and Communication Engineering (CCE), leading to the degree of Bachelor of Engineering.

The Department of Civil and Environmental Engineering offers a minor in Engineering Management which is open to all Engineering students.

### **Facilities**

The states-of-the-art and extensive laboratories of the Faculty of Engineering are available for faculty and student research, senior engineering projects, engineering competition projects and instruction, through open hours and scores of regularly scheduled laboratory courses.

Faculty members in the academic ranks are responsible for the lab course content, relevance to the curriculum, project supervision and the facilities development and update. Dedicated instructors supported by the laboratory staff are in charge of the laboratory courses instruction.

With these academic functions, laboratories have the effective capabilities, practical functionalities and excellent quality to provide wide-ranging services to the engineering profession. These services include certified testing to the construction industry as well as advanced and unique experimental research.

### **Curricula**

The curriculum of each program is listed under the appropriate department. All engineering curricula share a common General Education Requirements (GER) component:

**General Education Requirements** **27 cr.**  
**Communications Skills** **9 cr.**

A: English (6 cr.)

ENL 213: *Sophomore English rhetoric*

**And**

ENL 223: *Communication Arts*

**Or**

ENL 230: *English in the Workplace*

B: Arabic (3 cr.)

*One course from:*

ARB 211: *Appreciation of Arabic Literature*

ARB 212: *Advanced Arabic Grammar*

ARB 224: *Philosophy and Literature*

ARB 231: *Technical Arabic*

ARB 317: *Modern Arabic Literature in Lebanon*

**Philosophy and Religion** **6 cr.**

A: Religion (3 cr.)

REG 212: *Religion and Social Issues*

REG 213: *Catholicism*

REG 313: *The Maronites, Faith and cultural Heritage*

REG 314: *Marriage and Family in the Catholic Church*

B: Philosophy (3cr.)

*One course from:*

ENG 310: *Ethics in Engineering*

ENS 205: *Environment, Society and Ethics*

PHL 311: *Ethics and the Modern World*

POS 345: *Ethics and Leadership*

**Cultural Studies and Social Sciences** **6 cr.**

*One course from:*

ARP 215: *Cultural Themes in Lebanese Architecture*

COA 359: *Media and Society*

COA 315: *World Cinema Survey*

FAP 215: *Art & Culture*

HUT 305: *Human Thought to 1500*

HUT 306: *Human Thought from 1500 to the Present*

LIR 214: *Introduction to Literary Genres*

MUS 210: *Music Appreciation*

NTR 215: *Foods and Nutrition of World Cultures*

PSL 201: *Introduction to Psychology*

SOL 201: *Introduction to Sociology*

SOL 301: *Introduction to Anthropology*

*One course from:*

BAD 201: *Fundamentals of Management*

ECN 200: *Survey of Economics*

Or ECN 211: *Principles of Microeconomics*  
Or ECN 212: *Principles of Macroeconomics*  
ENG 210: *Introduction to Engineering Economy*

**Citizenship:**

3 cr.

*One course from:*

HIT 211: *History of Lebanon and the Middle east*  
POS 201: *Introduction to Political Science*  
POS 210: *Government and Institutions of Lebanon*  
POS 240: *Law and Society*  
POS 319: *Democracy and human Rights*  
POS 337: *Dialogue of Civilizations*  
IAF 301: *Modern Political Ideologies*

**Science and Technology:**

3 cr.

*One course from:*

AST 201: *Discovering Astronomy*  
BIO 202: *Mystery of Life*  
BIO 203: *Discover Biology*  
HEA 201: *Health Awareness*  
ENS 201: *Introduction to Environmental Science*  
ENS 202: *The Environment and Sustainable Development*  
ENS 206: *Ecotourism*  
NTR 201: *Basic Human Nutrition*  
PHS 207: *Development of Science and Technology*

Or a total of 3 credits from:

HEA 203: *Health Assessment (2 cr.)*  
CHM 271: *Principles of Chemistry Laboratory (1 cr.)*  
CSC 270: *Computer-Aided Engineering Design (1 cr.)*  
PHS 271: *Electricity and Magnetism Laboratory (1 cr.)*  
PHS 272: *Modern Physics Laboratory (1 cr.)*

**Study and Learning skills**

0 cr.

Note:

*Old students with ID numbers 2007 or earlier have to take 24 credits in GER courses.*

*These students can take any course listed above (if not already taken) as part of their two GER free electives on condition of not taking more than one Arabic course.*

**Faculty of Engineering Courses:**

**ENG 201 Introduction to Engineering (3.0); 3 cr.** Engineering design: needs, specifications, feasibility, models. System, detailed alternative and optimum design. Reliability and liability. Communication. Patents and copyrights. Ethics.

**ENG 202 Computers and Engineering (3.0); 3 cr.** Operating systems. Application softwares: MATLAB. Programming and Languages. Computer Architecture. Input/output. Storage. Network Architecture. Hardware applications: Data acquisition, PLC. *Co-requisite:* MAT 215

**ENG 210: Introduction to Engineering Economy (3.0); 3 cr.** Interest and time value of money. Investment, financing, depreciation, and economic selection. Analysis of engineering costs and capital investment in the design and implementation of engineering projects. *Prerequisite:* ENG 201.

**ENG 310: Ethics in Engineering (3.0); 3 cr.** Ethical issues in the practice of engineering: corporate responsibility; personal rights; honesty, ethical aspects of safety, risk and liability and conflicts of interest; environmental issues and sustainability; codes of ethics; emphasis on developing the capacity for independent ethical analysis of real cases.

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## **Minor in Engineering Management (18 credits)**

### **Motivation**

Management of Engineering projects has gained a significant importance in a competitive global market. The proposed Undergraduate Minor in Engineering Management aims at assisting engineering students to enhance their engineering skills by acquiring managerial skills. Through a selectivity of courses, the students will be able to learn the business aspect of Engineering projects.

### **Objective and Outcome**

The Objective of this minor is to provide engineering students with a better exposure on project management methods, planning, engineering economy and leadership. It offers students the necessary tools for managing technical projects in an interdisciplinary environment. This minor is addressed to prepare engineering students in any engineering discipline to acquire specific useful management skills, and be able to use technology more appropriately.

The Outcome is: Graduates who understand the market and financial investments of engineering projects.

### **Eligibility**

The Minor in Engineering Management program is open to NDU undergraduate engineering students:

1. In their second or third year of studies
2. Who are in a good academic standing (GPA>2.0)
3. Who have applied and been admitted into the program

### **Curriculum**

The Minor in Engineering Management requires at least six courses (18 credits) chosen as follows:

#### **A- Required Course (12 credits)**

ACO 201	Principles of Accounting I
BAD 201	Fundamentals of Management
CEN 392	Engineering Economy
Or	
ENG 210	Introduction to Engineering Economy
CEN 393	Project Management

#### **B- Elective Courses (6 credits)**

Choose 2 courses from the following pool:

BAD 317	Organizational Behavior
BAD 429	Operations Management

BAD 425	Quantitative Techniques for Management
CEN 471	Civil Engineering Laws and Ethics
CEN 493	Construction Planning
ECN 200	Survey of Economics
MAT 339	Numerical Analysis
MGT 201	Principle of Human Resources
MGT 411	Leadership Quality & Performance
MRK 201	Fundamentals of Marketing

A minimum grade of "C" in each course of the minor is required. The overall GPA should be a minimum of 2.0

**Application Procedure**

Application Form is available in "The Department of Civil and Environmental Engineering." Students must submit a petition through their advisor and attach the application form. All application forms must be received by **July 10** for the **Fall** enrollment and **January 10** for **Spring** enrollment. Late or incomplete application forms will not be considered.

**Withdrawal Procedure**

Withdrawal from the Minor in Engineering Management must be done by filing a petition through the advisor.

## **DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

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**Chairperson:** *Dr. Jacques Harb*

**Secretary:** *Ms. Nancy Turc*

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### **Associate Professor**

*Harb, Jacques*, Ph.D., 1996, *Civil Engineering*, Northeastern University, USA

### **Assistant Professors**

*Chakar, Elie*, Docteur, 1994, *Sciences et Techniques du Bâtiment*, Ecole Nationale des Ponts et Chaussées, France

*Jawad, Dima*, Ph.D., 2003, *Civil Engineering*, Rutgers, The State University of New Jersey, USA

*Matta, Alain*, Ph.D., 2004, *Civil Engineering*, The Johns Hopkins University, USA  
*Salem, Talal*, Docteur, 2007, *Civil Engineering*, Institut National des Sciences Appliquées de Lyon, France

*Youssef-Abdel-Massih, Dalia*, Doctorate, 2007, *Civil Engineering.-Geotechnics*, University of Nantes, France

### **Laboratory Assistant**

*Haddad, Wissam*, B.E., 2002, *Civil Engineering*, Lebanese American University, Lebanon,

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## **The Degree of Bachelor of Engineering in Civil Engineering**

This program aims at graduating civil engineers capable of applying their knowledge to serve society's needs in the design and construction of civil systems, while respecting nature and environmental ethics.

### **Admission Requirements**

Admission to the Civil and Environmental Engineering program is governed by the university admission requirements as outlined in the university catalog.

The Faculty of Engineering at Notre Dame University accepts transfer students from Sciences, Architecture, and Engineering majors at accredited universities provided they have completed a minimum of 12 credits at their institution with a cumulative GPA of 2.3. For students from European-system universities, they need to have successfully completed a minimum of one academic year and are eligible to continue their studies at their home institution.

For students from Sciences and Architecture majors, the following additional requirement applies:

They have completed a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a minimum total GPA of 2.5 in these 12 credits.

Transfer students can receive credit for NDU courses listed under the General Education Requirements (GER), Core Requirements and Free Elective categories of the NDU contract sheet. In order to ensure that the student has achieved the needed outcomes and objectives specified by the concerned Department, the Faculty of Engineering reserves the right not to give transfer credit for courses listed under the Major Requirements category even if the student has taken similar courses at his institution. For students transferring from Science majors, no courses listed under major requirements or technical electives can be transferred.

For a list of required documents and the relevant dates and deadlines, students planning to transfer to the Faculty of Engineering need to check with the NDU Admissions Office.

## **Residency Requirements**

Full time students entering the civil engineering program of first year standing must complete the listed program within eight years of the date of enrollment in the program.

A transfer candidate with a bachelor degree in Civil Engineering from an accredited institution is required to successfully complete a minimum of 45 credits of upper-division course work including a graduation project. A transfer student without a bachelor degree in civil engineering is required to successfully complete a minimum of 60 credits of upper-division course work including 3 credits of project work.

## **Course Load Requirements**

In general, students are not allowed to carry more than 17 credits per semester, nor more than 9 credits in a summer session unless otherwise specified in their suggested program. Restrictions may be imposed on students whose overall grade-point average is less than 2.3/4.0. Upon the approval of the advisor, a student whose overall grade-point average is no less than 3.2/4.0 may be permitted to carry a maximum load of 18 credits per semester.

Students in their last semester may petition to take up to 19 crs. given they are in good academic standing and they satisfy the minimum residency requirement for the major.

Students in their last semester may petition to take up to 20 crs. given they have a GPA of 3.5 or higher and they satisfy the minimum residency requirement for the major.

## **Graduation Requirements**

To obtain the degree of bachelor of engineering in civil engineering, a student must complete a total of 150 credits with an overall grade-point average of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements and technical electives. In addition, each major requirement course as well as technical elective courses must be successfully completed with a minimum grade of C-. These 150 credits are divided into:

### **Degree Requirements (150 credits)**

**General Education Requirements** **27 cr.**

**Core Requirements** **45 cr.**

CHM 211, CSC 212, EEN 205, ENG 201, ENG 202, MAT 213, MAT 215, MAT 224, MAT 235, MAT 326, MEN 201, MEN 210, MEN 320, PHS 203, GEO 201

**Major Requirements** **58 cr.**

CEN 202, CEN 203, CEN 250, CEN 251, CEN 270, CEN 204, CEN 210, CEN 311, CEN 220, CEN 325, CEN 221, CEN 271, CEN 330, CEN 343, CEN 443, CEN 360, CEN 361, CEN 392, CEN 462, CEN 463, CEN 465, CEN 430, CEN 431, CEN 440, CEN 598, CEN 599

**Approved Summer Training** **3 cr.**  
CEN 496

**Technical Electives** **12 cr.**

Choose any four courses from the following pool: CEN 393, CEN 407, CEN 510, CEN 511, CEN 512, CEN 513, CEN 514, CEN 515, CEN 516, CEN 520, CEN 521, CEN 522, CEN 530, CEN 531, CEN 523, CEN 524, CEN 541, CEN 450, CEN 543, CEN 544, CEN 560, CEN 461, CEN 370, CEN 471, CEN 580, CEN 581, CEN 582, CEN 493, CEN 594, MEN 400, MAT 339

*Or follow one of the tracks below:*

**Track A: Structural and Material Engineering**

CEN 407, CEN 510, CEN 511, CEN 512, CEN 513, CEN 514, CEN 515, CEN 516, CEN 520, CEN 521, CEN 522, CEN 523, CEN 524, CEN 541, CEN 580, CEN 581, CEN 582, CEN 392, CEN 493, CEN 594, MEN 400, MAT 339

**Track B: GeoEnvironmental Engineering**

CEN 392, CEN 393, CEN 530, CEN 531, CEN 560, CEN 461, CEN 580, CEN 581, CEN 582, CEN 493, CEN 594, MAT 339

**Track C: Transportation and Planning Engineering**

CEN 392, CEN 393, CEN 450, CEN 543, CEN 544, CEN 493, CEN 594, MAT 339.

**Track D: Construction Management**

CEN 370, CEN 392, CEN 393, CEN 471, CEN 493, CEN 594, MAT 339.

**Free Electives**

Include any course offered of particular interest, of sophomore level (200 level) or above

**5 cr.**

**Bachelor of Engineering in Civil Engineering  
Suggested Program (150 Credits)**

**Year 1**

**Fall Semester I (15 Credits)**

CEN	202	Statics	3 cr.
PHS	203	General Physics III	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
ENG	201	Introduction to Engineering	3 cr.
MAT	213	Calculus III	3 cr.

**Spring Semester I (17 Credits)**

CEN	203	Mechanics of Materials	3 cr.
CEN	250	Surveying	2 cr.
CEN	251	Field Surveying	1 cr.
CEN	270	Engineering Graphics	1 cr.
CEN	271	Civil Engineering CAD	1 cr.
ENG	202	Computers and Engineering	3 cr.
MAT	224	Calculus IV	3 cr.
MEN	201	Dynamics	3 cr.

**Summer Session I (9 Credits)**

ENL	230	English in the Workplace (GER)	3 cr.
—	—	General Education Requirements	3 cr.
—	—	General Education Requirements	3 cr.

**Year 2**

**Fall Semester II (16 Credits)**

CEN	204	Mechanics of Materials Laboratory	1 cr.
CEN	210	Structures I	3 cr.
CEN	220	Soil Mechanics	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
MEN	210	Thermodynamics I	3 cr.
EEN	205	Electric Circuits	3 cr.

**Spring Semester II (16 Credits)**

CEN	311	Structures II	3 cr.
CSC	212	Program Design and Data Abstraction	3 cr.
CEN	221	Soil Mechanics Laboratory	1 cr.
CHM	211	Principles of Chemistry	3 cr.
MEN	320	Fluid Mechanics I	3 cr.
GEO	201	Physical Geology	3 cr.

**Summer Session II (9 Credits)**

MAT	215	Linear Algebra I	3 cr.
—	—	General Education Requirements	3 cr.
—	—	General Education Requirements	3 cr.

**Year 3**

**Fall Semester III (17 Credits)**

MAT	326	Probability & Statistics for Engineers	3 cr.
CEN	392	Engineering Economy	3 cr.
—	—	General Education Requirements	3 cr.
CEN	330	Concrete Design I	3 cr.
—	—	Free Elective	2 cr.
CEN	360	Hydraulics	3 cr.

**Spring Semester III (16 Credits)**

CEN	430	Concrete Design II	3 cr.
CEN	343	Transportation Engineering I	3 cr.
CEN	361	Hydraulics Laboratory	1 cr.
CEN	325	Shallow Foundations	3 cr.
CEN	463	Water & Waste Water Networks	3 cr.
—	—	General Education Requirements	3 cr.

**Summer Session III (3 Credits)**

CEN	496	Approved Summer Training	3 cr.
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**Year 4****Fall Semester IV (17 Credits)**

CEN	462	Environmental Engineering	3 cr.
CEN	443	Transportation Engineering II	3 cr.
CEN	431	Concrete and Pavement Design Laboratory	1 cr.
—	—	Technical Elective	3 cr.
CEN	440	Steel Design	3 cr.
—	—	Technical Elective	3 cr.
CEN	598	Engineering Design I	1 cr.

**Spring Semester IV (15 Credits)**

CEN	599	Engineering Design II	2 cr.
CEN	465	Environmental Engineering Laboratory	1 cr.
—	—	General Education Requirements	3 cr.
—	—	Free Elective	3 cr.
—	—	Technical Elective	3 cr.
—	—	Technical Elective	3 cr.

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## Undergraduate Courses: Civil Engineering

**CEN 201 Engineering Mechanics (3.0); 3cr.** Forces; free body diagrams; beams; trusses, tension, compression, shear and bending moment diagrams; stress-strain relationship; stress in beams due to bending and shear forces; torsion of circular members, buckling of columns. Opened only to EE and CCE students.

**CEN 202 Statics (3.0); 3cr.** Forces, moments and couples; free body diagrams; problems involving beams, trusses, and various engineering applications. *Corequisite:* ENG 201.

**CEN 203 Mechanics of Materials (3.0); 3cr.** Tension, compression, shear and bending moment diagrams; torsion; stress-strain relationship; stresses in beams; pressure vessel; combined loading and unsymmetric bending; Mohr's circle beam deflections; buckling of columns. *Prerequisite:* CEN 202.

**CEN 204 Mechanics of Materials Laboratory (0.2); 1cr.** Testing for material characterization. Experiments related to static and fatigue testing of various types of materials. Tests include tension, compression, bending and buckling. *Prerequisite:* CEN 203.

**CEN 210 Structures I (3.0); 3cr.** Structural forms; analysis of structurally determinate structures; moving loads, influence lines; introduction to indeterminate structures. Collapse and analysis. *Prerequisite:* CEN 203.

**CEN 220 Soil Mechanics (3.0); 3cr.** Stress-strain relations and properties of soil, seepage and flow nets. Bearing capacity of soils, footings on sand and clay. *Prerequisite:* CEN 203.

**CEN 221 Soil Mechanics Laboratory (0.2); 1 cr.** The nature of soil behavior; laboratory tests include physical properties of soils, stress-strain relationships, compressibility, and shear strength. *Prerequisite:* CEN 220.

**CEN 250 Surveying (2.0); 2 cr.** Surveying and instrumentation; Introduction to optical, photogrammetrical, mathematical, and geometrical principles relevant to photogrammetry and remote sensing; introduction to global positioning system.

**CEN 251 Field Surveying (0.2); 1 cr.** Field plane surveying; topographic mapping; location survey and route surveying. *Corequisite:* CEN 250.

**CEN 270 Engineering Graphics (0.2); 1 cr.** Drawing of three-dimensional objects,

orthographic, sectional, pictorial view. Developed surfaces and intersections.

**CEN 271 Civil Engineering CAD (0.2); 1 cr.** This is an introductory course lab on CAD tools to be used by engineers and architects. CAD systems are interface soft wares. The CAD systems shall be used in conjunction with civil engineering basic drafting tools to form visualizations in 2D and 3D engineering entities. It constitutes the basic knowledge in AutoCAD, TransCAD, and other CAD software systems. *Corequisite:* CEN 270.

**CEN 311 Structures II (3.0); 3 cr.** Analysis of statically indeterminate structures; methods of consistent deformations, slope, deflection, and moment distribution. Energy theorems and applications to trusses, beams, and frames. *Prerequisite:* CEN 210.

**CEN 325 Shallow Foundations (3.0); 3cr.** Subsurface explorations, methods of exploration and sampling, design of sheeting and bracing systems for shallow foundations. Consolidation theory, settlement analysis. *Prerequisite:* CEN 220.

**CEN 330 Concrete Design I (3.0); 3 cr.** Behavior of reinforced concrete. Ultimate strength design method. Design of beams for flexure and shear, one-way slabs, and short columns. *Prerequisite:* CEN 210.

**CEN 343 Transportation Engineering I (3.0); 3 cr.** Transportation in society, and mobility; people and goods. Introduction to operating principles and procedures for transportation systems. Level-Of-Service, vehicle flow and capacity. Traffic analyses and control. Transportation Planning; Travel Demand Forecasts; demand-supply relationships; modeling. Project.. *Prerequisites:* Third Year Standing. *Corequisite:* MAT 326.

**CEN 360 Hydraulics (3.0); 3 cr.** Open channel flow, momentum and energy principles; water surface profiles; flow measurement. *Prerequisite:* MEN 320.

**CEN 361 Hydraulics Laboratory (0.2); 1 cr.** Applying continuity, momentum, and energy principles to flow problems. Experiments include laminar and turbulent flows, major and minor losses, hydraulic jump, weirs, flow measurements. *Prerequisite:* CEN 360.

**CEN 370 Electrical, Mechanical, and Sanitary Systems (3.0); 3 cr.** Electrical requirements and distribution in buildings; design of heating, cooling, and ventilation systems; selection and design of water distribution and plumbing systems.

**CEN 392 Engineering Economy (3.0); 3 cr.** Engineering economic analysis for project and design evaluation, decision making including replacement and retention, budget limitation, breakeven and sensitivity analysis. Case studies in the design/system analysis process, time value of money and economic evaluation of alternatives, risk analysis, and the effects of depreciation and taxes.. *Prerequisite:* ENG 201, Junior Standing.

**CEN 393 Project Management (3.0); 3 cr.** Fundamentals of Project Management, engineering organization, planning, budgeting, scheduling and cost controls, bidding process, tender documents and contracts. Examples will be given in all fields of Engineering. *Prerequisite:* Junior Standing.

**CEN 407 Advanced Mechanics of Materials (3.0); 3 cr.** Three dimensional strain and stress states, application of energy methods, torsion of noncircular members, nonsymmetrical bending of straight beams, shear center for thin-wall beam cross sections, curved beams. *Prerequisite:* CEN 210.

**CEN 430 Concrete Design II (3.0); 3 cr.** Study of the strength, behavior, and design of indeterminate reinforced concrete structures, with primary emphasis on slab systems; emphasis on the strength of slabs and on the available methods of design of slabs spanning in two directions, with or without supporting beams. Analysis and design of long columns, and footings. *Prerequisite:* CEN 330.

**CEN 431 Concrete and Pavement Design Laboratory (0.2); 1 cr.** Experiments dealing with concrete and asphalt properties, proportioning, design and analysis. *Prerequisites:* CEN 330, CEN 443. *Corequisite* CEN 443.

**CEN 440 Steel Design (3.0); 3 cr.** Design of steel beam girders, tension member columns, bolted, riveted, and welded connections. *Prerequisite:* CEN 210.

**CEN 443 Transportation Engineering II (3.0); 3 cr.** The geometric design of highways, drainage, roadbed, environmental concerns, cost.

Highway interchanges concepts. Roadbed construction; pavement design, construction, and management. Intermodal stations, airports design concepts. Project. *Prerequisite:* Fourth Year Standing. *Corequisite:* CEN 430.

**CEN 450 Advanced Surveying (3.0); 3 cr.** Subdivision theory, usage of total station in field surveying. *Prerequisites:* CEN 250, CEN 251.

**CEN 461 Water Pollution control and treatment (3.0); 3 cr.** Fundamental principles and engineering application of physical, chemical, and biological processes (like sedimentation, filtration, coagulation, flocculation, membranes, aerobic, anaerobic biological processes) are discussed. *Prerequisite:* CEN 462, or instructor's approval.

**CEN 462 Environmental Engineering (3.0); 3 cr.** Quantitative evaluation of the environmental, economic, and technical problems involved in control of pollutants of the air, water, and land. *Prerequisite:* MEN 320.

**CEN 463 Water and Waste Water Networks (3.0); 3 cr.** Quantities of water and wastewater; collection, transportation, and distribution; water distribution network; design of sanitary and storm- water sewer systems. *Prerequisite:* CEN 360.

**CEN 465 Environmental engineering Laboratory (1.0); 1 cr.** Laboratory and field experiments related to pollution of air, water and soil. Tests include air sampling, water testing, sound measurement, wastewater treatment, compost tests and landfill cover performance. *Prerequisite:* CEN 462.

**CEN 471 Civil Engineering Laws and Ethics (3.0); 3 cr.** Survey of Lebanese construction codes and regulations; civil engineering practice as related to environmental destruction and moral behavior.

**CEN 493 Construction Planning (3.0); 3 cr.** Job Planning and management, selection of construction equipment, soil stabilization, tractors, scrapers, excavating equipment, trucks, operation analysis, drilling rock, blasting, tunneling.

**CEN 495 Engineering Project; 3 cr.** Individual supervised work in one of the main field of Civil Engineering. *Prerequisite:* CEN 491, ENL 230.

**CEN 496 Approved Summer Training; 6 cr.** Department approved summer training practice

in Civil Engineering. A report is required. *Prerequisite:* Senior Standing.

**CEN 510 Elasticity (3.0); 3 cr.** Stress-Strain, elasticity formulation, solution by potentials, stress functions, torsion, thick cylinders, rotating disks, thermal stresses, straight simple beams, curved beams. *Prerequisite:* CEN 407.

**CEN 511 Advanced Elasticity (3.0); 3 cr.** Semi-infinite elastic medium and related problems, energy problems, variational methods, columns, beam columns, bending of thin plate, theory of thin shells, *Prerequisite:* CEN 510.

**CEN 512 Stress Wave Propagation (3.0); 3 cr.** Waves and vibration in strings, longitudinal waves in thin rods, flexural waves in thin rods, waves in membranes, thin plates, and shells. Waves in infinite media. *Prerequisite:* CEN 510.

**CEN 513 Advanced Stress Wave Propagation (3.0); 3 cr.** Waves in infinite media, waves in semi-infinite media scattering and diffraction of elastic waves, wave propagation in plates and rods. *Prerequisite:* CEN 512.

**CEN 514 Experimental Stress Analysis (3.0); 3 cr.** Methods of strain measurements and strain determination, brittle coating, electrical resistance gage, photo elastic techniques. *Prerequisite:* CEN 204.

**CEN 515 Energy Methods (3.0); 3 cr.** Principles of virtual work, total potential energy, complimentary virtual work, total complimentary energy, and Reissner's principle for solid mechanics problems. Applications to bars, columns and plates. *Prerequisite:* CEN 407.

**CEN 516 Continuum Mechanics (3.0); 3 cr.** Tensor notation and manipulation, stress and deformation in a continuum. Eulerian forms of physical laws governing the motion of a continuum. Application to solids. *Prerequisite:* CEN 407.

**CEN 520 Matrix Method for Structural Analysis (3.0); 3 cr.** Displacement (stiffness) method, truss applications, rectilinear, tapered and curved beams, matrix transformation, frame analysis, influence coefficients and coordinate transformation, force method. *Prerequisite:* CEN 311.

**CEN 521 Dynamics of Structures (3.0); 3 cr.** Theory and application of structural dynamics for single and multiple degree-of-freedom models of buildings due to dynamic forces.

Concepts of overall seismic design of buildings, proportioning, and detailing to achieve satisfactory seismic response. *Prerequisite:* Senior Standing.

**CEN 522 Structural Project (3.0); 3 cr.** Usage of commercial software packages in the analysis and design of multi-story concrete and steel buildings, Bridges and storage tanks. *Prerequisites:* CEN 430, CEN 440.

**CEN 523 Design of Structural Systems (3.0); 3 cr.** The whole structural design process including definition of functional requirements, selection of structural scheme, formulation of design criteria, preliminary and computer-aided proportioning, and analysis of response, detailing. *Prerequisites:* CEN 430, CEN 440, or instructor's approval.

**CEN 524 Prestressed Concrete (3.0); 3 cr.** Fundamentals of analysis and design of post-tensioned and pre-tensioned structural members, proportioning of members, calculation of the amount and positioning of reinforcement. *Prerequisite:* CEN 430 or instructor's approval.

**CEN 530 Slope Stability (3.0); 3 cr.** Slope stability analysis methods. Use of software packages. *Prerequisite:* CEN 325.

**CEN 531 Deep Foundations (3.0); 3 cr.** Subsurface exploration and sampling, design of sheeting and bracing systems for deep foundations. Pile and corrosion analysis. *Prerequisite:* CEN 325.

**CEN 541 Advanced Steel Design (3.0); 3 cr.** Design of structural systems for multiple loads, combined loading, torsion, and fatigue in structural members, plate and box members. *Prerequisite:* CEN 440.

**CEN 543 Transportation Engineering III (3.0); 3 cr.** One, two, or three topics in Transportation Engineering shall be offered. The course shall be concerned with the process of analyses and design of the topic concerned. Topics like airports; ports and harbours; railways and railway stations; traffic; supply-demand modelling; others. Projects. Topics shall be specified when the course is offered. *Prerequisite:* Fourth Year Standing *Co-requisite:* CEN 443.

**CEN 544 Designs of Highway Bridges and Interchanges (3.0); 3 cr.** Geometric design of highway interchanges and analyses and design of simple highway bridges. Project. *Pre-*

*requisites:* Fourth Year Standing, Instructor approval.

**CEN 560 Air pollution Engineering (3.0); 3 cr.** Characterization of sources, emissions, transport, transformation, effects, and control of air pollutants. *Prerequisites:* CEN 462, or instructor's approval.

**CEN 580 Finite Element Methods I (3.0); 3 cr.** Theory and application of finite element methods as an analysis tool for two-dimensional stress problems in engineering. *Prerequisite:* CEN 203 or MEN 202.

**CEN 581 Finite Element Methods II (3.0); 3 cr.** Solution of advanced three-dimensional stress problems in engineering. *Prerequisite:* CEN 580.

**CEN 582 Nonlinear Finite Element Methods (3.0); 3 cr.** Isoparametric finite element discretization, incremental equations of motion. Total and update lagrangian formulation. Nonlinear geometry, nonlinear material problems. Use of software packages for final solutions. *Prerequisite:* CEN 581.

**CEN 594 Selected Topics in Civil Engineering (3.0); 3 cr.** Structured presentations of new and developing areas of knowledge in civil engineering offered by the department to augment the formal courses available. *Prerequisite:* Individually identified for each offering under this course number.

**CEN 598 Engineering Design I (1.0); 1 cr.** The objective of this course is to develop a project proposal that includes the following items: Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc. *Prerequisite:* ENL 230 and Department approval.

**CEN 599 Engineering Design II (2.0); 2 cr.** Implementation of the engineering design project that was proposed in CEN 598. Includes report, final presentation. *Prerequisite:* CEN 598.

## DEPARTMENT OF ELECTRICAL AND COMPUTER AND COMMUNICATION ENGINEERING

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**Chairperson:** *Dr. Semaan Georges*

**Secretary:** *Mrs. Jaqueline Hobaiter*

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### **Professor Emeritus**

*Khoury, Shahwan*, Ph.D., 1965, *Electrical Engineering (Applied Space Science)*, Carnegie Institute of Technology, CMU, USA

### **Associate Professors**

*Elmurr, Sami*, Ph.D., 1986, *Electrical Engineering*, Mississippi State University, USA

*Georges, Semaan*, Ph.D., 2001, *Electrical Engineering*, Ecole de Technologie Superieure, Canada

*Hamad, Mustapha*, Ph.D., 1995, *Electrical Engineering*, University of South Florida, USA

*Nassar, Elias*, Ph.D., 1997, *Electrical Engineering*, The Ohio State University, USA

### **Assistant Professors**

*Atallah, Jad*, Ph.D., 2008, *Electronic and Computer Systems*, Royal Institute of Technology (KTH), Sweden

*Bou Sanayeh, Marwan*, Dr.-Ing., 2008, *Electrical Engineering*, University of Duisburg-Essen, Germany

*El Berbari, Racha*, Docteur, 2009, *Signal et Images*, Ecole Nationale Superieure de Telecommunications (SC)

*El Moucary Chady*, Doctorate., 2000, Lab De Génie Electrique de Paris (LGEP), France (NLC)

*Hassoun George*, Ph.D., 1996, *Electrical and Electronic Engineering*, University of Adelaide, Australia

*Kassem, Abdallah*, Ph.D., 2005, Ecole Polytechnique de Montreal, Canada

*Keyrouz, Fakheredine*, Dr.-Ing., 2008, *Electrical Engineering*, Technische Universitat Munchen Germany

*Kraidy, Ghassan*, Docteur, 2007, *Electronics and Communications Engineering*, Ecole Nationale Supérieure des Télécommunications, France

*Mendalek, Nassar*, Ph.D., 2003, *Electrical Engineering*, Ecole de Technologie Superieure, Canada

*Zgheib, Charbel*, Doctorate, 2005, *Physics of Condensed Matter*, University of Montpellier 2, France (SC)

### **Laboratory Instructors**

*Breidy, George*, M.B.A., 2004, *Business Administration*, Notre Dame University-Louaize, Lebanon

*Zakhem, Walid*, M.S., 1992, *Electrical Engineering*, Southern Illinois University, USA (NLC)

### **Laboratory Assistants**

*El-Turkey, Nisrine*, B.E., 2003, *Computer & Communication Engineering*, Notre Dame University-Louaize, Lebanon

*Siranossian, Aline*, B.E., 2001, *Electrical Engineering*, Notre Dame University-Louaize, Lebanon

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## **The Degree of Bachelor of Engineering in Computer and Communication Engineering**

This program is concerned with the design and use of computing devices and communication systems for processing, retrieval and storage of information. Areas include design of computer hardware, software and networks and design of telecommunication devices and systems.

### **Admission Requirements**

Admission to the Computer and Communication Engineering program is governed by the university admission requirements as outlined in the university catalog.

The Faculty of Engineering at Notre Dame University accepts transfer students from Sciences, Architecture, and Engineering majors at accredited universities provided they have completed a minimum of 12 credits at their institution with a cumulative GPA of 2.3. For students from European-system universities, they need to have successfully completed a minimum of one academic year and are eligible to continue their studies at their home institution.

For students from Sciences and Architecture majors, the following additional requirement applies:

They have completed a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a minimum total GPA of 2.5 in these 12 credits.

Transfer students can receive credit for NDU courses listed under the General Education Requirements (GER), Core Requirements and Free Elective categories of the NDU contract sheet. In order to ensure that the student has achieved the needed outcomes and objectives specified by the concerned Department, the Faculty of Engineering reserves the right not to give transfer credit for courses listed under the Major Requirements category even if the student has taken similar courses at his institution. For students transferring from Science majors, no courses listed under major requirements or technical electives can be transferred.

For a list of required documents and the relevant dates and deadlines, students planning to transfer to the Faculty of Engineering need to check with the NDU Admissions Office.

### **Residency Requirements**

Full time students entering the computer and communication engineering program of first year standing must complete the listed program within eight years of the date of enrollment in the program.

A transfer candidate with a bachelor degree in computer and communication engineering from an accredited institution is required to successfully complete a minimum of 45 credits of upper-division course work including a graduation project. A transfer student without a bachelor degree in computer and communication engineering is required to successfully complete a minimum of 60 credits of upper-division course work including 3 credits of project work.

### **Course Load Requirements**

In general students are not allowed to carry more than 17 credits per term and not more than 7 credits in a summer session unless otherwise specified in their suggested program.

Restrictions may be imposed on students whose overall grade point average is less than 2.3/4.0. Upon the approval of the advisor, a student whose overall grade-point average is no less than 3.2/4.0 may be permitted to carry a maximum load of 18 credits per semester.

Students in their last semester may petition to take up to 19 crs. given they are in good academic standing and they satisfy the minimum residency requirement for the major.

Students in their last semester may petition to take up to 20 crs. given they have a GPA of 3.5 or higher and they satisfy the minimum residency requirement for the major.

### **Graduation Requirements**

To receive a degree of Bachelor of Engineering in computer and communication engineering, a student must complete a total of 150 credits with an overall grade point average of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements and technical electives. In addition all major requirements and technical elective courses must be successfully completed with a minimum grade of C-. These 150 credits are divided into:

### **Degree Requirements (150 credits)**

**General Education Requirements** **27 cr.**

**Core Requirements** **39 cr.**

CEN 201, ENG 201, ENG 202, MAT 211, MAT 213, MAT 215, MAT 224, MAT 235, MAT 326, MAT 335 CHM 211, PHS 212, PHS 213.

**Major Requirements** **61 cr.**

CSC 212, CSC 213, CSC 312, CSC 414/CSC415, CSC 425, EEN 201, EEN 202, EEN 203, EEN 210, EEN 220, EEN 221, EEN 311, EEN 312, EEN 322, EEN 324, EEN 325, EEN 330, EEN 331, EEN 340, EEN 344, EEN 371, EEN 443, EEN 598, EEN 599.

**Technical Electives** **20 cr.**

Students should complete 20 credits of approved technical electives in EEN and CSC courses including two elective laboratories.

*Year 3 Technical Electives (2 CSC courses):* CSC 301, CSC 311, CSC 313, CSC 316, CSC 323, CSC 385, CSC 387.

*Year 4 Technical Electives (2 EEN and 2 EEN/CSC courses, at most one EEN 300 level course may be taken as part of Year 4 Electives):* CSC 412, CSC 422, CSC 423, CSC 426, CSC 431, CSC 432, CSC 463, EEN 315, EEN 326, EEN 327, EEN 342, EEN 350, EEN 360, EEN 416, EEN 421, EEN 422, EEN 426, EEN 430, EEN 431, EEN 432, EEN 433, EEN 436, EEN 473, EEN 480, EEN 523, EEN 545, EEN 546, EEN 547, EEN 548, EEN 583, EEN 585.

*Technical Elective Lab. 1 courses:* EEN 328, EEN 363, EEN 365.

*Technical Elective Lab. 2 courses:* EEN 439, EEN 444, EEN 481.

**Free Elective** **3 cr.**

This elective is chosen by the students according to their interests in broadening their knowledge. It can be any course offered by the university provided that it is of Sophomore level (200 level) or above.

**Bachelor of Engineering in Computer and Communication Engineering  
Suggested Program (150 Credits)**

**Year 1**

**Fall Semester I (15 Credits)**

CHM	211	Principles of Chemistry	3 cr.
ENG	201	Introduction to Engineering	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.

**Spring Semester I (15 Credits)**

CEN	201	Engineering Mechanics	3 cr.
ENG	202	Computers & Engineering	3 cr.
MAT	224	Calculus IV	3 cr.
PHS	212	Electricity & Magnetism	3 cr.
—	—	General Education Requirement	3 cr.

**Summer Session I (9 Credits)**

ENL	223	Communication Arts (GER)	3 cr.
Or			
ENL	230	English in the Workplace (GER)	
MAT	211	Discrete Mathematics	3 cr.
—	—	General Education Requirement	3 cr.

**Year 2**

**Fall Semester II (16 Credits)**

CSC	212	Program Design and Data Abstraction I	3 cr.
EEN	201	Circuits Analysis I	3 cr.
EEN	220	Introduction to Logic Design	3 cr.
EEN	221	Logic Design Laboratory	1 cr.
MAT	235	Ordinary Differential Equations	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester II (16 Credits)**

CSC	213	Program Design and Data Abstraction II	3 cr.
EEN	202	Circuits Analysis II	3 cr.
EEN	203	Circuits Laboratory	1 cr.
EEN	210	Electronic Circuits I	3 cr.
MAT	335	Partial Differential Equations	3 cr.
PHS	213	Modern Physics	3 cr.

**Summer Session II (9 Credits)**

CSC	312	Computer Architecture	3 cr.
MAT	326	Probability and Statistics for Engineers	3 cr.
—	—	General Education Requirement	3 cr.

**Year 3**

**Fall Semester III (16 Credits)**

CSC	—	Technical Elective 1	3 cr.
EEN	311	Electronic Circuits II	3 cr.
EEN	312	Electronic Circuits Laboratory	1 cr.
EEN	330	Electromagnetics I	3 cr.
EEN	340	Signals & Systems	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester III (16 Credits)**

CSC	—	Technical Elective 2	3 cr.
EEN	322	Digital Integrated Circuits	3 cr.
EEN	324	Microprocessor System Design	3 cr.
EEN	325	Microprocessor Laboratory	1 cr.
EEN	331	Electromagnetics II	3 cr.
EEN	344	Communication Systems I	3 cr.

**Summer Session III (3 Credits)**

EEN	371	Practical Training	3 cr.
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**Year 4****Fall Semester IV (17 Credits)**

CSC	414	Applied Operating Systems	3 cr.
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OR

CSC	415	Introduction to Operating Systems	
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EEN/CSC	___	Technical Elective 3	3 cr.
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EEN	___	Technical Elective 4	3 cr.
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EEN	___	Technical Elective Lab 1	1 cr.
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EEN	443	Communication Systems II	3 cr.
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EEN	598	Engineering Design I	1 cr.
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___	___	General Education Requirement	3 cr.
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**Spring Semester IV (18 Credits)**

CSC	425	Data Communications & Computer Networks	3 cr.
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EEN/CSC	___	Technical Elective 5	3 cr.
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EEN	___	Technical Elective 6	3 cr.
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EEN	___	Technical Elective Lab 2	1 cr.
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EEN	599	Engineering Design II	2 cr.
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___	___	Free Elective	3 cr.
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___	___	General Education Requirement	3 cr.
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## **The Degree of Bachelor of Engineering in Electrical Engineering**

The Electrical Engineering program promotes the development of technologies that affect our every day life. An Electrical Engineer's work includes the design of analog and digital electronic systems, design and operation of power systems (generation, transmission and distribution), design of auxiliary models to stabilize and/or modify the dynamics of systems (autopilot of aircraft, on-board control systems of automobiles), design of devices for telecommunication systems (cellular phones, microwave links).

### **Admission Requirements**

Admission to the Electrical Engineering program is governed by the university admission requirements as outlined in the university catalog.

The Faculty of Engineering at Notre Dame University accepts transfer students from Sciences, Architecture, and Engineering majors at accredited universities provided they have completed a minimum of 12 credits at their institution with a cumulative GPA of 2.3. For students from European-system universities, they need to have successfully completed a minimum of one academic year and are eligible to continue their studies at their home institution.

For students from Sciences and Architecture majors, the following additional requirement applies:

They have completed a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a minimum total GPA of 2.5 in these 12 credits.

Transfer students can receive credit for NDU courses listed under the General Education Requirements (GER), Core Requirements and Free Elective categories of the NDU contract sheet. In order to ensure that the student has achieved the needed outcomes and objectives specified by the concerned Department, the Faculty of Engineering reserves the right not to give transfer credit for courses listed under the Major Requirements category even if the student has taken similar courses at his institution. For students transferring from Science majors, no courses listed under major requirements or technical electives can be transferred.

For a list of required documents and the relevant dates and deadlines, students planning to transfer to the Faculty of Engineering need to check with the NDU Admissions Office.

### **Residency Requirements**

Full time students entering the electrical engineering program of first year standing must complete the listed program within eight years of the date of enrollment in the program. A transfer candidate with a bachelor degree in electrical engineering from an accredited institution is required to successfully complete a minimum of 45 credits of upper division course work including a graduation project. A transfer student without a bachelor degree in electrical engineering is required to successfully complete a minimum of 60 credits of upper-division course work including 3 credits of project work.

### **Course Load Requirements**

In general, students are not allowed to carry more than 17 credits per term and not more than 7 credits in a summer session unless otherwise specified in their suggested program. Restrictions may be imposed on students whose overall grade point average is less than 2.3/4.0. Upon the approval of the advisor, a student whose overall grade-point average is no less than 3.2/4.0 may be permitted to carry a maximum load of 18 credits per semester.

Students in their last semester may petition to take up to 19 crs. given they are in good academic standing and they satisfy the minimum residency requirement for the major.

Students in their last semester may petition to take up to 20 crs. given they have a GPA of 3.5 or higher and they satisfy the minimum residency requirement for the major.

### **Graduation Requirements**

To receive a degree of Bachelor of Engineering in electrical engineering, a student must complete a total of 150 credits with an overall grade point average of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements and technical electives. In addition, all major requirement and technical elective courses must be successfully completed with a minimum grade of C-. These 150 credits are divided into:

## Degree Requirements (150 credits)

**General Education Requirements** **27 cr.**

**Core Requirements** **42 cr.**

CEN 201, ENG 201, ENG 202, MEN 210, MAT 213, MAT 215, MAT 224, MAT 235, MAT 324, MAT 326, MAT 335, CHM 211, PHS 212, PHS 213.

**Major Requirements** **55 cr.**

CSC 212, CSC 213, CSC 312, EEN 201, EEN 202, EEN 203, EEN 210, EEN 220, EEN 221, EEN 311, EEN 312, EEN 324, EEN 330, EEN 331, EEN 340, EEN 350, EEN 352, EEN 360, EEN 371, EEN 416, EEN 598, EEN 599.

**Technical Electives** **23 cr.**

Students should complete 23 credits of approved technical electives in EEN and CSC courses including two elective laboratories.

*Year 3 Technical Electives* (1 EEN course and 1 EEN/CSC course): CSC 313, CSC 318, CSC 387, EEN 315, EEN 322, EEN 326, EEN 327, EEN 344. The EEN/CSC course can be substituted by CEN 270, MEN 270, and MEN 370 or a course from the Technical Elective Labs 1 and 2.

*Year 4 Technical Electives* (4 EEN and 1 EEN/CSC course):

One course from the Electronics pool: EEN 411, EEN 412, EEN 413, EEN 421, EEN 422, EEN 426, EEN 455, EEN 523.

One course from the Electromagnetics pool: EEN 430, EEN 431, EEN 432, EEN 433, EEN 435, EEN 436, EEN 527, EEN 534.

Two courses from the Power and Control pool: EEN 353, EEN 452, EEN 553, EEN 357, EEN 451, EEN 453, EEN 455, EEN 457, EEN 458, EEN 461.

One course chosen from the above areas or from the following courses:

(Communication Pool): EEN 342, EEN 443, EEN 545, EEN 546, EEN 548.

(Signal Processing Pool): EEN 473, EEN 480, EEN 583, EEN 585.

(Computer Science Pool): CSC 414, CSC 425, CSC 426.

*Technical Elective Lab. 1 courses:* EEN 325, EEN 328, EEN 363, EEN 365, EEN 462.

*Technical Elective Lab. 2 courses:* EEN 439, EEN 444, EEN 456, EEN 459, EEN 481.

**Free Elective** **3 cr.**

This elective is chosen by the students according to their interests in broadening their knowledge. It can be any course offered by the university provided that it is of Sophomore level (200 level) or above.

**Bachelor of Engineering in Electrical Engineering**  
**Suggested Program (150 Credits)**

**Year 1**

**Fall Semester I (15 Credits)**

CHM	211	Principles of Chemistry	3 cr.
ENG	201	Introduction to Engineering	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.

**Spring Semester I (15 Credits)**

CEN	201	Engineering Mechanics	3 cr.
ENG	202	Computers & Engineering	3 cr.
MAT	224	Calculus IV	3 cr.
PHS	212	Electricity & Magnetism	3 cr.
—	—	General Education Requirement	3 cr.

**Summer Session I (9 Credits)**

ENL	223	Communication Arts (GER)	3 cr.
Or			
ENL	230	English in the Workplace (GER)	
MAT	324	Mathematics for Engineering	3 cr.
—	—	General Education Requirement	3 cr.

**Year 2**

**Fall Semester II (16 Credits)**

CSC	212	Program Design and Data Abstraction I	3 cr.
EEN	201	Circuits Analysis I	3 cr.
EEN	220	Introduction to Logic Design	3 cr.
EEN	221	Logic Design Laboratory	1 cr.
MAT	235	Ordinary Differential Equations	3 cr.
PHS	213	Modern Physics	3 cr.

**Spring Semester II (16 Credits)**

CSC	213	Program Design and Data Abstraction II	3 cr.
EEN	202	Circuits Analysis II	3 cr.
EEN	203	Circuits Laboratory	1 cr.
EEN	210	Electronic Circuits I	3 cr.
MAT	335	Partial Differential Equations	3 cr.
MEN	210	Thermodynamics I	3 cr.

**Summer Session II (9 Credits)**

CSC	312	Computer Architecture	3 cr.
MAT	326	Probability and Statistics for Engineers	3 cr.
—	—	General Education Requirement	3 cr.

**Year 3**

**Fall Semester III (16 Credits)**

EEN	311	Electronic Circuits II	3 cr.
EEN	312	Electronic Circuits Laboratory	1 cr.
EEN	324	Microprocessor System Design	3 cr.
EEN	330	Electromagnetics I	3 cr.
EEN	340	Signals & Systems	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester III (16 Credits)**

EEN/CSC	—	Technical Elective 1	3 cr.
EEN	—	Technical Elective Lab 1	1 cr.
EEN	331	Electromagnetics II	3 cr.
EEN	350	Energy Conversion	3 cr.
EEN	360	Modern Control Systems	3 cr.
—	—	General Education Requirement	3 cr.

**Summer Semester III ( 3 Credits)**

EEN	371	Practical Training	3 cr.
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**Year 4****Fall Semester IV (17 Credits)**

EEN	—	Technical Elective 2	3 cr.
EEN	—	Technical Elective 3	3 cr.
EEN	—	Technical Elective 4	3 cr.
EEN	352	Energy Conversion Laboratory	1 cr.
EEN	416	Solid State Devices	3 cr.
EEN	598	Engineering Design I	1 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester IV (18 Credits)**

EEN	—	Technical Elective 5	3 cr.
EEN	—	Technical Elective 6	3 cr.
EEN/CSC	—	Technical Elective 7	3 cr.
EEN	—	Technical Elective Lab 2	1 cr.
EEN	599	Engineering Design II	2 cr.
—	—	Free Elective	3 cr.
—	—	General Education Requirement	3 cr.

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## Undergraduate Courses: Electrical Engineering and Computer and Communication Engineering

**EEN 201 Circuits Analysis I (3.0); 3 cr.** Passive elements. Circuits laws. Node and mesh analysis. Introduction to ideal operational amplifier circuits. Energy storage elements. RC, RL and RLC circuits. Forced and natural response. *Prerequisite:* ENG 201, *Corequisites:* PHS 212 and MAT 235.

**EEN 202 Circuits Analysis II (3.0); 3 cr.** Analysis of AC networks. Fourier and Laplace analysis. Frequency domain circuit analysis. Bode plots. Driving point and network transfer functions. Synthesis and design of first and second order linear time invariant circuit systems. Two port networks. One-phase and polyphase networks. *Prerequisite:* EEN 201.

**EEN 203 Circuits Laboratory (0.2); 1 cr.** Introduction to circuit laboratory instruments, Ohm's, Kirchhoff's laws. Mesh, Nodal, Superposition, Thevenin's. RC, RL, RLC networks, operational amplifiers. *Corequisite:* EEN 202.

**EEN 205 Electric Circuits (3.0); 3 cr.** Fundamentals of electric circuits. Resistive circuit techniques and methods of analysis. Introduction to operational amplifiers. AC network analysis. Sinusoidal frequency response. Transient analysis. AC power and transformers. Polyphase systems. Not open to EE and CCE students. *Corequisite:* MAT 235.

**EEN 206 Electronics (3.0); 3 cr.** Semiconductor theory. Diodes and applications. Transistor fundamentals. Transistor amplifiers and switches. Operational amplifiers. Digital Logic circuits. Digital Systems. Principles of electromechanics. Introduction to electric machines. Not open to EE and CCE students. *Prerequisite:* EEN 205.

**EEN 207 Instrumentation and Circuits Laboratory (0.2); 1 cr.** Measuring equipment such as voltmeter, ammeter, ohmmeter, function generator, and oscilloscope. Experiments in circuits, electronics, digital circuits, electronic transducers and machines. Not open to EE and CCE students. *Prerequisite:* EEN 206.

**EEN 210 Electronic Circuits I (3.0); 3 cr.** Properties, operation, and biasing of pn junction diodes, bipolar junction and field-effect transistors. Large and small signal models and their applications. Analog signal amplification. Op amp applications. *Corequisite:* EEN 202.

**EEN 220 Introduction to Logic Design (3.0); 3 cr.** Binary and non-binary systems. Boolean algebra. Logic gates. Logic minimization, combinational circuits, sequential circuits, flip-flops, synthesis of synchronous sequential circuits. PLDs (ROM, PLA, PAL). *Prerequisite:* ENG 202.

**EEN 221 Logic Design Laboratory (0.2); 1 cr.** Experiments with basic Logic gates, combinational network design, sequential network design. Designing with counters, registers, decoders, multiplexers, and adders. *Corequisite:* EEN 220.

**EEN 311 Electronic Circuits II (3.0); 3 cr.** Differential amplifiers. Frequency response of amplifiers. Concepts of feedback. Audio amplifiers. Concept of active filters. *Prerequisite:* EEN 210.

**EEN 312 Electronic Circuits Laboratory (0.2); 1 cr.** Experiments based on EEN 210 and EEN 311. Introduces the practical applications of analog circuits, including transistor and diode circuits, operational amplifiers applications, simple amplifiers, filters, and oscillators. *Prerequisite:* EEN 203, *Corequisite:* EEN 311.

**EEN 315 Simulation and Design Tools in Electrical and Computer Engineering (3.0); 3 cr.** Introduction to circuit simulation tools such as Orcad/Pspice. Introduction to engineering applications of Matlab and other engineering software packages. Design examples from circuits, electronics, and signal processing. *Prerequisite:* EEN 202.

**EEN 322 Digital Integrated Circuits (3.0); 3 cr.** Properties and definitions of digital ICs. Basic logic circuit families: TTL, CMOS, dynamic CMOS, BiCMOS, ECL, and GaAs; with emphasis on CMOS digital logic. Oscillators, Schmitt Trigger. *Prerequisites:* EEN 220 and EEN 311.

**EEN 324 Microprocessor System Design (3.0); 3 cr.** Microprocessor internal architecture. Registers, CPU, memory organization. Instructions, execution and timing. Interfacing with peripherals. Interrupts. Designing and Interfacing with state of the art microprocessors. Assembly language programming. *Prerequisite:* EEN 210 and CSC 312.

**EEN 325 Microprocessor Laboratory (0.2); 1 cr.** Experiments and design project related to the course EEN 324. *Prerequisite:* EEN 221, *Corequisite:* EEN 324.

**EEN 326 Microcontroller System (3.0); 3 cr.** Highly integrated processors and peripherals on a single microchip. System architecture. Embedded and real-time system specification and mapping this hardware. Machine language programming for monitoring and control applications. Includes a design project. *Prerequisite:* EEN 324.

**EEN 327 Advanced Logic Design (3.0); 3 cr.** Combinational and sequential network design. State machine SM charts, Asynchronous sequential Networks. State Assignment and Flow Tables. Hazards, PLDs and hardware description languages (HDL). *Prerequisite:* EEN 324.

**EEN 328 Advanced Digital Design laboratory (0.2); 1 cr.** Designing combinational and sequential digital circuits with an FPGA board (Xilinx, Altera or similar) and a CAD tool (HDL). *Prerequisite:* EEN 221. *Co-requisite:* EEN 327.

**EEN 330 Electromagnetics I (3.0); 3 cr.** Sinusoidal steady state and transient analysis of transmission lines. Static electric and magnetic fields. Laplace and Poisson's equations. Resistance, inductance and capacitance. Conductors, dielectrics and magnetic materials. Polarization and magnetization. Electromagnetic devices. Bioelectromagnetics. *Prerequisites:* PHS 212, EEN 202 and MAT 335.

**EEN 331 Electromagnetics II (3.0); 3 cr.** Maxwell's equations. Plane wave propagation reflection and transmission in lossless and lossy media. Normal and oblique incidence. Waveguides. Impedance matching. Electromagnetic effects in high-speed circuits. Computer simulation. *Prerequisite:* EEN 330.

**EEN 340 Signals and Systems (3.0); 3 cr.** Basic concepts in linear system theory. Analyzing continuous and discrete signals and linear systems. Superposition, convolution and impulse response. Sampling theorem. Spectral analysis. Fourier series and transforms. Laplace transforms. Transfer functions. Bode plots and stability. Discrete-Time Fourier transform. Introduction to z-transforms. *Prerequisites:* EEN 202 and MAT 335.

**EEN 342 Random Signals and Noise (3.0); 3 cr.** Probability and random variables, density functions, statistics of one and two random variables, estimation theory, hypothesis testing. Random processes, correlation and cross-correlation functions. Applications to filtering. *Prerequisites:* EEN 340 and MAT 326.

**EEN 344 Communication Systems I (3.0); 3 cr.** Mathematical analysis and signal processing used in basic communication systems. Spectral analysis. Signal transmission. Amplitude and angle modulations. Frequency-division multiplexing. FM stereo. Pulse modulation. Time-division multiplexing. Impulse radio. Baseband data transmission. Equalization. Digital band-pass modulation techniques. OFDM. Spread-spectrum techniques. Applications to digital voice, digital television and data communications. *Prerequisite:* EEN 340.

**EEN 350 Energy Conversion (3.0); 3 cr.** Magnetic materials. Fundamental operation of transformers, DC and AC machines. Design considerations of rotating machinery. *Prerequisite:* EEN 202, *Corequisite:* EEN 331.

**EEN 352 Energy Conversion Laboratory (0.2); 1 cr.** Experiments with single phase and three-phase transformers. DC and AC machines. *Prerequisite:* EEN 350.

**EEN 353 Electric Machines (3.0); 3 cr.** Operation of DC and AC machines. Control of electric machines. Induction motor, stepper motor. *Prerequisite:* EEN 350.

**EEN 357 Power Plant Engineering (3.0); 3 cr.** Generation of electric power. Overview of the different types of power plants. Investigation of new and environment-friendly methods for power generation. *Prerequisite:* EEN 355.

**EEN 360 Modern Control Systems (3.0); 3 cr.** Mathematical models for control systems. State variables and transfer functions representations. System performance and design criteria. Stability, sensitivity, time response of linear control systems. Use of Hurwitz, root-locus, Nyquist and Bode methods for analysis and synthesis of linear systems. *Prerequisite:* EEN 340.

**EEN 363 Instrumentation Laboratory (0.2); 1 cr.** Input and output transducers. Position, temperature, light intensity, force, speed and

sound measurements and display. Introduction to PCB design techniques. Design project. *Prerequisite:* EEN 312.

**EEN 365 Programmable Logic Control Laboratory (0.2); 1 cr.** Programmable control applications. Advanced PLC control techniques using pneumatic sequencer. Control of an automation system. *Prerequisite:* EEN 324.

**EEN 370 Practical Training (6.0); 6 cr.** Department approved practice in industry in one of the areas of Electrical, Computer and Communication Engineering. A report is required. (Only open to students admitted before Fall 2008). *Prerequisite:* Department approval.

**EEN 371 Practical Training (3.0); 3 cr.** Department approved practice in industry in one of the areas of Electrical, Computer and Communication Engineering. A report is required. *Prerequisite:* Department approval.

**EEN 411 Integrated Circuit Fabrication Processes (3.0); 3 cr.** The fundamental principles of integrated circuit fabrication processes, physical and chemical models for crystal growth, oxidation, ion implantation, etching, deposition, lithography, and back-end processing. *Prerequisites:* EEN 331 and PHS 213.

**EEN 412 Analog Integrated Circuit Design (3.0); 3 cr.** Analysis and design of MOS analog integrated circuits, emphasizing quantitative measures of performance, figures of merit, and circuit limitations. Evaluation of circuit performance by means of hand calculations and computer-aided circuit simulations. Design of operational amplifiers, broadband amplifiers, biasing circuits, and voltage references. *Prerequisite:* EEN 311.

**EEN 413 Analog Filter Design (3.0); 3 cr.** Systematic analysis and design for active filters. Bilinear transfer function. Cascade design. The Biquad circuit. Filter approximations and synthesis techniques. Monolithic integrated filters. Computer simulation verification. *Prerequisite:* EEN 311.

**EEN 416 Principles of Semiconductor Devices (3.0); 3 cr.** Fundamentals of the physical properties of semiconductors. Doping. Fermi-Dirac statistics. Generation-recombination properties of excess carriers in semiconductors. Optical absorption and luminescence. Carrier drift and diffusion. Properties of the p-n junction under forward and reverse bias. Characteristics

of semiconductor devices, and advanced device issues relevant to state-of-the-art integrated-circuit technologies. *Prerequisites:* PHS 213 and EEN 331.

**EEN 421 Introduction to VLSI Design (3.0); 3 cr.** Large-scale MOS Design. Topics: MOS transistors, static and dynamic MOS gates, MOS circuit fabrication, design rules, resistance and capacitance extraction, power and delay estimation, scaling, MOS combinational and sequential logic design, registers and clocking schemes, memory and data-path. Elements of computer-aided circuit analysis, synthesis, and layout techniques. *Prerequisite:* EEN 322.

**EEN 422 Testing and Fault Tolerance of Digital Systems (3.0); 3 cr.** The fundamental principles of testing computer systems and designing for testability. Failure and fault models. Deterministic and probabilistic techniques of test generation and testing. Design for testability. Basic considerations in the design of reliable computing systems. Concurrent checking techniques. Redundancy and evaluation methods. *Prerequisite:* EEN 327.

**EEN 426 Biomedical Engineering (3.0); 3 cr.** Design consideration for clinical and health care devices. Design of biomedical devices. Involves analog, digital and microprocessor / microcontroller based designs. Design of monitoring devices. *Prerequisites:* EEN 311 and EEN 324.

**EEN 430 Antenna Design for Wireless Communications (3.0); 3 cr.** Fundamentals of radiation from antennas. Wire antennas such as monopole, dipole and loop antennas. Aperture antennas such as horn and reflector antennas. Wideband antennas. Antenna arrays. Application to cellular systems. Course includes design project. *Prerequisite:* EEN 331.

**EEN 431 Microwave Circuit Design (3.0); 3 cr.** Coverage of passive and active microwave devices including transformers, couplers, resonators, circulators, oscillators and amplifiers. Course includes project consisting of computer-aided design of a microwave circuit. *Prerequisites:* EEN 311 and EEN 331.

**EEN 432 Numerical Methods for Wireless Propagation (3.0); 3 cr.** Basic coverage of the main numerical techniques in electromagnetics. Topics include the Finite Difference Time Domain (FDTD) and Finite Element (FE) methods. Use of a high level programming language such as Fortran, C, Pascal or Matlab to

simulate radiation and propagation of waves in a wireless communication environment. *Prerequisite:* EEN 331.

**EEN 433 Wave Propagation for Wireless Communications (3.0); 3 cr.** Prediction methods for tropospheric, ground wave and ionospheric propagation. Propagation, diffraction and reflection in cellular communication systems and wireless local area networks. *Prerequisite:* EEN 331.

**EEN 435 Electromagnetic Compatibility (3.0); 3 cr.** Fundamentals of Electromagnetic Compatibility (EMC) are covered including regulations, grounding, shielding and cross talk. Modeling and reduction techniques of noise and interference phenomena in electrical circuits. Effect of radiation on the human body. Design of electronic devices to minimize undesired radiation and susceptibility to electromagnetic emissions. *Prerequisite:* EEN 331.

**EEN 436 Fiber Optics (3.0); 3 cr.** Ray optics and wave optics. Design optimization of fibers for optical data transmission. Fiber fabrication. Signal degradation in optical fibers. Fiber connections and diagnostics. *Prerequisite:* EEN 331.

**EEN 439 Electromagnetics Laboratory (0.2); 1 cr.** Properties of magnetic materials. Electromagnetic devices. Transmission lines. Impedance matching. Antennas and microwave circuits. Includes design project and computer simulations. *Prerequisite:* EEN 331.

**EEN 443 Communication Systems II (3.0); 3 cr.** Random signals and noise. Noise in analog communications. Noise in digital communications. Error detection and correction. System and noise calculations. Electrical noise. Noise figure. Cascade connection of two-port networks. Free-space link calculations. Terrestrial mobile radio. Spread-spectrum techniques, CDMA. Turbo codes and Trellis Coded Modulation (TCM). *Prerequisites:* EEN 344 and MAT 326.

**EEN 444 Communication Systems Laboratory (0.2); 1 cr.** Introduction to Amplitude Modulation. Fault detection in DSB and SSB systems, FM modulators and demodulators. Analog to Digital conversion A/D, Digital to Analog conversion D/A, Encoding/Decoding. Pulse Modulation, PAM, PPM, PDM. Coherent detection of signal in noise. Frequency Shift Keying (FSK). *Corequisite:* EEN 443.

**EEN 451 Power System Protection and Switchgear (3.0); 3 cr.** Relays, circuit breakers and fuses for power system protection. Protection of machines, transformers and lines. Instrument transformers. *Prerequisite:* EEN 356.

**EEN 452 Fundamentals of Power Engineering (3.0); 3 cr.** Power system components. Basic principles of electrical power systems. Generator and transformer models, steady-state characteristics and the per-unit system. Overhead transmission line parameters, capacitance and inductance. Transmission line model, performance and line compensation. Power flow analysis. *Prerequisite:* EEN 350.

**EEN 453 Electric Drives (3.0); 3 cr.** Introduction to elements of drive systems, characterization of mechanical loads, requirements of electric drive systems, dc drives with various power electronics based conversion sources, dynamic equations and closed loop control of dc drives, induction motor drives, ac controller, slip-energy recovery, volts/Hz control, synchronous motor drives, permanent magnet motors, reluctance motors. *Prerequisites:* EEN 210 and EEN 350.

**EEN 455 Power Electronics (3.0); 3 cr.** Switching power supplies. AC power controllers. Controlled rectifiers. DC choppers and DC-AC converters. Bridge structure inverters. *Prerequisites:* EEN 210 and EEN 350.

**EEN 456 Power Electronics Laboratory (0.2); 1 cr.** Experiments based on EEN 455. *Corequisite:* EEN 455.

**EEN 457 Industrial Electrification (3.0); 3 cr.** Lighting design for residential and industrial facilities. Emphasis on latest lighting technologies. Cable types and sizing. Motor control centers. Includes design project. *Prerequisite:* EEN 350.

**EEN 458 Computer Methods for Power System Analysis and Design (3.0); 3 cr.** Use of computer software to simulate power flow and other power engineering problems. *Prerequisite:* EEN 356.

**EEN 459 Power Engineering Laboratory (0.2); 1 cr.** Experiments and simulations in power engineering and power system analysis. *Prerequisite:* EEN 355.

**EEN 461 Digital Control (3.0); 3 cr.** Sampling and data reconstruction in computer control systems. Z-transforms and state equations to

describe discrete and mixed data systems. Analysis of digital feedback systems using frequency domain techniques and state space techniques. Non-linear digital feedback systems. *Prerequisite:* EEN 360.

**EEN 462 Control Systems Laboratory (0.2); 1 cr.** Laboratory based on EEN 360 and EEN 461. Analog and digital control systems, PID control, PLC systems. *Prerequisite:* EEN 461.

**EEN 473 Special Topics in Electrical Engineering (3.0); 3 cr.** Material includes coverage of recent developments in Electrical Engineering that are needed to update students on the latest technologies. Department determines topics to be covered and *prerequisites* when offered. Open to EE and CCE students.

**EEN 480 Discrete-Time Signal Processing (3.0); 3 cr.** Fundamental concepts of discrete-time signals and systems. Digital signal processing of discrete signals. Sampling theory and reconstruction. Discrete Fourier transforms and analysis of digital filters in the frequency domain. Z-transforms, causality and stability. State-space equations. Design and analysis of FIR and IIR digital filters. Windowing. Bilinear transformation. Filter structures. *Prerequisite:* EEN 340.

**EEN 481 Signal Processing Laboratory (0.2); 1 cr.** Digital filtering techniques. Architectural feature of single-chip DSP processors. Design project. *Prerequisite:* EEN 480.

**EEN 523 Neural Networks (3.0); 3 cr.** Principles of neural networks, architecture and circuit implementations. *Prerequisites:* MAT 235 and MAT 326.

**EEN 527 Optoelectronic Devices (3.0); 3 cr.** Principles of light-emitting diodes (LEDs), lasers, and photodetectors. Population inversion at a junction. Generation of coherent radiation. Heterojunctions, quantum-well LEDs and lasers, and vertical cavity surface-emitting lasers (VCSELs). PIN and avalanche photodiodes. Photonic fabrication and packaging. *Prerequisite:* EEN 416.

**EEN 534 Radar Systems and Remote Sensing (3.0); 3 cr.** Operation of a radar system including antennas, circuitry and wave propagation. Remote sensing and mapping of the earth. Ground penetrating radar, intelligent vehicle highway system. Aircraft navigation. *Prerequisite:* EEN 344 and EEN 430.

**EEN 545 Optical Communication (3.0); 3 cr.** Fundamental of lightwave communication systems. Propagation of waves in dielectric thin films and cylindrical guides. Bit limitation rate due to dispersion and multimoding step-index and multi-index fibers. Switching and modulation by integrated optics techniques. *Prerequisites:* EEN 331 and EEN 443.

**EEN 546 Algebraic Coding and Information Theory (3.0); 3 cr.** Information theory and its relation to statistics. Kolomogrov complexity, entropy and inference. Shannon theory of communication. Source coding for noisy channels. Capacity theorems for multiple user channels. *Prerequisite:* EEN 443.

**EEN 547 Statistical Communication Theory (3.0); 3 cr.** Concepts of probability and random process theory necessary for advanced study of communications. Stochastic control. Detection and estimation problems. *Prerequisite:* EEN 443.

**EEN 548 Wireless Communications (3.0); 3 cr.** Introduction to wireless systems and cellular principles, modulation techniques for mobile radio, speech and channel coding, multiple access techniques, applications to wireless systems. *Prerequisites:* EEN 331 and EEN 443.

**EEN 553 Power System Analysis (3.0); 3 cr.** Optimal dispatch of generation. Synchronous machine transient analysis. Balanced and unbalanced short-circuits, balanced three-phase fault and systematic fault analysis. Symmetrical components and unbalanced faults. Transient stability and numerical solution of the swing equation. Power system control. *Prerequisite:* EEN 452. **EEN 583 Advanced Signal Processing (3.0); 3 cr.** Advanced techniques in signal processing. Multirate signal processing. Upsampling and downsampling in the Z-domain. Non-stationary signals. Frequency-domain adaptive filtering. The correlation matrix. Least-squares adaptive algorithms. Linear prediction. The wavelet transform. *Prerequisite:* EEN 480.

**EEN 585 Biomedical Signal Processing (3.0); 3 cr.** Analysis of biological signals. Random signals. Windowing with Fourier transform, z-transform, and wavelet transform. Signal processing techniques applied to vital signs signals such as: ECG, EEG, and EMG. High resolution CG and signal averaging. *Prerequisite:* EEN 480.

**EEN 598 Engineering Design I (1.0); 1 cr.** The objective of this course is to develop a project

proposal that includes the following items:  
Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc.  
Prerequisite: ENL 230 and Department approval.

**EEN 599 Engineering Design II (2.0); 2 cr.**  
Implementation of the engineering design project that was proposed in EEN 598. Includes report, final presentation. Prerequisite: EEN 598

## DEPARTMENT OF MECHANICAL ENGINEERING

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**Chairperson:** *Dr. Michel El-Hayek*

**Secretary:** *Ms. Ghada Khoury*

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### **Professor Emeritus**

*Assaf, Walid*, Ph.D., 1965, Nuclear Engineering, Iowa State University, USA

### **Associate Professors**

*Asmar, Ghazi*, Ph.D., 1998, *Mechanical and Aerospace Engineering*, University of Missouri, Columbia, USA

*El-Hayek, Michel*, Docteur Européen, 1997, *Sciences Appliquées*, Faculté Polytechnique de Mons, Belgium

### **Assistant Professors**

*Azzi, Marwan*, Ph.D., 2008, *Materials Engineering*, Universitatis McGill, Canada

*Bou-Mosleh, Charbel*, Ph.D., 2005, *Aerospace Engineering Sciences*, University of Colorado, Boulder, Colorado, USA

*Francis, Francis*, Ph.D., 2003, *Mechanical Engineering*, University of New South Wales, Sydney, Australia

*Metni, Najib*, Docteur, 2006, *Automatique et Traitement du Signal et des Images*, Université de Nice – Sophia Antipolis, France

### **Laboratory Assistant**

*Daou, Wissam*, B.E., 2000, *Mechanical Engineering*, Notre Dame University-Louaize, Lebanon

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## **The Degree of Bachelor of Engineering in Mechanical Engineering**

This program is designed to give students the background needed to define and solve problems related to the conception and construction of mechanical systems. It is concerned with all forms of power generation, the design of machines, control, and material handling.

### **Admission Requirements**

Admission to the Mechanical Engineering program is governed by the university admission requirements as outlined in the university catalog.

The Faculty of Engineering at Notre Dame University accepts transfer students from Sciences, Architecture, and Engineering majors at accredited universities provided they have completed a minimum of 12 credits at their institution with a cumulative GPA of 2.3. For students from European-system universities, they need to have successfully completed a minimum of one academic year and are eligible to continue their studies at their home institution.

For students from Sciences and Architecture majors, the following additional requirement applies:

They have completed a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a minimum total GPA of 2.5 in these 12 credits.

Transfer students can receive credit for NDU courses listed under the General Education Requirements (GER), Core Requirements and Free Elective categories of the NDU contract sheet. In order to ensure that the student has achieved the needed outcomes and objectives specified by the concerned Department, the Faculty of Engineering reserves the right not to

give transfer credit for courses listed under the Major Requirements category even if the student has taken similar courses at his institution. For students transferring from Science majors, no courses listed under major requirements or technical electives can be transferred.

For a list of required documents and the relevant dates and deadlines, students planning to transfer to the Faculty of Engineering need to check with the NDU Admissions Office.

### **Residency Requirements**

Full time students entering the mechanical engineering program of first year standing must complete the listed program within eight years of the date of enrollment in the program.

A transfer candidate with a bachelor degree in mechanical engineering from an accredited institution is required to successfully complete a minimum of 45 credits of upper-division course work including a senior project. A transfer student without a bachelor degree in mechanical engineering is required to successfully complete a minimum of 60 credits of upper-division course work including 3 credits of project work.

### **Course Load Requirements**

In general, students are not allowed to carry more than 17 credits per term, nor more than 7 credits in a summer session unless otherwise specified in their suggested program. Restrictions may be imposed on students whose overall grade-point average is less than 2.3/4.0. Upon the approval of the advisor, a student whose overall grade-point average is 3.2/4.0 or higher may be permitted to carry a maximum load of 18 credits per term.

Students in their last semester may petition to take up to 19 crs. given they are in good academic standing and they satisfy the minimum residency requirement for the major.

Students in their last semester may petition to take up to 20 crs. given they have a GPA of 3.5 or higher and they satisfy the minimum residency requirement for the major.

### **Graduation Requirements**

To receive the degree of Bachelor of Engineering in Mechanical Engineering, a student must complete a total of 150 credits with an overall grade-point average of at least 2.0/4.0. and a minimum average of 2.0/4.0 in the major requirements and technical electives. In addition, all major requirement courses and mechanical engineering electives must be successfully completed with a minimum grade of C-. These 150 credits are divided into:

#### **Degree Requirements (150 credits)**

**General Education Requirements** **27 cr.**

**Core Requirements** **37 cr.**  
CHM 211, PHS 203, PHS 212, EEN 205, EEN 206, EEN 207, ENG 201, ENG 202, CSC 212, MAT 215, MAT 235, MAT 326, MAT 335.

**Major Requirements** **66 cr.**  
CEN 202, CEN 204, CEN 270, MAT 213, MAT 224, MEN 200, MEN 201, MEN 202, MEN 210, MEN 211, MEN 270, MEN 302, MEN 310, MEN 320, MEN 321, MEN 330, MEN 340, MEN 370, MEN 376, MEN 380, MEN 401, MEN 430, MEN 435, MEN 437, MEN 471, MEN 598, MEN 599.

**Major Electives** **15 cr.**

Choose any five courses from the following pool: MEN 400, MEN 410, MEN 439, MEN 500, MEN 501, MEN 502, MEN 503, MEN504, MEN 505, MEN 507, MEN 510, MEN 515, MEN 517, MEN 520, MEN 521, MEN 525, MEN 530, MEN 534, MEN 540, MEN 544, MEN 550, MEN 580, MEN 581, MEN 590, MAT 339.

**Laboratory Electives**

**2 cr.**

Choose any two courses from the following pool: MEN 571, MEN 573, MEN 576, MEN 578.

**Free Electives**

**3 cr.**

Choose any course of sophomore level or higher offered by the university.

**Bachelor of Engineering in Mechanical Engineering**  
**Suggested Program (150 Credits)**

**Year I**

**Fall Semester I (16 Credits)**

CEN	202	Statics	3 cr.
CEN	270	Engineering Graphics	1 cr.
ENG	201	Introduction to Engineering	3 cr.
ENL	213	Sophomore English Rhetoric	3 cr.
MAT	213	Calculus III	3 cr.
PHS	203	General Physics III	3 cr.

**Spring Semester I (16 Credits)**

ENG	202	Computers & Engineering	3 cr.
MAT	215	Linear Algebra I	3 cr.
MAT	224	Calculus IV	3 cr.
MEN	201	Engineering Mechanics: Dynamics	3 cr.
MEN	202	Mechanics of Materials I	3 cr.
MEN	270	Computer-Aided Design	1 cr.

**Summer Semester I (9 Credits)**

ENL	230	English in the Workplace	3 cr.
CHM	211	Principles of Chemistry	3 cr.
—	—	General Education Requirement	3 cr.

**Year II**

**Fall Semester II (16 Credits)**

CEN	204	Mechanics of Materials Laboratory	1 cr.
EEN	205	Electric Circuits	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
MEN	200	Science of Materials	3 cr.
MEN	210	Thermodynamics I	3 cr.
PHS	212	Electricity and Magnetism	3 cr.

**Spring Semester II (16 Credits)**

EEN	206	Electronics	3 cr.
MAT	326	Probability and Statistics for Engineers	3 cr.
MEN	211	Thermodynamics II	3 cr.
MEN	302	Mechanics of Materials II	3 cr.
MEN	320	Fluid Mechanics I	3 cr.
MEN	370	Graphics for Mechanical Engineers	1 cr.

**Summer Semester II (9 Credits)**

—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Year III**

**Fall Semester III (17 Credits)**

CSC	212	Program Design and Data Abstraction I	3 cr.
MAT	335	Partial Differential Equation	3 cr.
MEN	321	Fluid Mechanics II	3 cr.
MEN	330	Mechanical Vibrations	3 cr.
MEN	376	Thermo/Fluid Laboratory	1 cr.
EEN	207	Instrumentation and Circuits Laboratory	1 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester III (16 Credits)**

MEN	310	Heat Transfer	3 cr.
MEN	340	Manufacturing Processes	3 cr.
MEN	401	Introduction to Mechatronics	3 cr.
MEN	430	Theory of Machines	3 cr.
MEN	471	Manufacturing Technology Laboratory	1 cr.
—	—	General Education Requirement	3 cr.

**Summer Semester III (3 Credits)**

MEN	380	Practical Training in Mechanical Engineering	3 cr.
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**Year IV****Fall Semester IV (17 Credits)**

MEN	435	Automated Controls	3 cr.
MEN	437	Mechanical Engineering Design	3 cr.
MEN	598	Engineering Design I	1 cr.
MEN	—	ME Laboratory Elective	1 cr.
MEN	—	ME Technical Elective	3 cr.
MEN	—	ME Technical Elective	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester IV (15 Credits)**

MEN	599	Engineering Design II	2 cr.
MEN	—	ME Laboratory Elective	1 cr.
MEN	—	ME Technical Elective	3 cr.
MEN	—	ME Technical Elective	3 cr.
MEN	—	ME Technical Elective	3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate Courses: Mechanical Engineering

**MEN 200 Science of Materials (3.0); 3 cr.** Material microstructures, dislocations and defects. Alloying and analysis of phase diagrams. Mechanical properties of metals, polymers, and composites. Heat treatment of metals, elastic and plastic behavior of materials, strain hardening, and fracture.

**MEN 201 Engineering Mechanics: Dynamics (3.0); 3 cr.** Description of force, position, velocity and acceleration in fixed and moving reference frames. Kinematics and kinetics of particles, of collections of particles and of rigid bodies. Energy and momentum concepts. *Prerequisite:* CEN 202.

**MEN 202 Mechanics of Materials I (3.0); 3 cr.** Equilibrium, force and moment resultants. Stress/strain concepts, generalized Hooke's law, classification of material behavior. Axial loads, torsion of rods and circular bars. Pressure vessels. Bending and shear stresses in beams. Analysis of Statically determinate and indeterminate structures. Stress transformation, combined loading. *Prerequisite:* CEN 202.

**MEN 210 Thermodynamics I (3.0); 3 cr.** Fundamentals of engineering thermodynamics: properties and behavior of pure substances, concepts of work and heat, systems and control volume analyses, first law, second law, entropy and entropy production, introduction to availability, Carnot cycle. *Prerequisite:* PHS 203 or CEN 201

**MEN 211 Thermodynamics II (3.0); 3 cr.** Thermodynamic cycles: steam and gas power systems, refrigeration and heat pump systems. Compressible substances: thermodynamic properties, general thermodynamic relations, virial equations of state. Introduction to psychrometrics. Introduction to combustion and equilibrium calculation. *Prerequisite:* MEN 210.

**MEN 270 Computer-Aided Design (0.2); 1 cr.** Application of existing CAD software to engineering problems: Basic concepts of engineering graphics in a computerized environment; Representation of engineering objects; 2D/3D representations, CAD Standards. *Prerequisite:* CEN 270.

**MEN 302 Mechanics of Materials II (3.0); 3 cr.** Analysis of more complicated problems in stress and strain. Energy methods, torsion of non-circular members. Shear center concept. Curved beams, thick cylinders and rotating

disks. Contact stresses. *Prerequisites:* MEN 202, MAT 235.

**MEN 310 Heat Transfer (3.0); 3 cr.** Mechanisms of heat transfer. Steady and transient conduction: one and multiple dimensions, approximate and exact solution procedure, introduction to numerical methods. Forced and free convection. Applications to heat exchanger design and performance evaluation. Introduction to thermal radiation. *Prerequisite:* MEN 211, *Corequisite:* MEN 321.

**MEN 320 Fluid Mechanics I (3.0); 3 cr.** Fundamentals of fluid mechanics: Fluid properties, fluid statics and kinematics, inviscid flow, potential flow, simple viscous incompressible flow. Flow analyses: Control volume analysis, differential analysis, dimensional analysis and similitude. Flow equations: continuity, momentum and energy equations. *Prerequisites:* MEN 210, MAT 235.

**MEN 321 Fluid Mechanics II (3.0); 3 cr.** Incompressible and compressible flows: laminar/turbulent flows, pipe flow, boundary layers, lift and drag, introduction to turbulence, elementary gas dynamics. Unsteady flow phenomena. Introduction to centrifugal and axial flow machinery: pumps, fans, hydraulic turbines, and torque converters. *Prerequisite:* MEN 320.

**MEN 330 Mechanical Vibrations (3.0); 3 cr.** Free and forced vibrations for undamped and viscously damped single-degree-of-freedom systems. Conservation of energy approach and Rayleigh's method. Vibration of multi-degree-of-freedom systems, eigenvalue problems and mode shapes. Modal analysis. *Prerequisites:* MEN 201, MEN 202, MAT 235

**MEN 340 Manufacturing Processes (3.0); 3 cr.** Fundamentals and technologies used in processing various industrial materials: casting, forging, machining, metal-sheet processing, joining techniques, etc. *Prerequisites:* MEN 200, MEN 370.

**MEN 370 Graphics for Mechanical Engineers (0.2); 1 cr.** Application of the basic concepts of engineering graphics to the representation of mechanical components: shafts, bearings, fasteners, keys, springs, gears, cams, etc.; Assembly drawings; Dimensioning and tolerancing; Standards. CAD tools are to be used throughout the course for representation purposes. *Prerequisite:* MEN 270.

**MEN 376 Thermo/Fluid Laboratory (0.2); 1 cr.** Experiments related to fundamentals of fluid and thermal sciences. Topics include fluid properties, flow regimes, flow measurement, energy and power, heat transfer modes, pressure and temperature measurement, data acquisition. *Prerequisite:* MEN 210. *Corequisite:* MEN 320.

**MEN 380 Practical Training in Mechanical Engineering (3.0); 3 cr.** Two-month-training in a mechanical engineering environment in which the student is exposed to different aspects of mechanical engineering practice and equipment: design, construction, testing, maintenance, etc. *Prerequisite:* Senior standing.

**MEN 400 Mechanics of Composite Materials (3.0); 3 cr.** Introduction to composite materials. Lamina and laminate mechanical properties. Micromechanics. Mechanical and hygrothermal behavior of laminae and laminates. Lamina and laminate strength theories. *Prerequisite:* MEN 302.

**MEN 401 Introduction to Mechatronics (3.0); 3 cr.** Analysis of intelligent electro-mechanical systems: electronics and logics, microprocessors; electro-mechanical devices, programmable logic controllers, sensors and transducers. Introduction to micro-electromechanical systems. *Prerequisites:* ENG 202, EEN 206.

**MEN 410 Internal Combustion Engines (3.0); 3 cr.** Analysis of internal combustion engines: dynamics, thermodynamics, combustion, friction and wear, and other factors affecting power, efficiency and emissions. Design and operating characteristics of different types of engines. *Prerequisites:* MEN 310.

**MEN 430 Theory of Machines (3.0); 3 cr.** Kinematics of machinery: linkages, cams, gears, bearings, belts, etc. Static and dynamic balancing and force analysis of machines. *Prerequisites:* MEN 201, MEN 370.

**MEN 431 Mechanical Engineering Laboratory (0.2); 1 cr.** Applications of mechanical engineering theories and design techniques to complex mechanical systems. Topics include air-conditioning and refrigeration, hydro-power generation, solar energy, combustion systems, pump systems, bearings, assembly processes, vibrations systems. *Prerequisite:* MEN 376.

**MEN 435 Automated Controls (3.0); 3 cr.** Feedback control design and analysis for linear

dynamic systems with emphasis on mechanical engineering applications: transient and frequency response, stability, system performance, control modes, state space technique, introduction to digital control systems. *Prerequisites:* MEN 201, MAT 235.

**MEN 437 Mechanical Engineering Design (3.0); 3 cr.** Design of machine elements. System reliability. Interchangeability of mechanical devices. Stress-strain relationship in mechanical elements configuration. *Prerequisite:* MEN 302.

**MEN 439 Engineering Instrumentations (3.0); 3 cr.** Fundamentals of experimental methods, data acquisition and treatment, error analysis. Design and selection of measurement tools used in mechanical engineering. *Prerequisite:* MEN 401.

**MEN 440 Computer Aided Design and Manufacturing (3.0); 3 cr.** Principles of computer aided design and manufacturing: design process, geometric modeling, design for assembly, design for manufacturability, design/manufacture interface, computer numerical control, product development, production planning and control, standards. *Prerequisites:* MEN 340.

**MEN 460 Senior Project (3.0); 3 cr.** A mechanical engineering project in which the student is exposed to the design process from concept through analysis to layout and report. Projects are proposed from the different areas of mechanical engineering and reflect the expertise of the instructing faculty. *Prerequisite:* Senior standing.

**MEN 471 Manufacturing Technology Laboratory (0.2); 1 cr.** Experiments related to fundamentals of manufacturing processes. Topics include properties of materials, metrology, foundry processes, cold and hot working of metals, machining processes and machines tools, welding and joining processes, heat treating techniques. *Prerequisite:* MEN 340.

**MEN 500 Energy Principles and Variational Methods in Mechanics (3.0); 3 cr.** Calculus of Variations, virtual work and energy principles, stationary variational principles, Hamilton's principle, energy theorem of structural mechanics, Ritz method, weight residual methods, finite element method. *Prerequisite:* MEN 302.

**MEN 501 Continuum Mechanics (3.0); 3 cr.** Introductory course in the mechanics of continuous media. Basic concepts of stress, strain, constitutive relationships; conservation laws are treated using Cartesian tensor notation. Examples from both solid and fluid mechanics investigated. *Prerequisites:* MEN 302, MEN 321.

**MEN 502 Theory of Elasticity (3.0); 3 cr.** Stress and strain at a point. General equations of elasticity. Plane stress, plain strain problems; torsion of prismatic bars. Energy methods. *Prerequisite:* MEN 302.

**MEN 503 Theory of Plates and Shells (3.0); 3 cr.** Rectangular and circular plates. Variational methods in the analysis of plates and shells. Plates of unusual shape. Shear deformation effects. Large deformation analysis. Analysis of cylindrical shells. *Prerequisite:* MEN 302.

**MEN 504 Theory of Elastic Stability (3.0); 3 cr.** Buckling of Columns, frames and plates. Kinematic approach to stability. Large deflections. Energy approach to buckling. Plate and shell buckling. Inelastic buckling of columns. Creep buckling. *Prerequisite:* MEN 302.

**MEN 505 Theory of Plasticity (3.0); 3 cr.** Plastic yield conditions and stress-strain relations. Behavior of elastic-perfectly plastic members. Plain strain in plastic members. *Prerequisites:* MEN 502.

**MEN 507 Fracture Mechanics (3.0); 3 cr.** Mechanics of flawed structure. Concepts include Griffith theory, Irwin analysis, energy analysis of cracked bodies, fracture toughness testing, plane strain, plane stress, transition temperature concepts, subcritical flaw growth. *Prerequisite:* MEN 302.

**MEN 510 Energy Conversion (3.0); 3 cr.** Methods and techniques used in energy conversion from thermal, hydraulic, solar, wind, geothermal, etc. to electrical energy, thermal powerplants, photovoltaic systems, fuel cells. *Prerequisite:* MEN 310.

**MEN 515 Heating, Ventilating and Air-Conditioning (3.0); 3 cr.** Design and analysis of HVAC systems and components, comfort, cooling and heating load calculations, piping and duct design, domestic hot and cold water system. Introduction to refrigeration. *Prerequisite:* MEN 310.

**MEN 517 Solar Energy (3.0); 3 cr.** Fundamentals of solar radiation, design and analysis of solar systems for both low and high temperature applications, passive and active solar thermal engineering, design of solar collectors, energy storage systems. *Prerequisite:* MEN 310.

**MEN 520 Fluid Power Control (3.0); 3 cr.** Fundamentals of fluid power technology: hydraulic fluids and system components like pumps, valves, motors, and cylinders; pneumatic systems, fluidic components. Design, analysis and control of fluid power circuits. *Prerequisite:* MEN 321.

**MEN 521 Viscous Flow and Boundary Layers (3.0); 3 cr.** Fundamentals of real flow phenomena: concepts of stress and strain and derivation of Navier-Stokes equations. Application to boundary layers, creeping flows and lubrication. Flow instabilities and turbulence. *Prerequisite:* MEN 321.

**MEN 525 Combustion and Flame (3.0); 3 cr.** Introduction to combustion processes; combustion thermodynamics and reaction kinetics; combustion phenomena: ignition, quenching, detonation and deflagration; flame instabilities; diffusion and premixed flames; introduction to turbulent combustion. *Prerequisite:* MEN 310.

**MEN 530 Advanced Vibration Analysis (3.0); 3 cr.** Advanced topics in vibration theory and its application to Mechanical Systems. Topics include vibration analysis of multi-degree of freedom, distributed and nonlinear systems, random vibration analysis, and vibration control. *Prerequisite:* MEN 330.

**MEN 534 Joining Processes: Welding, Soldering and Brazing (3.0); 3 cr.** Analysis of various joining processes: mechanisms of surface bonding; welding metallurgy; effect of heat input on resulting microstructures; residual stresses and distortion; welding processes: MIG, TIG, Laser, electron beam, spot welding, resistance welding. *Prerequisite:* MEN 340.

**MEN 540 Robots and Manipulators (3.0); 3 cr.** Concepts underlying the design and application of computer-controlled manipulators: Manipulator geometry, work volume, sensors, feedback control of manipulator linkages, kinematics, trajectory planning, programming, robot system architecture, applications in mechanical

engineering. *Prerequisites:* MEN 430, MEN 435.

**MEN 544 Computer-Aided Manufacturing (3.0); 3 cr.** Fundamentals of industrial automation; numerical control (NC) systems; part programming; robotics in manufacturing; materials handling and automated storage systems; group technology; automated identification and inspection systems; flexible manufacturing systems. *Prerequisites:* MEN 340, MEN 370.

**MEN 550 Computational Methods in Thermal and Fluid Mechanics (3.0); 3 cr.** Physical and mathematical foundations of computational fluid mechanics and heat transfer with emphasis on applications: governing equations and mathematical approximations; partial differential and integral equations, discretization and solution methods, stability and convergence. Introduction to physical modeling of turbulence, combustion, and radiation. *Prerequisites:* MEN 310, MAT 335, CSC 212.

**MEN 571 Design and Machinery Laboratory (0.2); 1 cr.** Applications of mechanical design techniques to complex systems. Topics include mechanisms – linkages, springs, gears and gear trains, bearings, etc... - assembly processes, geometric dimensioning and tolerancing, mechanical vibrations, balancing of machineries. *Prerequisites:* MEN 330, MEN 430, and MEN 471.

**MEN 573 Mechatronics and Control Laboratory (0.2); 1 cr.** Applications of control theory to mechanical systems and evaluation of their performance. Topics include feedback systems, PLC control systems, mechatronics systems, etc. *Prerequisites:* MEN 401, MEN 435, and EEN 207.

**MEN 576 Applied Fluid Mechanics Laboratory (0.2); 1 cr.** Applications of thermo-fluid theories to the design and evaluation of turbomachinery. Topics include pumps and pumping stations, hydraulic turbines, fans and

compressors, drag and lift experiments using wind tunnels. *Prerequisites:* MEN 321, and MEN 376.

**MEN 578 Applied Energy Laboratory (0.2); 1 cr.** Experiments dealing with energy related technology. Topics include heating, ventilating, air-conditioning, refrigeration, combustion techniques, energy conversion, renewable energy – solar, wind, etc... *Prerequisites:* MEN 310, MEN 376.

**MEN 580 Finite Elements Methods (3.0); 3 cr.** The concepts and fundamentals of the finite element method with applications to problems in solid mechanics, fluid mechanics, and heat transfer. *Prerequisites:* MEN 302, MEN 310.

**MEN 581 Special Topics in Mechanical Engineering (3.0); 3 cr.** Material includes coverage of recent developments in mechanical engineering that are needed to update students on the latest technologies. Department determines topics to be covered and *prerequisites* when offered.

**MEN 590 Mechanical Engineering Software (3.0); 3 cr.** Development and utilization of software packages related to various areas in mechanical engineering, graphical user interface, CAD, mesh generators, solvers, post-processors. *Corequisites:* MEN 550, MEN 580.

**MEN 598 Engineering Design I (0.2); 1 cr.** Development of a project proposal that includes the following items: Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc. *Prerequisite:* ENL 230, and Department approval.

**MEN 599 Engineering Design II (2.0); 2 cr.** Implementation of the engineering design project that was proposed in MEN 598. Includes report, final presentation. *Prerequisite:* MEN 598.



# **FACULTY OF HUMANITIES (FH)**

Dr. Carol Kfourri, *Dean*

DEPARTMENT OF ENGLISH, TRANSLATION, AND  
EDUCATION

Dr. Sami Samra, *Chairperson*

DEPARTMENT OF MASS COMMUNICATION

Dr. Joseph Ajami, *Chairperson*

DEPARTMENT OF SOCIAL AND BEHAVIORAL SCIENCES

Dr. Mansour Eid, *Chairperson*

## FACULTY DIRECTORY

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### **Department of English, Translation, and Education**

Pink Building, 3rd Floor, Room 338  
Tel: 09–218950/51/52 Extension 2426  
e-mail: [samra@ndu.edu.lb](mailto:samra@ndu.edu.lb)  
[mailto: dete@ndu.edu.lb](mailto:dete@ndu.edu.lb)

### **Department of Mass Communication**

Pink Building, 3rd Floor, Room 336  
Tel: 09–218950/51/ 52 Extension 2427  
e-mail: [jajami@ndu.edu.lb](mailto:jajami@ndu.edu.lb)  
[mass\\_communication@ndu.edu.lb](mailto:mass_communication@ndu.edu.lb)

### **Department of Social and Behavioral Sciences**

Pink Building, 3rd Floor, Room 341  
Tel: 09–218950/51/52 Extension 2429  
e-mail: [meid@ndu.edu.lb](mailto:meid@ndu.edu.lb)  
[sbs@ndu.edu.lb](mailto:sbs@ndu.edu.lb)

# FACULTY OF HUMANITIES

## LIST OF FULL-TIME FACULTY MEMBERS

### Professors

*Alam, Edward*, Ph.D., 1996, *Philosophy*, University of Utah, USA

<sup>1</sup>*Eid, Assad*, Doctorate, 1986, *Applied Linguistics and TEFL*, Université Saint-Joseph, Lebanon

*Eid, Mansour*, Doctorate, 1985, *Arabic Language and Literature*, Université Saint-Joseph, Lebanon

<sup>1</sup>*Oueijan, Naji*, Ph.D., 1985, *English Literature*, Baylor University, USA

<sup>1</sup>*Rihani, Ameen A.*, Ph.D., 1996, *Bilingual Literature*, Lebanese University, Lebanon

### Associate Professors

*Abouchedid, Kamal*, Ph.D., 1997, *Education*, Manchester University, UK

*Ajami, Joseph*, Ph.D., 1987, *Mass Communication*, Ohio University-Athens, USA

*Fahed, Ziad*, Doctorate, 2001, *Théologie Canonique*, Université Catholique de Lyon, France

*Fakih, Khalid*, Ph.D., 1992, *Journalism*, University of Missouri, USA

*Jahshan, Paul*, Ph.D., 2000, *American Studies*, Nottingham University, UK

*Kfouri, Carol*, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Malek, Amal*, Doctorate, 1<sup>ère</sup> Catégorie, 2000, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

<sup>1</sup>*Matar, Suhail*, C.A.P.E.S., 1969, *Arabic Language and Literature*, Lebanese University, Lebanon

*Sabieh, Christine*, Doctorate 1<sup>ère</sup> Catégorie, 1998, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Salameh, Doumit*, Ph.D., 1988, *Philosophy*, St. Louis University, USA

*Yaacoub, Youssef*, Ph.D., 1990, *Education*, Loyola University of Chicago, USA

### Assistant Professors

*Abdel-Nour, George*, Ph.D., 1997, *Spanish*, Yale University, USA

*Akar, Bassel*, Doctor of Philosophy, 2009, *Education*, Institute of Education, University of London, UK

*Antaby, Georges (Fr.)*, Doctorate, 2008, *Philosophy*, University of Ottawa, Canada

*Chidiac, May*, Doctorate, 2008, *Information Sciences*, Université Pantheon, Assas, Paris II, France

*Darouny, Kamal*, M.A., 1986, *Marketing and Advertising*, Sussex College of Technology, UK

*Donerian, Vatche*, M.A., 1987, *Theater and TV Directing*, Yerevan State Institute of Dramatic and Fine Arts, Armenia

*El-Doaihi, Jamil*, Ph.D., 1998, *Arabic Literature*, Sydney University, Australia

*El Hajj, Maya*, Doctorate, 2009, *Science of Language: Translation*, Université Saint Esprit Kaslik, Lebanon

*El Khoury, Akram (Fr.)*, Doctorate, 2006, *Canon Law*, Pontificia Universitas Lateranensis-Rome, Italy

*El-Meouchy, Rita*, Ph.D., 2007, *Education of the English Language*, University Saint-Joseph, Lebanon

*Guldimann, Colette*, Ph.D., 2004, *English*, University of London, UK

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<sup>1</sup> On tenure appointment

**Karam, Clovis**, Doctorate, 1984, *Scholastic Philosophy*, Université Catholique de Lyon, France

**Karam, Savo**, Doctorate, 2008, *English Literature*, Lebanese University, Lebanon (NLC)

**Khoury, Mary**, M.A., 1995, *English Language and Literature*, Lebanese University, Lebanon

**Kopaly, Tony**, Doctorate 1<sup>ère</sup> Catégorie, 2007, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

**Mouchantaf, Maha**, Doctorate, 2009, *Management- Emphasis Education*, University of Corsica, France

**Samra, Sami**, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

**Sarkis, Walid**, Doctorate, 2009, *Clinical Psychology*, Lebanese University, Lebanon

**Willis, Mary-Angela**, Ph.D., 2001, *Francophone Literature*, University of Alabama, USA

**Yazigy, Amal**, Ph.D., 1992, *Applied Linguistics*, Leicester University, UK

### Senior Lecturers

**Abou-Jawdeh, Simon**, D.E.S., 1992, *Clinical Psychology*, Lebanese University, Lebanon

**Akkari, Juliet**, M.A., 1971, *TEFL*, American University of Beirut, Lebanon

**Samrani, Diana**, M.A., 1990, *Education*, Andrews University of Michigan, USA

**Wehbe, Boulos (Fr.)**, M.A., 1981, *Middle Eastern Studies*, American University of Beirut, Lebanon

### Lecturers

**Bassil, Janet**, M.B.A., 1996, *International Affairs and Diplomacy*, Notre Dame University-Louaize, Lebanon

**Chibani, Wissam**, M.A., 2001, *TESOL*, Oklahoma City University, Oklahoma, USA

**Haji, Michael**, M.A., 1997, *English Literature*, Notre Dame University-Louaize, Lebanon (NLC)

**Lahoud, Sam**, M.A., 2010, *Media Studies: Journalism*, Notre Dame University, Lebanon

**Nassif, Nadim**, Intl. Master in Management, Law and Humanities of Sport, 2002, De Monfort University, Leicester, U.K.

**Oueijan, Harvey**, M.A., 2005 *English Literature*, Notre Dame University, Lebanon

**Van Loan, Amira**, MBA 2010, *Finance*, American University of Dubai, UAE /

M.A., 1995, *TESOL*, American University, USA.

### Instructor

**Karam, Mirna**, M.A., 2005, *Applied Linguistics*, Notre Dame University-Louaize, Lebanon (SC)

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<sup>1</sup> On tenure appointment

## **Staff Members**

**Chemaly, Wassil**, M.A., 2008, *Media Studies: Journalism*, Notre Dame University-Louaize, Lebanon, *Administrative Assistant to the Dean*

**Eid, Alice**, *Secretarial Studies*, 1992, Bechara Technical School, Lebanon, *Secretary, Mass Communication Department*.

**Jabbour, Vera**, M.A., 2010, *Education: Special Needs* , Notre Dame University-Louaize, Lebanon, *Secretary, English, Translation & Education Department*

**Noufaily, Christine**, M.A., 2007, *Graphic Design*, Notre Dame University-Louaize, Lebanon, *Secretary, Social and Behavioral Sciences Department*

# **FACULTY OF HUMANITIES**

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**Dean:** *Dr. Carol Kfourri*

**Administrative Assistant:** *Mrs. Wassil Chemaly*

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## **HISTORICAL OVERVIEW**

The Faculty of Humanities had its place with the two other founding faculties at NDU: The Faculty of Business Administration and Economics, and The Faculty of Natural and Applied Sciences.

During its early years as LCHE, the faculty mainly provided the NDU community with service courses in the English language, Human Thought, Arabic, Religion, Political Science among others. In 1987, a B.A. in Communication Arts and a B.A. in Interior and Graphic Design were offered. In 1991, the B.A. in Advertising and Marketing was introduced. Between 1993 and 1999, additional degrees in English, Translation, Physical Education, Arabic, International Affairs and Diplomacy on both the undergraduate and graduate levels were successfully introduced.

The Faculty of Humanities had become so large by 1999 that as of 2000, the Faculty of Political Science and the Faculty of Architecture, Art and Design were founded as independent entities.

Since 2000, the Faculty has added a B.A. in Psychology; and an M.A. in Educational Psychology.

Today, in addition to offering General Education courses and a large variety of elective courses, the Faculty of Humanities offers 8 undergraduate degrees and 7 M.A. programs. It also offers Teaching Diplomas and Certificates and welcomes a large number of Intensive English students each semester.

### **Deans of the Faculty of Humanities**

Mrs. Fay Niewiadomsky 1987-1991

Dr. Nemer Frayha 1991-1994

Dr. Assad Eid 1993-2000

Dr. Boulos Sarru' 2000-2006

Dr. Carol Kfourri (Acting Dean) 2006-2007

Dr. Carol Kfourri 2007- present

## **MISSION, VISION AND VALUES**

### **Mission**

The mission of the Faculty of Humanities is to provide opportunities for NDU students to develop their intellectual and interpersonal capacities to their full potential. The faculty also aims to encourage students to appreciate their culture and to work for justice and peace in their world. With a liberal arts education as the foundation of our programs, our mission is to equip students with a well rounded knowledge base enabling them to think critically and independently, to reflect on timeless issues and to shape progress. The faculty also aims to train students in professional career-based degrees.

## **Vision**

During the upcoming five years, the faculty will strive to become a university of choice for undergraduate degrees in Education, English, Physical Education, Psychology, Arabic, Translation and Mass Communications. To attain this goal, the curriculum will be reviewed and updated with special emphasis given to the inclusion of courses which offer students exposure to the career they have chosen. In addition, efforts will be made to promote interdisciplinary studies as well as a greater emphasis on research both for students and faculty members. In line with JPII's *Ex Corde Ecclesiae*, "research activities will study serious contemporary problems in areas such as the dignity of human life, the promotion of justice for all, the quality of personal and family life, the protection of nature and the search for peace and political stability...." (Article 32). Graduate programs will continue to be expanded to welcome adult learners who wish to further their specialization. The Faculty of Humanities is also in the process of developing Ph.D. programs which will cater to graduate students in the region.

## **Values**

As an integral part of a Catholic university which embraces the Maronite tradition of faith in the role of education to empower its members, the Faculty of Humanities places special emphasis on the following in all of its courses and activities:

- Academic integrity
- Academic excellence
- Personal ethics
- Belief in one's own worth
- Responsibility of the individual towards one's family and community
- Respect for tradition
- Becoming independent, critical thinkers
- Serving others
- Compassion
- Developing the ability to work in a team atmosphere for the good of the entire group
- Cross-cultural understanding
- Social consciousness
- Encouraging dialogue between faith and reason (*Ex Corde Ecclesiae* # 15)

## **FACULTY PROFILE**

The Faculty of Humanities plays two roles in the academic life of the university. The first is to offer degree-granting programs on both the undergraduate and graduate levels; the second is to provide a large array of general education requirements, foreign language courses, and special programs designed for students at the various stages of their academic careers.

Three departments are housed under the Faculty of Humanities:

Department of English, Translation, and Education

Department of Mass Communication

Department of Social and Behavioral Sciences

## **General Education Requirements**

Students (I.D.'s 2008 and on) whose majors fall under the Faculty of Humanities must fulfill the General Education Requirements as outlined below.

### **I. Communication Skills**

**9 cr.**

#### ***English (6 cr.)***

ENL 213: *Sophomore English Rhetoric*

And

ENL 223: *Communication Arts*

Or

ENL 230: *English in the Workplace*

#### ***Arabic (3 cr.) One course from:***

ARB 211: *Appreciation for Arabic Literature*

ARB 212: *Advanced Arabic Grammar*

ARB 224: *Arabic Literature and Human Thought*

ARB 231: *Technical Arabic*

ARB 317: *Themes of Modern Arabic Literature in Lebanon (20th century)*

### **II. Philosophy and Religion**

**6 cr.**

#### ***Religion (3 cr.)***

REG 213: *Catholicism*

REG 212: *Religion and Social Issues*

REG 314: *Marriage and Family in the Catholic Church*

REG 313: *The Maronites: Faith and Cultural Heritage*

#### ***Philosophy and Ethics (3 cr.)***

PHL 211: *Logic and the Scientific Method*

PHL 311: *Ethics and the Modern World*

POS 345: *Ethics and Leadership*

ENS 205: *Environment, Society and Ethics*

COA 360: *Media Ethics*

### **III. Cultural Studies and Social Sciences**

**6 cr.**

#### ***Cultural Studies (3 cr.)***

HUT 305: *Human Thought to 1500*

HUT 306: *Human Thought from 1500 to the Present*

LIR 214: *Introduction to Literary Genres*

MUS 210: *Music Appreciation*

FAP 215: *Art and Culture*

ARP 215: *Cultural Themes in Lebanese Arch*

COA 359: *Media and Society*

COA 315: *World Cinema Survey*

NTR 215: *Foods and Nutrition of World Cultures*

#### ***Social Sciences (3 cr.)***

PSL 201: *Introduction to Psychology*

SOL 201: *Introduction to Sociology*

SOL 301: *Introduction to Anthropology*

BAD 201: *Fundamentals of Management*

ECN 200: *Survey of Economics*

ECN 211: *Principles of Micro Economics*

ECN 212: *Principles of Macro Economics*

**IV. Citizenship**

**6 cr.**

*Two courses from the following pool:*

POS 201: *Introduction to Political Science*

HIT 211: *History of Lebanon and the Middle East*

POS 210: *Government and Politics in Lebanon*

POS 212: *Political History of the Near East until WWI*

POS 240: *Law and Society*

IAF 301: *Modern Political Ideologies*

COA 350: *Current Issues*

**V. Science and Technology**

**6 cr.**

***Mathematics/Statistics/Computer Science (3 cr.)***

CSC 201: *Computers and Their Use*

CSC 202: *Computers for Visual Arts*

CSC 203: *Introduction to Programming*

MAT 201: *Fundamentals of Mathematics*

MAT 202: *Mathematics for Arts*

MAT 204: *Mathematics for Business and Economics I*

MAT 211: *Discrete Mathematics*

STA 201: *Statistics for Social Sciences*

STA 202: *Statistics for Humanities*

STA 206: *Applied Statistics for Business and Economics I*

***Natural Sciences (3 cr.)***

PHS 211: *Principles of Physics*

PHS 207: *Development of Science and Technology*

AST 201: *Discovering Astronomy*

AST 210: *Introduction to Astronomy and Astrophysics*

CHM 211: *Principles of Chemistry*

ENS 201: *Introduction to Environmental Science*

ENS 202: *Environment and Sustainable Development*

ENS 205: *Environment, Society, and Ethics*

ENS 206: *Ecotourism*

GEO 202: *Geology for Architects*

BIO 202: *Mystery of Life*

BIO 203: *Discover Biology*

HEA 201: *Health Awareness*

NTR 201: *Basic Human Nutrition*

**VI. Study and Learning Skills**

**0 cr.**

**Notes:**

1. Psychology students will take 30 credits of GERs. Psychology students will be required to take 3 credits from the Cultural and Social Sciences category. They satisfy their Cultural and Social Sciences requirement with any course other than PSL 201. They must take STA 202 as 3 credits of the Science and Technology requirements
2. Students majoring in Mass Communication may satisfy their Philosophy requirement by taking COA 360 Media Ethics.
3. Mass Communication students may satisfy 3 credits of their Citizenship requirements by taking COA 350 Current Issues.
4. COA courses listed in the Cultural Studies and Social Sciences category do not satisfy GER requirements for Mass Communication students. These courses must only be taken as core or major courses.
5. Mass Communication students must take STA 202 as 3 credits of the Science and Technology requirements.
6. Education students must take STA 202 as 3 credits of the Science and Technology requirements.
7. ARB 212 does not count as a GER Arabic course where it is a part of the major requirements.
8. English students may not take LIR 214 to satisfy a GER requirement.
9. Journalism students may not take COA 350 to satisfy a GER requirement.

## **DEPARTMENT OF ENGLISH, TRANSLATION, AND EDUCATION**

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**Chairperson:** *Dr. Sami Samra*

**Secretary:** *Ms. Vera Jabbour*

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### **Professors**

*Eid, Assad*, Doctorate, 1986, *Applied Linguistics and TEFL*, Université Saint-Joseph, Lebanon

*Oueijan, Naji*, Ph.D., 1985, *English Literature*, Baylor University, USA

### **Associate Professors**

*Abou-Chedid, Kamal*, Ph.D., 1997, *Education*, Manchester University, UK

*Jahshan, Paul*, Ph.D., 2000, *American Studies*, Nottingham University-Nottingham, UK

*Kfoury, Carol*, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Malek, Amal*, Doctorate 1<sup>ère</sup> Catégorie, 2000, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Sabieh, Christine*, Doctorate 1<sup>ère</sup> Catégorie, 1998, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

### **Assistant Professors**

*Abdel-Nour, George*, Ph.D., 1997, *Spanish*, Yale University, USA

*Akar, Bassel*, Doctor of Philosophy, 2009, *Education*, Institute of Education, University of London, UK

*El Hajj, Maya*, Doctorate, 2009, *Science of Language: Translation*, Université Saint Esprit Kaslik, Lebanon

*El-Meouchy, Rita*, Ph.D., 2007, *Education of the English Language*, Université Saint-Joseph, Lebanon

*Guldemann, Colette*, Ph.D., 2004, *English*, University of London, UK

*Karam, Savo*, Doctorate, 2008, *English Literature*, Lebanese University, Lebanon

*Khoury, Mary*, M.A., 1995, *English Language and Literature*, Lebanese University, Lebanon

*Kopaly, Tony*, Doctorate 1<sup>ère</sup> Catégorie 2007, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Samra, Sami*, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

*Willis, Mary-Angela*, Ph.D., 2001, *Francophone Literature*, University of Alabama, USA

*Yazigy, Amal*, Ph.D., 1992, *Applied Linguistics*, Leicester University, UK

### **Senior Lecturers**

*Akkari, Juliet*, M.A., 1971, *TEFL*, American University of Beirut, Lebanon

*Samrani, Diana*, M.A., 1990, *Education*, Andrews University of Michigan, USA

### **Lecturers**

*Bassil, Janet*, M.B.A., 1996, *International Affairs and Diplomacy*, Notre Dame University-Louaize, Lebanon

*Chibani, Wissam*, M.A., 2001, *TESOL*, Oklahoma City University, USA

*Hajj, Micheal*, M.A., 1997, *English Literature*, Notre Dame University-Louaize, Lebanon

*Nassif, Nadim*, Intl. Master in Management, Law and Humanities of Sport, 2002, De Monfort University, Leicester, U.K.

*Oueijan, Harvey*, M.A., 2005 *English Literature*, Notre Dame University, Lebanon

*Van Loan, Amira*, MBA 2010, *Finance*, American University of Dubai, UAE

M.A., 1995, *TESOL*, American University, USA

## Instructor

*Karam, Mirna*, M.A., 2005, *Applied Linguistics*, Notre Dame University-Louaize, Lebanon

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The Department of English, Translation, and Education offers the following degree programs:

**B.A. in Education**  
**B.A. in English**  
**B.A. in Physical Education and Sport**  
**B.A. in Translation and Interpretation**  
**M.A. in English Language and Literature**  
**M.A. in Education**  
**M.A. in Translation and Interpretation**  
**EdD. Doctor of Education**

**Teaching Diploma**  
**Teaching Certificate**

**Minor in English**  
**Minor in Translation**

In addition, the Department offers:

Intensive English Program  
Communication Skills Courses  
Language Courses (Chinese, French, German, Italian, Latin, Spanish and Syriac)

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### Intensive English Program

Students who score less than 400 on the NDU EET are offered the opportunity to take a one-semester 12 credits. Intensive English course. Students may also take one Math remedial course simultaneously. The passing grade in Intensive English is “C” (70). A student who scores a “B” or above is placed automatically in ENL 110. Students may repeat this course only once.

Intensive English is divided into two components:

Grammar and Writing (6cr.)  
Reading and Oral (6cr.)

In addition to the traditional class setting, students are encouraged to participate in the University’s academic life by sitting in on regular university classes, and will have access to the Mariam and Youssef Library and the Writing Center.

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### Communication Skills Courses

The placement of students in Communication Skills Courses is based upon their EET scores (see Undergraduate Admission).

ENL 105 - College English I (5 non-credit carrying; passing grade is “C”) *Note: Students who score “B” or above will be placed in ENL 213*

ENL 110 - College English II (3 non-credit carrying; passing grade is a “C”)

ENL 213 - Sophomore English Rhetoric (3cr.)

ENL 223 - Communication Arts (3cr.)

ENL 230 - English in the Workplace (3cr.)

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## Languages

The Department offers courses in the following languages:  
Chinese, French, German, Italian, Latin, Spanish, and Syriac

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## Teaching Diploma

The purpose of the Teaching Diploma program is to prepare school teachers.

The program is designed to cater to both the freshly-out-of- school, inexperienced graduate and the teacher who has already had some experience but who lacks scientific preparation.

The course material will cover the various aspects of teaching, regardless of the subject matter. Such aspects include general educational theories of acquisition, basic educational psychology, discipline and management in the classroom, testing and evaluating, and the different methods of the teaching-learning process.

### Admission Requirements

To qualify for admission, a candidate must either be working towards a BA/BS degree, or hold a recognized BA/BS degree in the following: English, Mathematics, Biology, and Physical Education. All candidates must pass the EET with a minimum score of 500.

### Recognition

The Government of Lebanon recognizes the Teaching Diploma as equivalent to the “License d’Enseignement” if the student holds the Lebanese Baccalaureate Part II and has successfully passed the number of credits required for the Diploma over and above the total number of credits required for the BA/BS degree.

### Graduation Requirements

In order to obtain the Teaching Diploma, students must successfully pass 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 201 Introduction to Education
- EDU 313 Psychology of Education: Learning
- EDU 343 Classroom Management
- or
- EDU 330 Curriculum Development and Evaluation

Depending on their original Bachelor’s degree, English, Mathematics, Biology, Physical Education, students must select an additional set of 3 courses suited to their discipline. NDU students may elect to begin their Teaching Diploma parallel to their degree program. T.D. courses are offered during Summer Session as well as Fall and Spring semesters.

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## Teaching Diploma in Arabic Language and Literature

The purpose of the Teaching Diploma program is to prepare school teachers.

The program is designed to cater to both the freshly-out-of- school, inexperienced graduate and the teacher who has already had some experience but who lacks scientific preparation.

The course material will cover the various aspects of teaching Arabic. Such aspects include general educational theories of acquisition, basic educational psychology, discipline and management in the classroom, testing and evaluating, and the different methods of the teaching-learning process.

### Admission Requirements

To qualify for admission, a candidate must either be working towards a BA degree in Arabic or hold a recognized BA degree in Arabic.

### **Recognition**

The Government of Lebanon recognizes the Teaching Diploma as equivalent to the “License d’Enseignement” if the student holds the Lebanese Baccalaureate Part II and has successfully passed the number of credits required for the Diploma over and above the total number of credits required for the BA degree in Arabic.

### **Graduation Requirements**

In order to obtain the Teaching Diploma, students must successfully pass 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 202 Introduction to Education (in Arabic)
- EDU 314 Educational Psychology (in Arabic)
- EDU 315 Literary Criticism (in Arabic)
- EDU 345 Methods of Teaching Arabic Language and Literature (in Arabic)
- EDU 359 Curriculum Design (in Arabic)
- EDU 414 Writing Styles and Textual Analysis (in Arabic)
- EDU 477 Practicum in Teaching Arabic (in Arabic)

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## **Teaching Certificate**

The Teaching Certificate program is designed to help school teachers conduct their classes scientifically. The candidate is not required to hold a university degree to join. This program will cater to elementary school teachers who are already teaching in a school but do not hold a university degree.

### **Admission Requirements**

To qualify for admission, a candidate must hold a Lebanese Baccalaureate Part II or its equivalent. The candidate must prove English language proficiency, by passing the EET with a minimum score of 500. The candidate must also sit for an oral interview before he/she can be admitted to the program.

### **Academic Requirements**

In order to obtain the Teaching Certificate, a candidate must successfully complete 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 201 Introduction to Education
- EDU 313 Psychology of Education: Learning
- EDU 343 Classroom Management
- EDU 350 Methods of Teaching - Elementary Level
- EDU 430 Tests, Measurement and Evaluation - Elementary Level
- EDU 460 Teaching Practicum - Elementary Level

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## **Teaching Certificate in Arabic Language and Literature**

The Teaching Certificate program is designed to help school teachers conduct their classes scientifically. However, this is not a graduate program: the candidate is not required to hold a university degree to join. This program will cater to elementary school teachers who are already teaching in a school but do not hold a university degree.

### **Admission Requirements**

To qualify for admission, a candidate must hold a Lebanese Baccalaureate II or its equivalent. The candidate must prove Arabic language proficiency. The candidate must also sit for an oral interview before he/she can be admitted to the program.

## Academic Requirements

In order to receive the Teaching Certificate, a candidate must complete 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 202 Introduction to Education (in Arabic)
- EDU 314 Educational Psychology (in Arabic)
- EDU 315 Literary Criticism (in Arabic)
- EDU 345 Methods of Teaching Arabic Language and Literature (in Arabic)
- EDU 359 Curriculum Design (in Arabic)
- EDU 414 Writing Styles and Textual Analysis (in Arabic)
- EDU 477 Practicum in Teaching Arabic( in Arabic)

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## The Degree of Bachelor of Arts in Education

The purpose of the BA Education comes in line with the University's commitment to serve the community around it, and with the national strategy of educational reform.

Students majoring in Education may choose one of the following options: Early Childhood, Learning Disabilities, or Education of the Gifted.

### Graduation Requirements

Students must complete a total of 105 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements. The 105 credits are divided into:

### Degree Requirements (105 credits)

**General Education Requirements** **33 cr.**

**Core Requirements** **24 cr.**  
PSL 211, ENL 311, SOL 313, EDU 201, EDU 213, EDU 313, EDU 343, EDU 360

**Major Requirements** **42 cr.**  
**Option I – Early Childhood**  
EDU 311, EDU 332, EDU 344, EDU 355, EDU 411, EDU 413, EDU 465, EDU 475

Students must choose an additional 18 credits as described below: **18 cr.**  
*Group I:* EDU 301 or EDU 321 (3 credits)  
*Group II:* EDU 361, EDU 362, EDU 402, EDU 420, EDU 421, EDU 422, EDU 430, EDU 450 (12 credits)  
*Group III:* EDU 401 or SOL 312 (3 credits)

**Option II – Learning Disabilities**  
EDU 311, EDU 324, EDU 344, EDU 357, EDU 422, EDU 430, EDU 460, EDU 470

Students must choose an additional 18 credits as described below:  
*Group I:* EDU 302 or EDU 325 (3 credits)  
*Group II:* EDU 342 (3 credits)  
*Group III:* EDU 362, EDU 402, EDU 412, EDU 413, EDU 420, EDU 421, EDU 451 (9 credits)  
*Group IV:* EDU 401 OR SOL 312 (3 credits)

**Option III – Education of the Gifted**

EDU 322, EDU 323, EDU 341, EDU 344, EDU 361, EDU 430, EDU 460, EDU 470

Students must choose an additional 18 credits as described below:

*Group I:* EDU 330 or EDU 331 (3 credits)

*Group II:* EDU 301, EDU 311, EDU 321, EDU 324, EDU 402, EDU 413, EDU 420, EDU 421, EDU 422 (12 credits)

*Group III:* EDU 401 or EDU 412 (3 credits)

**Free Electives**

**6 cr.**

**Bachelor of Arts in Education**  
**Early Childhood Emphasis - Suggested Program (105 credits)**

**Fall Semester I (15 Credits)**

—	—	GER	3 cr.
EDU	201	Introduction to Education	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PSL	211	Psychology of the Young Child	3 cr.
—	—	GER	3 cr.
EDU	213	Human Growth and Development	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

EDU	313	Psychology of Education: Learning	3 cr.
EDU	343	Classroom Management	3 cr.
EDU	344	School Libraries	3 cr.
ENL	311	English Phonetics	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

EDU	311	Children's Literature	3 cr.
EDU	355	Methods of Teaching: Early Childhood	3 cr.
—	—	Group I	3 cr.
—	—	Group II	3 cr.
—	—	Free Elective	3 cr.

**Summer Session II (9 Credits)**

EDU	360	Instructional Technology	3 cr.
SOL	313	Family Violence and Child Abuse	3 cr.
—	—	Group III	3 cr.

**Fall Semester III (15 Credits)**

EDU	332	Curriculum Development and Evaluation: Early Childhood	3 cr.
EDU	411	Early Childhood Education	3 cr.
EDU	465	Early Childhood Teaching Practicum I	3 cr.
—	—	Group II	6 cr.

**Spring Semester III (12 Credits)**

EDU	413	Early Childhood General Health, Nutrition and Safety	3 cr.
EDU	475	Early Childhood Teaching Practicum II	3 cr.
—	—	Group II	3 cr.
—	—	Free Elective	3 cr.

**Bachelor of Arts in Education**  
**Learning Disabilities Emphasis - Suggested Program (105 credits)**

**Fall Semester I (15 Credits)**

—	—	GER	3 cr.
EDU	201	Introduction to Education	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PSL	211	Psychology of the Young Child	3 cr.
—	—	GER	3 cr.
EDU	213	Human Growth and Development	3 cr.
NTR	201	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

EDU	313	Psychology of Education: Learning	3 cr.
EDU	343	Classroom Management	3 cr.
EDU	344	School Libraries	3 cr.
ENL	311	English Phonetics	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

EDU	311	Children's Literature	3 cr.
EDU	324	Counseling in Special Education	3 cr.
EDU	357	Methodology of Teaching: Learning Disabilities	3 cr.
—	—	Group I	3 cr.
—	—	Group II	3 cr.

**Summer Session II (6 Credits)**

EDU	360	Instructional Technology	3 cr.
SOL	313	Family Violence and Child Abuse	3 cr.

**Fall Semester III (15 Credits)**

EDU	422	Learning and Behavioral Difficulties of Children	3 cr.
EDU	460	Elementary Teaching Practicum I	3 cr.
—	—	Group III	9 cr.

**Spring Semester III (15 Credits)**

EDU	430	Tests, Measurement and Evaluation: Elementary Level	3 cr.
EDU	470	Elementary Teaching Practicum II	3 cr.
—	—	Group IV	3 cr.
—	—	Free Elective	6 cr.

**Bachelor of Arts in Education**  
**Education of the Gifted Emphasis - Suggested Program (105 credits)**

**Fall Semester I (15 Credits)**

—	—	GER	3 cr.
EDU	201	Introduction to Education	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PSL	211	Psychology of the Young Child	3 cr.
—	—	GER	3 cr.
EDU	213	Human Growth and Development	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

—	—	GER	3 cr.
EDU	313	Psychology of Education: Learning	3 cr.
EDU	343	Classroom Management	3 cr.
EDU	344	School Libraries	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

EDU	322	Education of Talented and Gifted Students	3 cr.
ENL	311	English Phonetics	3 cr.
—	—	Group I	3 cr.
—	—	Group II	6 cr.

**Summer Session II (9 Credits)**

EDU	360	Instructional Technology	3 cr.
SOL	313	Family Violence and Child Abuse	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 Credits)**

EDU	323	Behavioral Problems of exceptional Students	3 cr.
EDU	341	Reading Skills for the Gifted	3 cr.
EDU	460	Elementary Teaching Practicum I	3 cr.
—	—	Group II	6 cr.

**Spring Semester III (15 Credits)**

EDU	361	Applications of Computers in Teaching	3 cr.
EDU	430	Tests, Measurement and Evaluation: Elementary Level	3 cr.
EDU	470	Elementary Teaching Practicum II	3 cr.
—	—	Group III	3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate courses: Education

**EDU 201 Introduction to Education (3.0); 3 cr.** Introduces the history and philosophy of education, structure and components of the school, and the role of the teacher.

**EDU 202 Introduction to Education (2.0); 2 cr.** Introduces the history and philosophy of education, structure, and components of the school, and the role of the teacher. (In Arabic)

**EDU 212 Sociological Perspectives on Schools (3.0); 3 cr.** Aims to give students a thorough understanding of pupils and current procedures in the classroom. *Corequisite:* EDU 201.

**EDU 213 Human Growth and Development (3.0); 3 cr.** Introduces students to the field of developmental psychology and its influence on education. *Corequisite:* EDU 201.

**EDU 214 Youth in Contemporary Society (3.0); 3 cr.** Aims at developing an awareness of the Lebanese adolescent society by focusing on psychological and social development of the adolescent. *Corequisite:* EDU 201.

**EDU 301 Introduction to Arts Education (3.0); 3 cr.** Involves both a practical and a theoretical approach to dance, music and visual art in the community. *Corequisite:* EDU 201.

**EDU 302 Introduction to the Education of the Mentally Disabled (3.0); 3 cr.** Involves the diagnosis, classification, learning potential, and general characteristics of the disabled child. *Corequisite:* EDU 201.

**EDU 311 Children's Literature (3.0); 3 cr.** Introduces criteria for selection of children's literature, children's reading interests and preparation of materials. *Corequisite:* EDU 201.

**EDU 313 Psychology of Education: Learning (3.0); 3 cr.** Learning and its relation to growth and development. Surveys the theories of learning and their pedagogical implications. *Corequisite:* EDU 201.

**EDU 314 Educational Psychology (3.0); 3 cr.** Examines the interrelationship between education and psychology, presents the theoretical and practical perspectives of teaching, and compares the Western to the Arab theories and views. (In Arabic)

**EDU 315 Literary Criticism (3.0); 3 cr.** Introduces a wide variety of literary disciplines

and methods and applies these disciplines to selected ancient and modern texts. (In Arabic)

**EDU 321 Education and the Media (3.0); 3 cr.** Examines and interprets the role that the press, radio, film, television and advertising play in developmental attitudes and behavior. *Corequisite:* EDU 313

**EDU 322 Education of Talented and Gifted Students (3.0); 3 cr.** Offers theoretical background and practical concerns for educating exceptionally able students. *Corequisite:* EDU 313.

**EDU 323 Behavioral Problems of Exceptional Students (3.0); 3 cr.** Introduces teaching methods appropriate to the needs of students with emotional and behavioral problems. *Corequisite:* EDU 313.

**EDU 324 Counseling in Special Education (3.0); 3 cr.** Presents approaches to working with exceptional individuals and their parents in the school, home and community. *Corequisite:* EDU 313.

**EDU 325 The Needs of the Disabled (3.0); 3 cr.** Is designed to develop awareness of the educational needs of the disabled and the competencies to meet those needs. *Corequisite:* EDU 313.

**EDU 330 Curriculum Development and Evaluation: Elementary (3.0); 3 cr.** Examines basic elements and foundations of a curriculum. Emphasis is on the elementary level. *Corequisite:* EDU 313.

**EDU 331 Curriculum Development and Evaluation: Secondary (3.0); 3 cr.** Same as EDU 330 but emphasizes the secondary level. *Corequisite:* EDU 313.

**EDU 332 Curriculum Development and Evaluation: Early Childhood (3.0); 3 cr.** Same as EDU 330 but emphasizes early childhood. *Corequisite:* EDU 313.

**EDU 333 Curriculum Development and Evaluation: the Disabled (3.0); 3 cr.** Same as EDU 330 but emphasizes students with learning disabilities. *Corequisite:* EDU 313

**EDU 341 Reading Skills for the Gifted (3.0); 3 cr.** Focuses on the special reading skills of gifted students. Current programs and teaching

approaches are critically examined. *Corequisite:* EDU 313.

**EDU 342 Instructional Strategies for the Disabled (3.0); 3 cr.** Provides techniques for teaching the disabled, such as basic stimulus control, positioning, eating, toileting, etc. *Corequisite:* EDU 313.

**EDU 343 Classroom Management (3.0); 3 cr.** Examines the role of the teacher in a classroom situation: teacher-student interaction and variations in class activities. *Corequisite:* EDU 201.

**EDU 344 School Libraries (3.0); 3 cr.** Introduces library skills and provides students with ideas related to the structuring and enrichment of library material. *Corequisite:* EDU 201.

**EDU 345 Methods of Teaching Arabic Language and Literature (3.0); 3 cr.** Examines the most recent methods of teaching Arabic. Aims to develop the teachers abilities to motivate and inspire students. (In Arabic)

**EDU 350 Methods of Teaching: Elementary (3.0); 3 cr.** Provides principles and techniques of language, arithmetic, and science teaching in the elementary classes. *Corequisite:* EDU 313.

**EDU 351 Methods of Teaching English as Foreign Language (3.0); 3 cr.** Same as EDU 350 but focuses on the teaching of the four language skills at various learning stages. *Corequisite:* EDU 313.

**EDU 352 Methods of Teaching Mathematics (3.0); 3 cr.** Examines methods of teaching mathematics: educational objectives, mathematical logic and teaching aids. *Corequisite:* EDU 313.

**EDU 353 Methods of Teaching Science (3.0); 3 cr.** Examines methods of teaching science: educational objectives, basic concepts, lab skills and teaching aids. *Corequisite:* EDU 313.

**EDU 354 Methods of Teaching Social Studies (3.0); 3 cr.** Deals with different approaches to teaching history, geography and civics. *Corequisite:* EDU 313.

**EDU 355 Methods of Teaching: Early Childhood (3.0); 3 cr.** Methods and materials for the young child's learning: the use of manipulative and multi-sensory materials. *Corequisite:* EDU 313.

**EDU 356 Methods of Teaching: the Handicapped (3.0); 3 cr.** Methods for handicapped students: curriculum needs, teaching techniques and behavior management. *Corequisite:* EDU 313.

**EDU 357 Methodology of Teaching: Learning Disabilities (3.0); 3 cr.** Introduces dimensions of learning disabilities: identification, characteristics, development, habilitation. *Corequisite:* EDU 313.

**EDU 359 Curriculum Design (2.0); 2 cr.** Examines basic elements and foundations of the curriculum of Arabic language and literature in K-12 classes. (In Arabic)

**EDU 360 Instructional Technology (3.0); 3 cr.** The practical application of audio-visual materials, the operation and maintenance of equipment, and the construction of aids.

**EDU 361 Applications of Computers in Teaching (3.0); 3 cr.** The implications of computer application in the classroom. Students will learn software evaluation skills.

**EDU 362 Education and the Lebanese Law (3.0); 3 cr.** Studies the various laws in the Lebanese Constitution that determine the educational process in Lebanon.

**EDU 401 Intercultural Communication (3.0); 3 cr.** Introduces the comparative study of communication variables that influence interaction between persons of different social groups.

**EDU 402 Foundations of Counseling Services (3.0); 3 cr.** Studies the philosophy, theory, organization and administration of school and agency counseling services.

**EDU 411 Early Childhood Education (3.0); 3 cr.** Investigates the significance of early childhood years (0-8) in the education of children. A comparative study is made of early childhood education in Lebanon.

**EDU 412 Gender and Human Interaction (3.0); 3 cr.** Examines gender and communication and the relationship of gender to self-disclosure, self assertion, listening and empathy.

**EDU 413 Early Childhood General Health, Nutrition and Safety (3.0); 3 cr.** Investigates effective techniques for dealing with health, safety and nutrition in early childhood education.

**EDU 414 Writing Styles and Textual Analysis (3.0); 3 cr.** Surveys a variety of writing styles. It aims to develop the students' ability to write and analyze texts based on content and style. (In Arabic)

**EDU 420 Crisis Intervention (3.0); 3 cr.** Examines the crisis intervention services in community health, mental health, substances misuse, and child welfare.

**EDU 421 Children at Risk (3.0); 3 cr.** Identifies potential risks to which children may be exposed. Also shows how the teacher, school and community can cooperate with child to foster a positive sense of worth and ability.

**EDU 422 Learning and Behavioral Difficulties (3.0); 3 cr.** Presents adaptive teaching/learning procedures. Also prescribes instructional strategies and techniques.

**EDU 430 Tests, Measurement and Evaluation: Elementary (3.0); 3 cr.** Critically examines the basic principles and techniques of testing and evaluation on the elementary level. *Corequisite:* EDU 350.

**EDU 431 Tests, Measurement and Evaluation in English (3.0); 3 cr.** A critical examination of the basic principles and techniques of testing and evaluation in English. *Corequisite:* EDU 351.

**EDU 432 Tests, Measurement and Evaluation in Mathematics (3.0); 3 cr.** Same as EDU 431 but relates to the testing of mathematics. *Corequisite:* EDU 352.

**EDU 433 Tests, Measurement and Evaluation in Science (3.0); 3 cr.** Same as EDU 431 but relates to the testing of science subjects. *Corequisite:* EDU 353.

**EDU 434 Tests, Measurement and Evaluation in Social Studies (3.0); 3 cr.** Same as EDU 431 but relates to the testing of social studies. *Corequisite:* EDU 354.

**EDU 438 Tests, Measurement and Evaluation in Arabic (3.0); 3 cr.** Same as EDU 431 but relates to the testing of Arabic language.

**EDU 450 Law and the Disabled (3.0); 3 cr.** Discusses relevant laws pertaining to the disabled.

**EDU 451 Clinical Assessment in the School (3.0); 3 cr.** Studies the nature of psychological tests, standardization procedures, and types of scales and scores.

**EDU 460 Elementary Teaching Practicum I (1.2); 3 cr.** Guided and supervised practice in the application of elementary level teaching methods. Part I. *Corequisite:* EDU 430.

**EDU 461 English Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of English. Part I. *Corequisite:* EDU 431.

**EDU 462 Mathematics Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of mathematics. Part I. *Corequisite:* EDU 432.

**EDU 463 Science Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of science subjects. Part I. *Corequisite:* EDU 433.

**EDU 464 Social Studies Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of social studies. Part I. *Corequisite:* EDU 434.

**EDU 465 Early Childhood Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but deals with teaching on the early childhood level. Part I. *Corequisite:* EDU 430.

**EDU 466 Teaching of the Disabled Practicum I (1.2); 3 cr.** Same as EDU 460 but deals with the teaching of the handicapped. Part I. *Corequisite:* EDU 356.

**EDU 468 Arabic Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of the Arabic language.

**EDU 470 Elementary Teaching Practicum II (1.2); 3 cr.** Similar to EDU 460. Part II. *Corequisite:* EDU 460.

**EDU 471 English Teaching Practicum II (1.2); 3 cr.** Similar to EDU 461. Part II. *Corequisite:* EDU 461.

**EDU 472 Mathematics Teaching Practicum II (1.2); 3 cr.** Similar to EDU 462. Part II. *Corequisite:* EDU 462.

**EDU 473 Science Teaching Practicum II (1.2); 3 cr.** Similar to EDU 463. Part II. *Corequisite:* EDU 463.

**EDU 474 Social Studies Teaching Practicum II (1.2); 3 cr.** Similar to EDU 464. Part II. *Corequisite:* EDU 464.

**EDU 475 Early Childhood Teaching Practicum II (1.2); 3 cr.** Similar to EDU 465. Part II. *Corequisite:* EDU 465.

**EDU 476 Teaching of the Disabled Practicum II (1.2); 3 cr.** Similar to EDU 466. Part II. *Corequisite:* EDU 466.

**EDU 477 Practicum in Teaching Arabic (3.0); 3 cr.** Aims to develop students' ability not only to develop lesson plans but also to follow them across all school levels. (In Arabic)

**EDU 478 Arabic Teaching Practicum II (1.2); 3 cr.** Similar to EDU 468 Part II. *Corequisite:* EDU 468.

**EDU 480 Elementary Teaching Internship (1.0); 1 cr.** The student will choose a pedagogical issue, discuss its treatment/application in schools and present a written report.

**EDU 481 English Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of English as a foreign language.

**EDU 482 Mathematics Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of mathematics.

**EDU 483 Science Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of science subjects.

**EDU 484 Social Studies Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of social studies.

**EDU 485 Early Childhood Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on early childhood.

**EDU 486 Teaching of the Disabled Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of the handicapped.

**EDU 487 Counseling and Guidance Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on counseling and guidance.

**EDU 488 Arabic Teaching Internship (3.0); 3 cr.** Same as EDU 480 but with emphasis on the teaching of Arabic.

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## **The Degree of Bachelor of Arts in Physical Education and Sport**

The B.A. in Physical Education and Sport is designed to meet the needs of those who plan on pursuing careers as teachers, coaches, or trainers. Students majoring in Physical Education and Sport must also study for their Teaching Diploma in Physical Education. The B.A. in Physical Education will increase students' theoretical knowledge, develop students' practical skills in various sports activities, including sports required in international baccalaureate programs, instill a commitment to health and fitness, and prepare students to practice their skills and compete in the job market.

- Students must either pass PES 321 before taking major elective courses or register concurrently in PES 321 and other major elective courses.
- Courses are part lecture and part activity.

### **Graduation Requirements**

To graduate, students must successfully complete a total of 120 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements.

### **Degree Requirements (120 credits: Major courses 99 cr. & - TD 21 cr.)**

<b>General Education Requirements:</b>	<b>30 cr.</b>
<b>Core Requirements</b> PES 204, PES 205, PES 250, PES 301, PES 321, PES 354, PES 358, PES 420, PES 421, PES 422, PES 426, PES 492	<b>33 cr.</b>
<b>Major Electives</b> - 6 courses from the following pool: PES 326, PES 327, PES 328, PES 329, PES 330, PES 331, PES 332, PES 347 - 10 courses from the following pool: PES 322, PES 333, PES 334, PES 335, PES 336, PES 337, PES 338, PES 339, PES 340, PES 341, PES 342	<b>32 cr.</b>
<b>Free Electives</b>	<b>4 cr.</b>
<b>Teaching Diploma</b>	<b>21 cr.</b>

**Bachelor of Arts in Physical Education and Sport  
Suggested Program (120 Credits)**

**Fall Semester I (17 Credits)**

PES	204	Foundations in Physical Education	3 cr.
PES	321	Physical Exercise	2 cr.
EDU	201	Introduction to Education	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (16 Credits)**

EDU	—	—	3 cr.
EDU	313	Psychology of Education: Learning	3 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (18 Credits)**

PES	205	Physical Therapy & Athletic Injuries	3 cr.
PES	250	Motor Development & Motor Learning	3 cr.
PES	301	Anatomical Kinesiology	3 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
EDU	—	—	3 cr.

**Spring Semester II (18 Credits)**

PES	354	Athletic Fitness Training	3 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
EDU	343	Classroom Management	3 cr.
Or			
EDU	330	Curriculum Development and Evaluation	3 cr.
EDU	—	—	3 cr.
—	—	GER	3 cr.

**Summer II (9 credits)**

—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	GER	3 cr.

**Fall Semester III (17 Credits)**

PES	358	Physiology of Exercise	3 cr.
PES	420	Theory of Fitness Coaching	3 cr.
EDU	—	—	3 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Free Elective	2 cr.

**Spring Semester III (16 Credits)**

PES	421	Coaching	3 cr.
PES	422	Biomechanics	3 cr.
PES	426	Adapted Physical Fitness	3 cr.
PES	492	Internship	1 cr.
—	—	Major Elective	2 cr.
—	—	Major Elective	2 cr.
—	—	Free Elective	2 cr.

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## Undergraduate Courses: Physical Education and Sport

- PES 201 Introduction to PE (3.0); 3 cr.** Nature, aims, motivation and profession. *Corequisite:* ENL 105.
- PES 202 History of PE (3.0); 3 cr.** Egyptian, Phoenician, Greek and Roman; later developments till the modern age. *Corequisite:* ENL 105.
- PES 203 Introduction to Physical Therapy (3.0); 3 cr.** The discipline of physical therapy, opportunities, and responsibilities. *Corequisite:* ENL 105.
- PES 204 Foundations of Physical Education (3.0); 3 cr.** This course examines the historical, philosophical and sociological foundations of sport and serves as an introduction to the physical education, exercise and sport-related fields. The course will also incorporate contemporary trends and issues. This course should be taken during the first academic year.
- PES 205 Physical Therapy & Athletic Injuries (3.0); 3 cr.** The student will learn a wide variety of rehabilitation and physical therapy techniques in relation to injuries associated with sports activities, their prevention and care. The material will also cover basic first aid and CPR.
- PES 250 Motor Development & Motor Learning (3.0); 3 cr.** This course explores specific principles of learning and the control of movement and motor skills. Students will also study the neurophysiological activation of muscles, reflexes, etc. during movement.
- PES 251 Motor Learning (3.0); 3 cr.** Exploration and explanation of materials, methods and mechanisms. *Prerequisite:* PES 201.
- PES 252 Athletic Injuries (3.0); 3 cr.** Care and prevention, first aid methods (CPR).
- PES 301 Anatomical Kinesiology (3.0); 3 cr.** An understanding of human anatomy and basic mechanical principles related to efficient movement
- PES 311 Basketball (1.0); 1 cr.** Basic skills, rules, refereeing, training - theory and practice.
- PES 312 Volleyball (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 313 Football (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 314 Handball (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 315 Tennis (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 316 Racquet Sports (1.0); 1 cr.** (squash, table-tennis, badminton) basic skills, rules, refereeing, training - theory and practice.
- PES 317 Tae-Kwon-Do (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 318 Swimming (2.0); 2 cr.** Basic swimming strokes, diving, and swimming competitions.
- PES 319 Judo (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 320 Water-Polo (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.
- PES 321 Physical Exercise (2.0); 2 cr.** (Aerobics, stretching, etc.) basic skills, rules, training - theory and practice.
- PES 322 Dancing (2.0); 2 cr.** Beginning skills in dance techniques - classical and modern.
- PES 323 Weight-lifting (1.0); 1 cr.** Basic skills, rules, refereeing, training - theory and practice.
- PES 324 Track & Field (2.0); 2 cr.** Basic skills, refereeing, training - theory and practice.
- PES 325 Gymnastics (1.0); 1 cr.** Fundamentals of various types of gymnastics for men and women (classical and rhythmic).
- PES 326 Basketball (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching basketball, the rules, and refereeing.
- PES 327 Volleyball (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching volleyball, the rules, and refereeing.
- PES 328 Football (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of

techniques of teaching football, the rules, and refereeing.

**PES 329 Tennis (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching tennis, the rules, and refereeing.

**PES 330 Badminton (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching badminton, the rules, and refereeing.

**PES 331 Table Tennis (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching table tennis, the rules, and refereeing.

**PES 332 Weight-Lifting (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching weight-lifting and the rules.

**PES 333 Swimming I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching the different strokes (freestyle, backstroke, crawl), the rules, and refereeing.

**PES 334 Swimming II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching the different strokes (breaststroke, butterfly), the rules, and refereeing. *Prerequisite:* PES 333

**PES 335 Track and Field I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching running (sprint, 100m, 200m, endurance, etc.), the rules, and refereeing.

**PES 336 Track and Field II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and

acquisition of techniques of teaching jumping (long jump, high jump, etc.), the rules, and refereeing.

**PES 337 Track and Field III (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching throwing (discus, shot-put, javelin, etc.), the rules, and refereeing.

**PES 338 Combat Sports I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching combat sports (Striking: Tae-Kwon-Do, Karate, etc.), the rules, and refereeing.

**PES 339 Combat Sports II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching combat sports (Grappling: Wrestling, Judo, etc.), the rules, and refereeing.

**PES 340 Gymnastics I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching gymnastics (floor techniques), the rules, and refereeing.

**PES 341 Gymnastics II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching gymnastics (apparatus techniques), the rules, and refereeing. *Prerequisite:* PES 340

**PES 342 Winter Sports (2.0); 2cr.** Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching skiing and snowboarding. This is an accelerated course that will take place during the winter season over the course of a specific number of trips to ski resorts for intensive practical sessions. Priority is given to Physical Education majors.

**PES 343 Pilates and Yoga (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of the fundamental skills of Pilates and Yoga and the techniques of teaching them. Pilates will focus on increasing breathing capacity and improving postural alignment

through simultaneous stretching and strengthening movements. Hatha Yoga is a vigorous cardiovascular workout which increases strength, flexibility, balance, conditioning, and endurance.

**PES 344 Cardio Fitness and Toning (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills in cardiovascular workouts and acquisition of techniques of teaching. The course combines aerobic activities with muscle toning strength movements. Instruction will include the safe and effective use of fitness apparatus including, bench step, physio balls, resistance bands and hand weights.

**PES 345 Chess (1.0); 1 cr.** This course is designed to help students engage in cognitive processing mechanisms, and accordingly develop competence in the logical thinking needed to play chess.

**PES 346 Lifeguard Training (2.0); 2 cr.** This course introduces and develops skills and knowledge necessary to prepare individuals for lifeguard responsibilities. It teaches students to prevent, recognize, and respond to aquatic-related emergencies. Teaching methodology includes lectures, demonstrations, and instructional video with hands-on training and practice. Pre-requisite: Students must pass a swimming test.

**PES 347 Handball (2.0); 2 cr.** This course will provide the basic skills of team handball including fundamental strategies and rules. The course is also designed to provide physical education students with teaching skills and methods necessary for the instruction of handball. For Physical Education majors.

**PES 348 Basic Life Support and First Aid (2.0); 2 cr.** This course trains students in Basic Life Support skills and first aid care according to International Red Cross standards. It combines lectures and demonstrations with hands-on training and practice. Focus will be on bone fractures, joint dislocations, ligament sprains, muscle strain, major wounds, burns, basic airway management, bleeding control, and spinal dislocation.

**PES 351 Development of Motor Control (3.0); 3 cr.** Neurophysiological activation of muscles, reflexes, etc. during movement.

**PES 352 Exercise and Mental Health (3.0); 3 cr.** Theories related to mental health consequences of physical activities.

**PES 354 Athletic Fitness Training (3.0); 3 cr.** This comprehensive course is designed to provide the student with the knowledge and skills needed to develop fitness programs for competitive athletes in different sports. The course focuses on advanced topics in training the aerobic and anaerobic systems, developing strength and power, planning and periodization, in addition to topics in sports nutrition and exercise physiology.

**PES 355 Methods in PE (3.0); 3 cr.** Planning, strategies, techniques, and methods of teaching PE.

**PES 356 Individual and Dual Sports (3.0); 3 cr.** Strategies and materials in planning, implementing, and teaching programs.

**PES 357 Team Sports (3.0); 3 cr.** Strategies and materials in planning, implementing and teaching programs.

**PES 358 Physiology of Exercise (3.0); 3 cr.** Physiological changes that occur as a result of exercise and work.

**PES 360 Consumer Health (3.0); 3 cr.** Consumer discrimination of health information, products and services.

**PES 361 Sports Policy and Management (3.0); 3 cr.** The aim of this course is to have the students expand their knowledge in the economic and political aspects of Sports and Physical Education. They will be able to identify the roles and responsibilities of a sport manager, agent, and coordinator. Students will also develop their understanding in the planning and management of different sports programs in schools, universities, health clubs, competitive sports clubs, sports federations, sports companies and companies related to sports and athletic fitness.

**PES 411 Advanced Prevention and Care (3.0); 3 cr.** Of athletic injuries. Prerequisite: PES 252.

**PES 412 Administration of PE (3.0); 3 cr.** Procedures in secondary education - curriculum development and planning.

**PES 413 PE in Elementary Schools (3.0); 3 cr.** Development of positive body image, basic movement, and manipulative skills.

**PES 414 Alcohol, Tobacco, and Drugs (3.0); 3 cr.** Use, misuse and abuse of drugs in relation to all sides of human development.

**PES 420 Theory of Fitness Coaching (3.0): 3 cr.** This course incorporates the basic components of fitness and wellness in order to better understand human health and well-being. Students will learn to design, implement and evaluate personal fitness and wellness programs. Topics covered will include incorporating exercise into every lifestyle including youth, the elderly, expecting mothers. In addition, nutrition, weight management and stress management will be studied. The latest fitness and wellness research will also be analyzed and interpreted. *Prerequisite:* PES 358

**PES 421 Coaching (3.0); 3 cr.** Leadership, supervision, democracy and behavior in sports; also methods of coaching.

**PES 422 Biomechanics (3.0); 3 cr.** Improved teaching/coaching through biomechanical and anatomical analyses of sports and related activities.

**PES 423 Dynamic Fitness (3.0); 3 cr.** Develops positive health practices in physical activity, diet, rest, and relaxation of living.

**PES 424 Therapeutic Use of Exercise (3.0); 3 cr.** How to use exercise in physical therapy.

**PES 425 Adapted Physical Education (3.0); 3 cr.** Exercise programs adapted to the needs of the special student.

**PES 426 Adapted Physical Fitness (3.0): 3 cr.** Designed to promote knowledge and understanding of the needs and abilities of the special student in addition to the procedures and responsibilities of physical education for the special student. Emphasis will be placed on the development of methods to competently modify physical activities to suit students with various individual needs. *Corequisite:* PES 358.

**PES 430 Evaluation of PE (3.0); 3 cr.** Nature and use of a variety of tests - practical application and interpretation of results.

**PES 461 Teaching Practicum Elementary (3.0); 3 cr.** Application of PE and Sport methods in elementary schools.

**PES 470 Laboratory Practice in Kinesiology (3.0); 3 cr.**

**PES 472 Laboratory Practice in Kinesiology II (3.0); 3 cr.**

**PES 491 Senior Project (3.0); 3 cr.** Paper based on scientific research - topic chosen by student and approved by the department.

**PES 492 Internship (1.0): 1 cr.** Supervised, practical experience in teaching physical education activities or with approved professionals in select athletic training settings. Student must submit final report. *Prerequisite:* Senior standing and department chair approval.

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## The Degree of Bachelor of Arts in English Language

The B.A. English Language

- helps students obtain that mastery of the English language which is now necessary in most non-teaching careers,
- provides the necessary background required by those who intend to engage in teaching English language and/or literature, and
- prepares students to pursue graduate studies in language and/or literature.

### Graduation Requirements

Students majoring in English must successfully complete a total of 102 credits with an overall GPA of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements. A minimum grade of “C” is required in ENL 213 and ENL 223.

### Degree Requirements (102 credits)

**General Education Requirements** **33 cr.**

**Core Requirements** **48 cr.**

ENL 301, ENL 311, ENL 312, ENL 313, ENL 314, ENL 316, ENL 415, ENL 416, LIR 214, LIR 215, LIR 216, LIR 217, LIR 305, LIR 306, LIR 315, LIR 316

**Major Requirements from the following pool** **15 cr.**

ENL 315, ENL 317, ENL 321, ENL 322, ENL 324, ENL 411, ENL 412, ENL 413, ENL 414, ENL 417, ENL 421, ENL 430, LIR 323, LIR 324, LIR 325, LIR 411, LIR 412, LIR 421, LIR 422, LIR 423, LIR 424, LIR 425, LIR 426, LIR 427, LIR 428, LIR 430

**Free Electives** **6 cr.**

**Bachelor of Arts in English Language  
Suggested Program (102 Credits)**

**Fall Semester I (15 Credits)**

ENL	301	Introduction to the Study of Language	3 cr.
ENL	311	Phonetics	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

LIR	214	Introduction to Literary Genres	3 cr.
LIR	215	Introduction to Literary Criticism	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

ENL	312	Morphology	3 cr.
ENL	313	Syntax	3 cr.
ENL	314	English Vocabulary	3 cr.
LIR	216	English Literature to the end of the 19 <sup>th</sup> C.	3 cr.
—	—	ENL/LIR Pool Course	3 cr.

**Spring Semester II (15 Credits)**

LIR	217	American Literature to the end of the 19 <sup>th</sup> C.	3 cr.
LIR	305	Novel to the end of the 19 <sup>th</sup> C.	3 cr.
ENL	316	Fundamentals of Discourse Analysis	3 cr.
—	—	ENL/LIR Pool Course	3 cr.
—	—	ENL/LIR Pool Course	3 cr.

**Summer Session II (6 Credits)**

—	—	GER	3 cr.
—	—	Free Electives	3 cr.

**Fall Semester III (15 Credits)**

ENL	415	Applied Linguistics	3 cr.
ENL	416	Language Theories	3 cr.
LIR	306	Drama to the end of the 19 <sup>th</sup> C.	3 cr.
LIR	315	Modern and Contemporary Novel	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

LIR	316	Lebanese Writers	3 cr.
—	—	GER	3 cr.
—	—	ENL/LIR Pool Course	3 cr.
—	—	ENL/LIR Pool Course	3 cr.
—	—	Free Elective	3 cr.

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## Minor in English (18 credits)

Students minoring in English must successfully complete a total of 18 credits with a minimum average of 2.0/4.0 in the minor courses. Students must earn a “B” or higher in ENL 213 to be eligible to register for English minor courses.

### Option I: Language (18 cr.)

ENL 301

9 credits at the 300-level

6 credits at the 400-level

### Option II: Literature (18 cr.)

LIR 214

3 credits at the 200-level

12 credits at the 300 and 400-levels

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## Undergraduate Courses: English

**ENL 001 Intensive English I (20.0); 0 cr.** Designed to raise students' level of English to university standards.

**ENL 002 Intensive English II (12.0); 0 cr.** Designed to improve the students' level of English and to prepare for University. Emphasis on reading, writing, speaking and grammar. Students who score a B or above may register for ENL 110. Passing Grade is “C”.

**ENL 105 College English I (5.0); 5 cr.** This course places emphasis on listening, speaking, reading, and writing skills that will enable students to succeed in other courses offered at NDU. The passing grade for this course (non-credit carrying) is C. Students who earn a B or above may register directly in ENL 213.

**ENL 107 Freshman English II (5.0); 5 cr.** Designed to strengthen student proficiency in academic English. Students will master research techniques. *Corequisite:* ENL 105 or Placement.

**ENL 109 Freshman English I for Science (3.0); 3 cr.** Aims at facilitating the science students' access to university courses given in the English language.

**ENL 110 College English II (3.0); 3 cr.** This course bridges the gaps for those students who need to reinforce the basic skills taught in ENL 105 in order to succeed in sophomore-level university courses. Emphasis is on consolidating research techniques and further development of academic reading and writing skills. The passing grade for this course (non-credit carrying) is C. *Corequisite:* ENL 105 or Placement.

**ENL 111 Public Speaking (3.0); 3 cr.** Introduces Freshman students to the art of public speaking and communication in the English language. Emphasizes personal experience, informative and persuasive speaking. The course also aims to prepare for a successful transition into academic life. For Freshman students.

**ENL 213 Sophomore English Rhetoric (3.0); 3 cr.** Aims at developing the use of logic and reasoning in argumentation. A properly documented critical paper is required. *Prerequisite:* ENL 105 or ENL 110 or placement.

**ENL 223 Communication Arts (3.0); 3 cr.** Designed to introduce the student to the art and science of speech making and communicating with others. *Corequisite:* ENL 213

**ENL 230 English in the Workplace (3.0); 3 cr.** Provides students with the practical technical skills required for professional communication. *Corequisite:* ENL 213.

**ENL 301 Introduction to the Study of Language (3.0); 3 cr.** An introduction to the study of language; its nature, structure, and development. *Corequisite:* ENL 213.

**ENL 311 Phonetics (3.0); 3 cr.** Study of articulatory phonetics with emphasis on English sound systems. Practice in phonetic transcription. *Corequisite:* ENL 301.

**ENL 312 Morphology (3.0); 3 cr.** Word formation and the attempts to formulate a theory of word structure. *Corequisite:* ENL 301.

**ENL 313 Syntax (3.0); 3 cr.** Analysis of phrase and sentence structure in English and their

immediate constituents and types. *Corequisite:* ENL 312.

**ENL 314 English Vocabulary (3.0); 3 cr.** A detailed study of meaning relationships, with a study of borrowings from other languages. *Corequisite:* ENL 312.

**ENL 315 Transformational Grammar (3.0); 3 cr.** Involves students in solving exercises in a transformational generative syntax of English. Chomsky's grammar models are included. *Corequisite:* ENL 313.

**ENL 316 Fundamentals of Discourse Analysis (3.0); 3 cr.** Aims at introducing students to the different structural and communicative levels of discourse: textual organization (reference, cohesion, coherence, etc.), shared beliefs (presupposition, implicature, given-new information structure, etc.) and conversational analysis (turn-taking, interruptions, etc.). *Prerequisite:* ENL 301.

**ENL 317 Language Acquisition Theories (3.0); 3 cr.** Studies the process by which language develops in humans. Theories concerning first language acquisition as well as second language acquisition are discussed.

**ENL 321 Semiotics (3.0); 3 cr.** A study of the various patterns of bodily activities, and/or gestures which different English speaking communities systematically use in order to communicate.

**ENL 322 Language and Culture (3.0); 3 cr.** A study of cultural matter i.e. customs, traditions, ways of thinking, taboos, etc. which influence 'meaning' in language use.

**ENL 324 Creative Writing (3.0); 3 cr.** A course in creative writing through practical experiment, discussion, and stylistic study of models. Students will practice various writing genres. *Corequisite:* ENL 213

**ENL 411 History of the English Language (3.0); 3 cr.** A study of the major phonological, syntactic and lexical developments since 9<sup>th</sup> century. *Corequisite:* ENL 314.

**ENL 412 Phonology (3.0); 3 cr.** Studies phonological theory development. Emphasizes

generative phonology of English. *Corequisite:* ENL 311.

**ENL 413 Advanced English Grammar (3.0); 3 cr.** Study of English grammar as dealt with by the traditional grammarians. *Corequisite:* ENL 313.

**ENL 414 Sociolinguistics I (3.0); 3 cr.** Treats language as a social phenomenon. Linguistic variations, social, and contextual factors are studied. *Corequisite:* ENL 314.

**ENL 415 Applied Linguistics (3.0); 3 cr.** Studies the application of modern linguistics to teaching. Includes contrastive analysis between English and Arabic and error analysis. *Corequisite:* ENL 314.

**ENL 416 Language Theories (3.0); 3 cr.** Studies the historical development of linguistic theory with a critical analysis of the competing theories of language. *Corequisite:* ENL 411.

**ENL 417 Introduction to Critical Linguistics (3.0); 3 cr.** Looks at language from a functional systemic perspective. It utilizes linguistic techniques (tense, reference, deixis, transitivity, voice, theta roles, modality, etc.) in order to uncover implicit ideologies inherent in texts. Texts covered include scientific, religious, literary, political, and advertising texts. *Prerequisite:* ENL 301

**ENL 421 Varieties of English (3.0); 3 cr.** A systematic analysis of the major features/characteristics of the different 'styles' of English, i.e. commercial, scientific, legal, etc.

**ENL 430 Special Topics in Linguistics (3.0); 3 cr.** Investigation of special topics of current interest in Linguistics. May be repeated for credit with change of topic. *Prerequisite:* ENL 301.

**ENL 500 English for Specific Purposes (3.0); 3 cr.** This course is designed for graduate students in the sciences with deficiencies in the English language. The course focuses on developing vocabulary and grammar needed for expository writing, critical reading and discipline-specific tasks such as problem-solution sets, data commentary and reviews of research.

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## Undergraduate Courses: Languages

**CHI 201 Basic Chinese (3.0); 3 cr.** This course introduces students to basic Chinese conversation. Students practice everyday situations and learn how to read elementary Chinese. At the end of the course students will be able to give oral summaries.

**CHI 202 Intermediate Chinese (3.0); 3 cr.** This course is a continuation of Chinese 201. Emphasis is on improving conversational Chinese in addition to reading and writing.

**FRC 105 Freshman French I (3.0); 3 cr.** This course introduces the student to basic spoken and written French. Students will practice conversation on subjects of a daily nature. They will read and write on an elementary level. This course is designed for students who have no previous knowledge of the French language. For beginners only.

**FRC 110 Freshman French II (3.0); 3 cr.** This is an intermediate-level course in which students will improve their ability to hold conversations in French. They will read and write on an intermediate level; they will write paragraphs; summarizing and paraphrasing will also be practiced. Pre-requisite: placement test.**FRC 222 Sophomore French I (3.0); 3 cr.** Emphasizes writing critical analysis, and argumentation.

**FRC 222 Sophomore French I (3.0); 3 cr.** Refines the students' ability to write in French. Critical analysis, and argumentation will be practiced.

**FRC 223 Sophomore French II (3.0); 3 cr.** Emphasizes fluency in French. Students will present both extemporaneous and prepared speeches.

**FRC 231 French for Business (3.0); 3 cr.** This course aims to prepare students with a French

education to work in a career setting which uses the French language as its language of correspondence and negotiation. Students will practice both oral skills of business presentations and the written skills of report writing, resumé preparation, external and internal business correspondence. An aptitude test is obligatory before the "drop and add period."

**GEM 201 German I (3.0); 3 cr.** Practice in basic spoken German.

**GEM 202 German II (3.0); 3 cr.** Continuation of GEM 201. Emphasis on writing and reading.

**ITL 201 Italian I (3.0); 3 cr.** Practice in basic spoken Italian.

**ITL 202 Italian II (3.0); 3 cr.** Continuation of ITL 201. Emphasis on writing and reading

**LTN 201 Latin I (3.0); 3 cr.** Explanation of the different characteristics of the Latin language.

**LTN 202 Latin II (3.0); 3 cr.** Continuation of LTN 201. Emphasis on writing and reading.

**SPA 101 Introduction to Spanish (3.0); 3 cr.** This course introduces Freshman students to the Spanish language and civilization. Students will practice speaking, reading, and writing. Emphasis will be developing the ability to communicate with Spanish-speaker. For Freshman students.

**SPA 201 Spanish I (3.0); 3 cr.** Practice in basic spoken Spanish.

**SPA 202 Spanish II (3.0); 3 cr.** Continuation of SPA 201. Emphasis on writing and reading.

**SYR 201 Syriac I (3.0); 3 cr.** This course introduces students to the Syriac Language.

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## Undergraduate Courses: Literature

**LIR 101 Introduction to Literature in English (3.0); 3 cr.** This introductory course is aimed at providing freshman students with an opportunity to appreciate literature and improve their English communication skills. Students will study significant literary genres, including fiction, poetry, and drama. Material covered will be representative of pre-Modern, Modern and Post-Modern literature originally written in English,

and will include Women's, Children's, and Minority literature. For Freshman students.

**LIR 211 Survey of English Literature I (3.0); 3 cr.** Surveys English poetry and prose from the Anglo-Saxon period to the rise of Romanticism.

**LIR 212 Survey of English Literature II (3.0); 3 cr.** Continuation of LIR 211 from Romantic period to the mid-twentieth century.

**LIR 213 Survey of American Literature (3.0); 3 cr.** Surveys poetry and prose from the Colonial Period to the mid-19th century.

**LIR 214 Introduction to Literary Genres (3.0); 3 cr.** Studies the essential features of poetry, fiction, and drama. Selections include representative texts by British, Irish, and American literary figures. *Corequisite:* ENL 213.

**LIR 215 Introduction to Literary Criticism (3.0); 3 cr.** Presents the basic principles of literary criticism from its beginnings with Plato to the end of the 19th century. *Corequisite:* ENL 213

**LIR 216 English Literature to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** Surveys the literary currents and movements of poetry and prose, excluding fiction and drama, from the Anglo-Saxon period to the end of the 19th century. *Corequisite:* ENL 213

**LIR 217 American Literature to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** Studies major American authors and movements from the Colonial period to the end of the 19th century. *Corequisite:* ENL 213

**LIR 301 Introduction to Fiction (3.0); 3 cr.** Studies the formal elements of fiction. Selections will be from British and American writers.

**LIR 302 Introduction to Poetry (3.0); 3 cr.** Studies the elements of poetry with emphasis on prosody, imagery, and language. Selections from British and American poets.

**LIR 303 Introduction to Drama (3.0); 3 cr.** Studies drama as literary genre. Readings include representative selections from the Middle Ages to the Modern Period.

**LIR 304 Introduction to Shakespeare (3.0); 3 cr.** Studies the major works of Shakespeare.

**LIR 305 Novel to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** A study of the development of the novel to 1900. Selections will include representative novels by Defoe, Richardson, Austin, Dickens, the Bronte sisters, Eliot, and Hardy.

**LIR 306 Drama to the End of the 18th. Century (3.0); 3 cr.** A study of the development of drama from its origins to 1800. Selections will include major representative works.

**LIR 311 Twentieth Century Literature (3.0); 3 cr.** Studies the major themes in contemporary American literature.

**LIR 312 Literary Criticism (3.0); 3 cr.** A survey of literary disciplines and methods from Plato to the Modern Age.

**LIR 313 Orientalism in English Literature (3.0); 3 cr.** This course gives a definition of the term "Orientalism" and traces the germination and development of Oriental scholarship in England ever since the medieval period and up to the nineteenth century.

**LIR 314 Creative Literary Writing (3.0); 3 cr.** Workshop course in the writing of literary pieces, fictional and poetic, emphasizing discussion of student work.

**LIR 315 Modern and Contemporary Novel (3.0); 3 cr.** Presents the major works of British and American novelists of the 20th century. Contemporary authors are emphasized.

**LIR 316 Lebanese Writers (3.0); 3 cr.** Studies major Lebanese writers and their impact on both the East and the West with emphasis on Lebanese immigrant literature.

**LIR 323 Orientalism and Post-Colonial Studies (3.0); 3 cr.** Defines Orientalism and Post-Colonialism, and traces their germination and development.

**LIR 324 Modern and Contemporary Poetry (3.0); 3 cr.** Presents the major works of British and American poets of the 20th and 21st centuries. Contemporary authors are emphasized.

**LIR 325 Science Fiction (3.0); 3cr.** Envisioning the advances of science through the exercise of creative imagination, this course on science fiction traces the evolution of its dominant themes, metaphors, and techniques, and its cultural significance. Material covered includes written text, film, and digital representations.

**LIR 411 Shakespeare (3.0); 3 cr.** Studies the major dramatic works of Shakespeare and his contemporaries.

**LIR 412 Modern and Contemporary Drama (3.0); 3 cr.** Presents the major works of British and American playwrights of the 20th and 21st centuries. Contemporary authors are emphasized. *Prerequisites:* LIR 214 and LIR 215.

**LIR 413 Restoration and 18th Century Literature (3.0); 3 cr.** A study of the poetry and prose, excluding novel and drama, of principal writers from Butler to Johnson

**LIR 414 19th Century Literature (3.0); 3 cr.** A study of both the Romantic and the Victorian movements and their representative poets from Wordsworth to Arnold.

**LIR 415 20th Century Novel and Drama (3.0); 3 cr.** Readings and analysis of representative works by principal novelists and playwrights.

**LIR 416 20th Century Poetry (3.0); 3 cr.** A study of the modern poetic temper as reflected in the works of major British and Irish poets.

**LIR 417 Lebanese-American Writers (3.0); 3 cr.** A study of the major Lebanese-American writers, known as the Lebanese immigrant writers, and their literary impact.

**LIR 418 Comparative Literature (3.0); 3 cr.** A study of the concepts of comparative literature and literary theory and their applications to several literary topics and disciplines.

**LIR 421 Modern and Contemporary Critical Theory (3.0); 3 cr.** Presents the major developments of modern and contemporary critical theory from its beginnings with Formalism, passing by New Criticism and Structuralism, to the latest developments in Post-Structuralist theory. Latest trends are stressed. *Prerequisites:* LIR 214 and LIR 215.

**LIR 422 Urban Studies ["The City as Literary Artefact"] (3.0); 3 cr.** Studies the representation of the city as literary artefact based on literary and critical theory paradigms. *Corequisite:* LIR 421

**LIR 423 Film and Media Studies (3.0); 3 cr.** Presents the juncture between literary theory and

the latest developments in film and media studies. *Prerequisites:* LIR 214 and LIR 215

**LIR 424 Gender Studies (3.0); 3 cr.** Traces themes of gender in literature through the prism of a critical theory that addresses the feminine and masculine.

**LIR 425 Women Writers (3.0); 3 cr.** Studies the ways female writers have contributed to, challenged, and reshaped the literary tradition. Traces women writers' choice of themes and genres, the relationship between expectations for women writers and readers and what women wrote, and the changing social role of the woman author writing for herself and for others across several centuries of cultural change.

**LIR 426 World Literature (3.0); 3 cr.** This course is a critical study of world masterpieces in translation.

**LIR 427 Marketing Literature: The Best-Seller (3.0); 3 cr.** Literature as marketed through various institutions such as book prizes, media advertising, reviews, and the role of critical assessment in the formation of canons and counter-canons are explored in connection with the phenomenon of the best-seller. Questions such as how and why best-sellers are produced, and how they influence and shape the existing narrative discourse are raised.

**LIR 428 Travel Literature (3.0); 3 cr.** This course explores the germination and development of travel writing and its influence on cross-cultural awareness; representations of discourse, landscape, and ethnicity; and movements across cultural landscapes through narratives embodied in novels, explorer journals, travelogues, and others.

**LIR 430 Special Topics in Literature (3.0); 3 cr.** Explores particular authors, topics, themes in depth. May be repeated for credit with change of topic. *Prerequisites:* LIR 214 and LIR 215.

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## **The Degree of Bachelor of Arts in Translation and Interpretation**

The purpose of the B.A. in Translation and Interpretation is to prepare expert translators and interpreters to meet the present and future demands of translation in the fields of law, economics, politics, diplomacy, the humanities, media, and the arts.

The program is designed to refine students' linguistic skills in Arabic, English, and French. In this program, Arabic and English are the principal languages of translation.

Special skills include:

- Developing verbal and written messages,
- Developing proficiency in speech delivery with accurate pronunciation, intonation, tempo and rhythm,
- Acquiring the latest methods of translation, summary, reporting, analysis, and interpreting,
- Integrating knowledge and experience in the use of modern translation and interpreting equipment and technology, and
- Developing intellectual and cultural formation.

Students may choose to emphasize either Translation or Interpretation.

Once admitted to the program students are required to develop competence in the three languages: English, Arabic, and French. Students may be required to take remedial courses in these languages in which a "C" or above is required.

### **Graduation Requirements**

Students majoring in Translation and Interpretation must successfully complete a total of 108 credits with a minimum grade-point average of 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements including the emphasis area. These credits are divided into:

**Degree Requirements – Translation Emphasis  
(108 credits)**

**General Education Requirements** **33 cr.**

**Core Requirements** **52 cr.**

ENL 314, ENL 312, TRA 201, TRA 211, TRA 212, TRA 301, TRA 302,  
TRA 311, TRA 312, TRA 331, TRA 401, TRA 402, TRA 411, TRA 412,  
TRA 421, TRA 422, INT 431, INT 432

**Major Translation Requirements** **16 cr.**

TRA 403, TRA 431, TRA 432, TRA 433, TRA 434, TRA 480

**Free Electives** **7 cr.**

**Degree Requirements – Interpretation Emphasis  
(108 credits)**

**General Education Requirements** **33 cr.**

**Core Requirements** **52 cr.**

ENL 314, ENL 312, TRA 201, TRA 211, TRA 212, TRA 301, TRA 302,  
TRA 311, TRA 312, TRA 331, TRA 401, TRA 402, TRA 411, TRA 412,  
TRA 421, TRA 422, INT 431, INT 432

**Major Interpretation Requirements** **16 cr.**

INT 433, INT 434, INT 435, INT 436, INT 480, FRC 223

**Free Electives** **7 cr.**

**Bachelor of Arts in Translation and Interpretation  
Suggested Program (108 Credits)**

**Fall Semester I (15 Credits)**

TRA	201	Trans. Theory and Methodology	3 cr.
ENL	314	English Vocabulary	3 cr.
—	—	GER	9 cr.

**Spring Semester I (15 Credits)**

TRA	211	Trans. Of Cont. Engl. Texts	3 cr.
TRA	212	Trans. Of Cont. French Texts	3 cr.
ENL	312	Morphology	3 cr.
—	—	GER	6 cr.

**Summer Session I (3 Credits)**

—	—	GER	3 cr.
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**Fall Semester II (15 Credits)**

TRA	301	Trans. of English Documents	4 cr.
TRA	302	Trans. of French Documents	4 cr.
—	—	GER	6 cr.
—	—	Free Elective	1 cr.

**Spring Semester II (15 Credits)**

—	—	GER	3 cr.
TRA	311	Trans. of English Legal Documents	3 cr.
TRA	312	Trans. of French Legal Documents	3 cr.
TRA	331	Mechanical Translation and Interpretation	3 cr.
—	—	Free Electives	3 cr.

**Summer Session II (3 Credits)**

—	—	Free Electives	3 cr.
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**Fall Semester III (15 Credits)**

TRA	401	Trans. of Engl. Bus. Texts	3 cr.
TRA	402	Trans. of French Bus. Texts	3 cr.
TRA	403	Translation Practicum	3 cr.
INT	431	Interpreting: Engl. Ara. I	3 cr.
INT	432	Interpreting French-Arabic I	3 cr.

**Spring Semester III (15 Credits)**

TRA	411	Trans. of Engl. Films	2 cr.
TRA	412	Trans. of French Films	2 cr.
TRA	421	Trans. of Engl. Lit.	2 cr.
TRA	422	Trans. of French Lit.	2 cr.
TRA	480	Trans. Internship <b>OR</b>	1 cr.
INT	480	Interpreter Internship	1 cr.
—	—	GER	6 cr.

**Fall Semester IV Emphasis (15 Credits)**

TRA	—		15 cr.
/INT	—		

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## Minor in Translation (16 credits)

Students minoring in Translation must successfully complete a total of 16 credits with a minimum average of 2.0/4.0 in the minor courses. Students in this minor would choose between two language options: Arabic/ English or Arabic/French. Students must earn a B or higher in the Arabic and French Assessment Exams and in ENL 213.

### Option I: Arabic/English (16 cr.)

TRA 201	Translation Theory and Methodology (3 cr.)
TRA 211	Translation of English Contemporary Texts (3 cr.)
TRA 301	Translation of English Documents (4 cr.)
TRA 331	Mechanical Translation (3 cr.)
TRA 401	Translation of English Business Texts (3 cr.)

### Option II: Arabic/French (16 cr.)

TRA 201	Translation Theory and Methodology (3 cr.)
TRA 212	Translation of French Contemporary Texts (3 cr.)
TRA 302	Translation of French Documents (4 cr.)
TRA 331	Mechanical Translation (3 cr.)
TRA 402	Translation of French Business Texts (3 cr.)

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## Undergraduate Courses: Interpretation

**INT 431 Interpreting: English-Arabic I (3.0); 3 cr.** Aims to help students develop competence in consecutive interpretation needed at international congresses. *Prerequisite:* TRA 421.

**INT 432 Interpreting: French-Arabic I (3.0); 3 cr.** Aims to help students develop competence in consecutive interpretation needed at international conferences. *Prerequisite:* TRA 422.

**INT 433 Interpreting: French-English I (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. *Prerequisites:* INT 431 or INT 432.

**INT 434 Interpreting: English-Arabic II (3.0); 3 cr.** Aims to help students develop competence

in simultaneous interpretation needed at international conferences. *Prerequisite:* INT 431.

**INT 435 Interpreting: French-Arabic II (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international congresses. *Prerequisite:* INT 432.

**INT 436 Interpreting: French-English II (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. *Prerequisite:* INT 433.

**INT 480 Interpreter Internship; 1 cr.** Practical training in a professional setting at conferences using simultaneous interpretation supervised by the instructor. *Prerequisite:* INT 433.

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## Undergraduate Courses: Translation

**TRA 201 Translation Theory and Methodology (3.0); 3 cr.** Provides students with a firm foundation of both translation and methodology.

**TRA 202 Translation Theory and Methodology II (3.0); 3 cr.** Provides students with further understanding of translation methodology. *Prerequisite:* TRA 201.

**TRA 211 Translation of English Contemporary Texts (3.0); 3 cr.** Familiarizes

students with different genres and contemporary literature English/Arabic. *Corequisites:* TRA 201, ENL 213.

**TRA 212 Translation of French Contemporary Texts (3.0); 3 cr.** Familiarizes students with different genres and features of contemporary literature. French/Arabic. *Corequisite:* TRA 201.

**TRA 301 Translation of English Documents (3.2); 4 cr.** Develops competence in translating

official, legal, and judicial English/Arabic texts. *Corequisite:* TRA 212.

**TRA 302 Translation of French Documents (3.2); 4 cr.** Trains students in translating official, legal, and judicial French/Arabic texts. *Prerequisite:* TRA 212.

**TRA 311 Translation of English Legal Documents (3.0); 3 cr.** Trains students in interpreting and translating English and Arabic texts which cover diverse areas of law. *Prerequisite:* TRA 301.

**TRA 312 Translation of French Legal Documents (3.0); 3 cr.** Trains students in interpreting and translating French and Arabic texts which cover diverse areas of law. *Prerequisite:* TRA 302.

**TRA 331 Mechanical Translation and Interpretation (3.0); 3 cr.** Use of modern equipment in the field of translation and interpretation. *Prerequisites:* TRA 301 or TRA 302.

**TRA 332 Mechanical Translation and Interpretation (3.0); 3 cr.** Further practice in the use of modern equipment in the field of translation and interpretation. *Prerequisite:* TRA 331.

**TRA 401 Translation of English Business Texts (3.0); 3 cr.** Aims to train students in interpreting and translating English and Arabic texts which cover diverse areas of business. *Prerequisite:* TRA 301.

**TRA 402 Translation of French Business Texts (3.0); 3 cr.** Trains students in interpreting and translating French and Arabic texts which cover diverse areas of business. *Prerequisite:* TRA 302.

**TRA 403 Translation Practicum (3.0); 3 cr.** Offers intensive practice in translating contemporary English into French and vice versa. *Prerequisite:* TRA 402.

**TRA 411 Translation of English Films (2.0); 2 cr.** Focuses on the translation of the literature and language (English and Arabic) of motion pictures and television. *Prerequisite:* TRA 301.

**TRA 412 Translation of French Films (2.0); 2 cr.** Focuses on the translation of the literature and language (French and Arabic) of motion pictures and television. *Prerequisite:* TRA 302.

**TRA 421 Translation of English Literature (2.0); 2 cr.** Offers intensive practice in translating English literary and artistic texts into Arabic. *Prerequisite:* TRA 301.

**TRA 422 Translation of French Literature (2.0); 2 cr.** Offers intensive practice in translating French literary and artistic texts into Arabic. *Prerequisite:* TRA 302.

**TRA 431 Translation of Cultural Texts I (3.0); 3 cr.** Focuses on intensive practice in translating Arabic cultural texts (historical, religious, philosophical, etc.) into English. *Corequisite:* TRA 421.

**TRA 432 Translation of Cultural Texts II (3.0); 3 cr.** Focuses on intensive practice in translating English cultural texts into Arabic. *Corequisite:* TRA 421.

**TRA 433 Translation of Cultural Texts III (3.0); 3 cr.** Focuses on intensive practice in translating Arabic cultural texts into French. *Corequisite:* TRA 422.

**TRA 434 Translation of Cultural Texts IV (3.0) 3 cr.** This course focuses on intensive practice in translating French cultural texts into Arabic. *Corequisite:* TRA 422.

**TRA 480 Translation Internship (1.0); 1 cr.** Practical training in a professional setting supervised by the instructor. *Corequisite:* TRA 422.

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## **The Degree of Master of Arts in English Language and Literature**

### **Literature Emphasis**

The M.A. in English Language and Literature, Literature emphasis, is intended to crystallize students' expertise in English studies and to augment their exposure to contextual areas of the discipline. The techniques and fields of research are set to provide students with opportunities either to pursue further graduate studies or engage in research or teaching.

### **Graduation Requirements**

To satisfy the requirements for the Master of Arts in English Language and Literature emphasis, the student must complete 36 credits with an overall average of 3.0/4.0 including submitting and defending a thesis. Over and above these requirements, a candidate must take a three non-credit course in a second European language. Students may be exempted from this requirement if they:

1. Sit for a proficiency test in the second European language and score 500 or above  
or
2. Submit proof of proficiency certificate from an acknowledged institute of education.

### **Major Requirements**

ENL 601, LIR 605, LIR 662, LIR 699

**15 cr.**

### **Electives**

Students may select electives from the following:

LIR 604, LIR 606, LIR 607, LIR 608, LIR 609, LIR 610, LIR 612, LIR 613,  
LIR 615, LIR 616, LIR 617, LIR 618, LIR 619, LIR 620, LIR 626, LIR 627,  
LIR 628, LIR 629, LIR 630, LIR 634, LIR 635, LIR 636, LIR 637, LIR 640,  
LIR 682

**21 cr.**

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## Graduate Courses: English Language and Literature Literature Emphasis

**LIR 604 Literature and War in the 20<sup>th</sup> and 21<sup>st</sup> Centuries (3.0); 3 cr.** This course will explore contemporary literature that responds to and depicts war and violence including the World Wars, the Vietnam War, the Lebanese Civil War, the Palestinian/Israeli crisis and the Iraq War among others. The objective of this course is to explore the modalities of war and violence in a range of forms and contexts and the role they play in the construction/reconstruction of subjectivities and narratives. Writers will include Kurt Vonnegut, Virginia Woolf, Tim O'Brien, Ghada Al-Samman, Nuha Al-Radi, René Girard, Elaine Scarry and others.

**LIR 605 Critical/Literary Theory (3.0); 3 cr.** A major course which lays the ground for advanced interpretative studies and skills, Critical/Literary Theory addresses contemporary critical issues dealing with the ways in which literary texts are read in the context of an increasingly rich and complex multi-cultural and multi-disciplinary world.

**LIR 606 Tracing the Imaginary in Literary Studies (3.0); 3 cr.** From Plato to Descartes, to Coleridge, and on to Lacan, Deleuze, Castoriadis, and Crapanzano in the twentieth-century, the imaginary has been a productive concept in appreciating the value of literature and art, as well as approaching the theme of the constitution of selfhood. In this course we will trace how the imaginary has been conceptually valued and employed in literary studies and philosophy.

**LIR 607 Satire: From Dryden to Byron (3.0); 3 cr.** The course studies satire as a dominant form of poetic expression from 1660 until the 1830s. The poetic and prosaic works of Butler, Dryden, Pope, Swift, Johnson, Blake, Shelley, and Byron are studied in relation to the targets of their satire in their respective periods. Special consideration is on the humanistic role of satire and its impact on the course of political, social, and economic events not only in England and Ireland but also on the continent, especially after the expansion of industrialism during the eighteenth century and the advancement of liberalism during the late eighteenth and early nineteenth centuries.

**LIR 608 Feminist Literary Criticism (3.0); 3 cr.** This course will examine the ways in which developments in feminist criticism reflect trends in mainstream contemporary literature and culture. Topics studied may include Feminism and Colonialism, Feminism and Psychoanalysis, French Feminism, Marxist Feminism, and Eco-Feminism and writers will include Hélène Cixous, Julia Kristeva, Judith Butler, Luce Irigaray, Donna Haraway, Caroline Marchant, and Simone de Beauvoir.

**LIR 609 Postmodernism and Beyond: The Rise and Fall of Theory (3.0); 3 cr.** Postmodernism has been hailed as one of the most significant transformations in the interpretative history of humanity, and a body of principles and practices, known as "Theory," has stormed academia since the last quarter of the twentieth century. The most notable theoreticians of this peculiar interest have been centered mainly in Europe but also in the United States. Yet, at the beginning of the third millennium, voices have been raised against what is perceived as the hegemony of "theory," and attempts are being made, on the one hand, to break the dictatorship of postmodernist thought and, on the other hand, to delineate the features of the new age. Theorists include J. Hillis Miller, Terry Eagleton, Fredric Jameson, Umberto Eco, and others.

**LIR 610 Postcolonial Discontents (3.0); 3 cr.** "What is English about English literature?" writes Salman Rushdie, effectively giving voice to a primary theme and preoccupation of postcolonial literary theory. In this course we will read both postcolonial theory and postcolonial literatures, so as to gain some appreciation of these forms of writing and critical inquiry. Novels include Malouf's *An Imaginary Life*, Harris' *Palace of the Peacock*, Rhys' *Wide Sargasso Sea*, Conrad's *Lord Jim*, Morrison's *Beloved*.

**LIR 612 Dramatic Literature of the Jacobean and Restoration Periods (3.0); 3 cr.** Extensive reading of Jacobean and Restoration drama.

**LIR 613 Advanced Shakespearean Studies (3.0); 3 cr.** This advanced course deals with the latest trends in Shakespearean studies and criticism, such as playwrighting, theater, and performance.

**LIR 615 The Irish Dramatic Movement (3.0); 3 cr.** Analysis of the rise of Irish drama.

**LIR 616 Romantic Narrative Poetry: A Seminar (3.0); 3 cr.** The course studies the Romantics' long narrative poetic works. It explores romantic narrative poetry as a reflection of the romantics' concern in the hero as a person of magnitude facing the mystifying and incomprehensible or as a common person living the tragic events of everyday life. The course pays particular attention to long narrative poetry as a replacement for the epic. Texts include: Wordsworth's *The Prelude*, *The Ruined Cottage*, and *Michael*, Coleridge's *Christabel* and *The Rime of the Ancient Mariner*, Byron's *Don Juan* and *Childe Harold's Pilgrimage*, Shelley's *Alastor* and *Epipsychidion*, and Keats's *Endymion*, *Isabella*, and *Hyperion*.

**LIR 617 Identity Through Writing: Women Writers of the Arab World (3.0); 3 cr.** This course will examine how Arab women have articulated and expressed their subjectivity, responded to cultural, social, political and familial demands and created a literary and feminist aesthetic. Authors include Naomi Shihab Nye, Ahdaf Soueif, Evelyne Accad, Etel Adnan, Margot Badran, Fadia Faqir, and Diana Abu-Jaber.

**LIR 618 Representations of the City in 20<sup>th</sup>-Century American Fiction (3.0); 3 cr.** The city has been, since Theodore Dreiser's *Sister Carrie*, one of the important loci of American fiction. As the city landscape developed, the relationship between city-dwellers and their urban practices has evolved and produced a narrative which attempts to fictionalize the experience of living and moving in the city, as well as inscribing the self in the frame of the emerging polis. Authors include Thomas Pynchon, Paul Auster, Don DeLillo, Steven Millhauser, E.L. Doctorow, and others.

**LIR 619 Seductive Identifications (3.0); 3 cr.** Multicultural or ethnic minority literature has come to be recognized as an important aspect of the cultural landscapes of Australia, Canada, and the United States. In this course we will read both creative and critical literatures in English that define specific sites of multicultural engagement. Readings include Castro's *Birds of Passage*, Haikal's *Seducing Mr Maclean*, Kureishi's *The Buddha of Suburbia*, and the poetry of Antigone Kefala.

**LIR 620 Lord Byron and the Orient: A Seminar (3.0); 3 cr.** The course is an in-depth study of the Oriental peoples, cultures, traditions, sites, climates, themes, and colorings of Lord Byron's Eastern Tales: *The Bride of Abydos*, *The Giaour*, *The Corsair*, and *Siege of Corinth*. Short selections of other major works like *Lara*, *Childe Harold's Pilgrimage*, and *Don Juan*, which allude to the Orient, will be studied as well. Students will investigate Byron's Oriental scholarship and his authenticity in representing the various elements of the East.

**LIR 626 Visual Storytelling(3.0); 3 cr.** An unexplored literary genre, the graphic novel provides a unique interplay of words and images whereby the narrative is relayed through words accompanied by illustrative art. The course will examine the link between visuality and narrativity and will focus on meaning, agency, representation, semiotics, and myth. Students will study the evolution of the genre, its structure, language and impact on today's readers. Authors might include the Pulitzer-Prize winner Art Spiegelman, Raymond Briggs, R. Crumb, Marjane Satrapi, Paul Auster, Jean Baudrillard, Walter Benjamin, and Roland Barthes.

**LIR 627 Re-Creations of the Industrialized Past and Visions of the Virtual Future: The Influence of Steampunk and Cyberpunk (3.0); 3 cr.** The last two decades of the twentieth century have been marked by unprecedented advances in science, and fiction has been quick to incorporate the findings of what is called the "New Technologies" into its narrative representations of the nature of reality, society, and the individual. Recreated memories of an advanced past and visions of a dystopian future, and imagined virtual worlds challenging our notions of what reality is, have been the centerpiece of the two new genres of steampunk and cyberpunk. The works of Bruce Bethke, William Gibson, Bruce Sterling, Pat Cadigan, Neal Stephenson, Jeff Noon, Greg Bear, and others are included.

**LIR 628 Reading Masculinity (3.0); 3 cr.** This course is concerned with how literature has contributed to symbolic and signifying networks of exchange in which masculinity is constructed, negotiated, parodied and explored as a site of eroticism, romanticism, and violence. We will read Bob Connell's *Masculinities* and other critical works, as well as a selection of novels that lend themselves to a critical approach to the

theme. Readings include Hemmingway, Wilde, Patricia Highsmith's *The Cry of the Owl*, Christos Tsiolkas' *Loaded*.

**LIR 629 Ameen Rihani and Kahlil Gibran: A Seminar (3.0); 3 cr.** The course studies the English works of the Lebanese-American writers Ameen Rihani and Kahlil Gibran. Emphasis will be on *The Book of Khalid* and *The Prophet* and their enormous influence on building bridges between the East and the West. Those and other works like Rihani's essays and Gibran's prophetic narratives, which have become so well known and studied in the curricula of world universities, will be studied as advancing East-West cross-cultural integration.

**LIR 630 Contemporary Voices in Exile (3.0); 3 cr.** What is the relationship between exile and literary creativity? Does exile contribute to creative freedom or entrap the writer in nostalgia? Why do some writers choose to write in the language of their adopted country? The condition of exile has produced a distinctive literary voice where the dilemmas of language, identity, politics and diaspora are examined. This course will examine the effects of such dilemmas on writers living and writing in exile. Authors may include Amine Maalouf, Hanif Kureishi, Andrea Levy, Miroslav Jancic, Samuel Beckett, Salman Rushdie, Etel Adnan, Vladimir Nabokov and Chinua Achebe.

**LIR 634 The Detective Story: History and Themes (3.0); 3 cr.** This course traces the development of the detective story from its creation by Edgar Allan Poe to the present day. Starting with classical novels of detection and moving to "hard-boiled" private eyes and culminating with the "metaphysical" and postmodern detective, key figures like Arthur Conan Doyle, Wilkie Collins, G. K. Chesterton, Agatha Christie, Dorothy L. Sayers, Ellery Queen, Dashiell Hammett, Raymond Chandler, Rex Stout, Georges Simenon, Paul Auster, Patricia Cornwell, and Michael Dibdin are presented along their representative works.

**LIR 635 Out-Posting Empire (3.0); 3 cr.** The works of Edward Said, Homi Bhabha and

Gayatri Spivak among others, study postcolonial criticism of imperial culture. In this course we will trace the trajectory of their works. Some of the themes covered are: critique of textualism, engagement with the work of Foucault, and intellectual vocation.

**LIR 636 Western Images of the East (3.0); 3 cr.** This course studies the major Western figures, literary ones, artists, travelers, scientists, explorers, and so on, who projected the image of the East in their literary and scholarly works and in their travelogues and documents. Students study particularly, but not exclusively, Orientalists like Sir William Jones, Simon Ockley, Sir Henry Holland, Lady Mary Wortley Montagu, Sir Richard Burton, Godfrey Higgins, John Lewis Burckhardt, Eugene Delacroix, and others.

**LIR 637 From Modernism to Postmodernism: Readings in 20<sup>th</sup>-Century British and American Fiction (3.0); 3 cr.** This course explores the ways in which British and American fiction have developed between the first and second halves of the twentieth century. The passage from modernism to postmodernism has been most obvious in literary discourse and the study of British and American narratives in these two periods will help not only understand this epochal shift in consciousness but will also place these narratives in their social and cultural frame. Authors include Anthony Burgess, John Fowles, Kurt Vonnegut, Norman Mailer, Thomas Pynchon, and others.

**LIR 640 Selected Topics and/or Figures (3.0); 3 cr.** This course aims at accommodating the students' particular research interests.

**LIR 662 World Literature (3.0); 3 cr.** A study of major literary works by non-Anglo-Saxon authors.

**LIR 682 Seminar in Selected Topics (3.0); 3 cr.** An in-depth analysis of selected topics and themes as delineated in literature.

**LIR 699 Thesis 6 cr.** The research for the master thesis must show the student's proficiency in approved topics in literature.

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## **The Degree of Master of Arts in English Language and Literature**

### **Applied Linguistics and TEFL Emphasis**

The M.A. in English Language and Literature, Applied Linguistics and TEFL emphasis is designed to help students develop language teaching competence. Holders of the degree may choose to move on to careers such as lecturers in teacher training colleges, advisors in ministries of education, specialist inspectors, heads of departments, syllabus designers, materials and test writers etc. Others may wish to pursue further graduate studies and make a significant contribution to advanced research work.

#### **Admission Requirements**

Preference is given to applicants with additional qualifications and professional experience (teaching). Applicants must provide evidence of a high level of proficiency in English before their application can be considered; a minimum of 600 in the EET (English Entrance Test) is required for admission. For those who take the GRE (Graduate Record Exam), proof of a satisfactory performance is required.

#### **Graduation Requirements**

To satisfy the requirements for the M.A. in English Language and Literature, Applied Linguistics and TEFL emphasis, the student must complete a total of 36 credits with an overall average of 3.0/4.0 including submitting and defending a thesis.

#### **Major Requirements**

**24 cr.**

These consist of the following: ENL 601, ENL 602, ENL 612, ENL 613, ENL 623, ENL 631, ENL 699

#### **Electives**

**12 cr.**

Students may select electives from the following: ENL 611, ENL 621, ENL 622, ENL 624, ENL 632, ENL 633, ENL 641, EDU 681, EDU 682, EDU 683, EDU 684

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## Graduate Courses: English Language and Literature Applied Linguistics and TEFL Emphasis

**ENL 601 Bibliography and Methodology of Research (3.0); 3 cr.** Studies the materials, tools, and methods of research.

**ENL 602 Intro. to Applied Linguistics and Lang. (3.0); 3 cr.** Introduces the fundamental concepts of language learning and teaching.

**ENL 603 Linguistics (3.0); 3 cr.** A study of major trends and methodologies in linguistics.

**ENL 611 Analytical English Grammar (3.0); 3 cr.** Analyzes the problems of teaching grammar in light of current developments in the field.

**ENL 612 Psycholinguistics (3.0); 3 cr.** Emphasizes learners' strategies L1 and L2 acquisition and motivation.

**ENL 613 Sociolinguistics II (3.0); 3 cr.** Studies the links between sociolinguistic theory and L2 acquisition.

**ENL 621 Arabic Linguistics and Sociolinguistics (3.0); 3 cr.** Emphasizes Arabic phonology, semantics, and syntax as well as language varieties in the Lebanese community.

**ENL 622 Contrastive Analysis and Error Analysis (3.0); 3 cr.** A classroom-based study of L1 (Arabic) and L2 (English) along with detailed analysis of Lebanese learners' errors.

**ENL 623 Language Teaching Methodology (3.0); 3 cr.** Relates language-teaching theory to teaching aural/oral reading and writing skills. *Corequisites:* ENL 612, ENL 613.

**ENL 624 Discourse Analysis (3.0); 3 cr.** Emphasizes text analysis in order to produce relevant teaching material.

**ENL 631 Measurement and Evaluation (3.0); 3 cr.** Investigates linguistic tests and measurements and emphasizes test evaluation.

**ENL 632 Syllabus and Materials Design (3.0); 3 cr.** Studies syllabus design; EAP and ESP course designs are stressed. *Corequisite:* ENL 623

**ENL 633 Data Processing in L2 Teaching (3.0); 3 cr.** Emphasizes the use and design of computer programming for L2 learning.

**ENL 641 Field Methodology (3.0); 3 cr.** Considers the theory and practice of training teachers of English as a foreign or second language. *Prerequisite:* ENL 623.

**ENL 699 Thesis 6 cr.** Research for the master's thesis must show the student's proficiency in approved topics in applied linguistics.

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## **The Degree of Master of Arts in Education**

The degree of Master of Education is offered to promote educational professionalism and to enhance the University's role in the field of education. The M.A. program concentrates on three areas: Special Education, School Management and Educational Leadership, and Educational Technology. The general educational objective of the program to better serve the community is met by offering necessary specializations and pioneering programs.

### **Admission Requirements:**

Candidates are expected to have completed the degree of Bachelor of Education, Bachelor of Arts in Education, or Bachelor of Arts with a Teaching Diploma from an accredited university. Candidates holding the degree of Bachelor of Arts or Sciences in a related field from an accredited university will be considered on an individual basis, pending the decision of the Department concerning special admission conditions.

### **Graduation Requirements:**

To satisfy the requirements for the degree of Master of Arts in Education, the student must complete a total of 33 credits with an overall average of 3.0/4.0, inclusive of a thesis.

## Degree Requirements (33 credits)

### Major Requirements

15 cr.

Complete the following required courses:  
EDU 610, EDU 611, EDU 622, EDU 699

### Electives

9cr.

Three out of the following courses  
EDU 612, EDU 613, EDU 614, EDU 621, EDU 623, EDU 624.

### Concentration Areas:

9 cr.

**1. Special Education:** The Special Education concentration prepares educators to work with students with special needs. The program emphasizes interaction between students, teacher, and school administrations.

- Three from the following courses: EDU 641, EDU 642, EDU 643, EDU 644

**2. School Management and Educational Leadership:** Educators who wish to pursue a career in school administration will be exposed to best practice in policy making, leadership skills, law and methodology.

- Three from the following courses: EDU 651, EDU 652, EDU 653, EDU 654

**3. Educational Technology:** Educators interested in applying modern technology to the classroom will benefit from this concentration. Courses focus on practical application of technology to enhance student learning.

- Three from the following courses: EDU 661, EDU 662, EDU 663, EDU 664

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## The Degree of Master of Arts in Education - School Leaders' Option

The Professional degree of Master of Arts in Education is offered in the field of Educational Leadership to candidates who are presently working in the educational administrative domain as school principals, coordinators, department heads, or other positions of leadership.

### Admission Requirements

This program will consider applicants who have a minimum of three years of school administrative experience.

### Graduation Requirements

To satisfy the requirements for a Professional Master of Arts in Education, the student must complete a total of 33 credits with an overall average of 3.0/4.0.

### Required Courses

EDU 610, EDU 611, EDU 612, EDU 614, EDU 621, EDU 623, EDU 624, EDU 651, EDU 652, EDU 653, EDU 654

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## Graduate Courses: Education

**EDU 610 Educational Research Methods (3.0); 3cr.** This course presents key concepts and issues in statistics and their use in educational research, including descriptive and inferential research. Both qualitative and quantitative research methodologies will be explored in relation to improving educational programming. Particular emphasis will be placed on developing skills in applying research to educational decision-making, including conducting needs assessment and analyzing, interpreting, and communicating educational data.

**EDU 611 Educational Models and Curriculum Design (3.0); 3cr.** This course introduces procedures and plans which incorporate social, political, economic, intellectual, and other values in determining what to include in a curriculum. It also examines the question concerning the nature and history of the “curriculum” concept by looking at both the content and pedagogy of important curriculums employed in the Ancient and Medieval worlds.

**EDU 612 Ethics and Politics in Education (3.0); 3cr.** This course addresses the inevitable tension that exists in education between the realm of politics and the realm of ethics. It examines concepts of power and communication especially as these relate to pressure groups and advisory bodies. The course seeks to overcome this tension by helping students to understand how it is possible to both ethical and politically astute at the same time. *Corequisite:* EDU 610

**EDU 613 Education and a Pluralistic Society (3.0); 3cr.** This course addresses current issues that are related to the challenges of education in a pluralistic society. It concentrates upon designing curricula, strategies, and techniques that will best serve to educate students of diverse cultural, social, economic, and religious backgrounds. *Corequisite:* EDU 610

**EDU 614 Technology and Education (3.0); 3 cr.** This course emphasizes the impact of technology on the total school environment. Students critically analyze the role of technology in instruction and develop strategies for infusing technological resources into the curriculum and the classroom, to improve the teaching-learning process. *Corequisite:* EDU 610

**EDU 621 Advanced Educational Psychology (3.0); 3cr.** This course presents an in-depth study in advanced psychological theories of learning and the relationship between the theories and instructional strategies. *Corequisite:* EDU 610

**EDU 622 Comparative Education (3.0); 3cr.** This course analyses educational systems as related to values and cultures; compares the Lebanese educational system to other Arab, European, and American systems.

**EDU 623 Advanced Educational Measurement (3.0); 3cr.** This course provides an advanced theoretical and practical training in techniques of test construction, evaluation and standardization, validation, reliability, item analysis, norm setting, criterion referencing, selection and interpretation of standardized tests. *Corequisite:* EDU 610

**EDU 624 Advanced Methodology (3.0); 3cr.** This course presents an in-depth analysis of current methods and techniques of instruction. *Corequisite:* EDU 610

**EDU 641 Special Education: Issues and Trends (3.0); 3cr.** This course attempts to define both the concept and practice of “special education” by examining its history and evolution in education. It analyzes the contemporary issues and trends in special education and critically examines many of the major “special education” categories.

**EDU 642 Special Education: Assessment and Treatment (3.0); 3cr.** This course focuses on traditional and contemporary methods of assessment and treatment as related to the standard categories of “special education”.

**EDU 643 Motivation in Special Education (3.0); 3 cr.** This course examines motivational strategies that help to improve self-image, and that enhance learning and the desire to achieve. Examines motivational strategies regarding self-image, achievement, and the learning process.

**EDU 644 The Special Student and The Regular Classroom (3.0); 3cr.** This course studies ways of providing foundations for educational partnerships between regular and special educators/students. Examines some of the most recent and innovative methods used to meet the needs of special students.

**EDU 651 Leadership for School Improvement (3.0); 3cr.** This course defines leadership skills and abilities and develops the dynamics of team functioning, decision-making, problem-solving communicating, and self-improvement.

**EDU 652 Instructional Management and its Evaluation (3.0); 3cr.** This course studies the management and evaluation of instruction; emphasizes the use of systemic management and evaluation models by teachers.

**EDU 653 Administrative Leadership Skills (3.0); 3cr.** This course studies the theory of leadership in the different contexts of public and private schools.

**EDU 654 School Business Management and Facilities (3.0); 3cr.** This course presents guiding principles for developing financial programs. Studies sources of revenue and the management of school funds and facilities.

**EDU 661 Technology-Oriented Instructional Materials (3.0); 3 cr.** This course examines the production of instructional materials using technology as a tool. It uses basic and advanced techniques, materials and mechanics to accomplish such production.

**EDU 662 Issues and Implications of Telecommunications in Education (3.0); 3 cr.** This course focuses on creating virtual entities, developing a sense of community using online tools, the developing communication infrastructure. Looks into how new technologies affect pupils in the school, the home, and the future job market. Studies the computer as a communication tool, whether online or offline, and looks into the advantages and disadvantages of utilizing this tool in the modern classroom.

**EDU 663 Developing Multimedia Productions (3.0); 3cr.** This course presents elements of instructional design and storyboarding techniques to translate instruction into various types of multimedia presentation. Improves skills, knowledge, and creativity used in video production. Assists students to plan, write, produce, and edit for educational and informational productions. Students discuss the potential, limitations, and techniques for effectively using the television, radio, distance learning, telecommunications, and interactive video.

**EDU 664 Information Retrieval Through Technology (3.0); 3cr.** This course develops search strategies and uses information retrieval technology to access sources. Focuses on developing media center retrieval systems.

**EDU 681 Seminar in Teaching Reading (3.0); 3 cr.** Recent trends and research in teaching reading to L2 learners are treated. *Prerequisite:* ENL 623.

**EDU 682 Seminar in Teaching Writing and Composition (3.0); 3 cr.** Recent trends and research in teaching writing to L2 learners. *Prerequisite:* ENL 623.

**EDU 683 Seminar in Teaching Literature (3.0); 3 cr.** Recent trends and research in teaching literature to L2 learners. *Prerequisite:* ENL 623.

**EDU 684 Seminar in Teaching ESP Courses (3.0); 3 cr.** Recent trends and research in teaching English for professional learner purposes to L2 learners. *Prerequisite:* ENL 623

**EDU 699 Thesis 6cr.** This course researches an issue directly related to the field of concentration with a fieldwork study.

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## The Degree of Master of Arts in Translation

The M.A. in Translation aims at further equipping the students with increased competence and expertise in the areas of translation and interpretation. It also prepares graduate students for further academic studies at the doctoral level.

The program serves the needs and the career goals of those already working in the field who may want to upgrade their knowledge in these areas.

### Admission Requirements

M.A. candidates must pass a written language proficiency test in French and Arabic. A grade of 70 or above is required in both exams. In addition, an interview in English, French, and Arabic is also required. If only a small deficiency in one of the three languages is detected, remedial courses will be required during the first semester. A grade of **B** must be obtained in the remedial courses.

### Graduation Requirements

To satisfy the requirements for a Master of Arts in Translation/Interpretation, the student must complete 36 credits with an over-all average of 3.0/4.0.

### Degree Requirements (36 credits)

#### Translation Emphasis

##### Major Requirements

TRA 610, TRA 620, TRA 621, TRA 622, TRA 630, TRA 631, TRA 632, TRA 633 or TRA 634, TRA 635 or TRA 636, TRA 637, TRA 638 or TRA 639, TRA 690

**30 cr.**

##### Electives

Choose 2 from the following: ENL 611, LIR 601, LIR 662, IAF 641, IAF 621, IAF 605, INT 610, or any two 600 level INT Courses.

**6 cr.**

#### Interpretation Emphasis

##### Major Requirements

Complete the following required courses: TRA 610, TRA 620, TRA 621, TRA 622, TRA 630, INT 610, INT 620, INT 621, INT 622

**30 cr.**

##### Electives

Choose 2 of the following: ENL 611, LIR 601, LIR 662, or any two 600 level BAD, COA or IAF courses.

**6 cr.**

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## Graduate Courses: Translation

**INT 610 Consecutive and “A Vue” Translation ARB/ENL/FRC(3.0); 3 cr.** An advanced course with emphasis on language use.

**INT 620 Conference I ARB/ENL (4.0); 4 cr.** An advanced course with emphasis on U.N. agencies, education and development texts.

**INT 621 Conference II ARB/FRC (4.0); 4 cr.** Terminology and intensive practice in all aspects of medical translation and relevant scientific concepts.

**INT 622 Conference III ARB/ENL (4.0); 4 cr.** Terminology and intensive practice in science and technology related to Middle East development.

**TRA 610 Advanced English Writing (3.0); 3 cr.** Fine points of English writing including: clarity, accuracy style, proofreading and revision.

**TRA 620 Linguistics for Translation Students (3.0); 3 cr.** The nature and structure of language, its role in society, the theory and methods of linguistics: phonology, syntax, semantics and lexicon as applied in translation.

**TRA 621 Comparative Stylistics for Translation (3.0); 3 cr.** Presentation and analysis of texts related to interlinguistic transfer. Intensive workshop approach treating both English/Arabic and French/Arabic texts. *Prerequisite:* TRA 620.

**TRA 622 Terminology ARB/ENL (3.0); 3 cr.** History of Terminology. The terminologist’s task. Terminographics research methods. Use of documentation. Practical work in term research and subject field research.

**TRA 630 Computer Assisted Translation (3.0); 3 cr.** Computer aids for translation, desktop publishing, terminology management. Machine and machine-assisted translation.

**TRA 631 Advanced Translation of Literature ARB/ENL (3.0); 3 cr.** Study and analysis of translated works. Translation into Arabic of a work which was not translated before.

**TRA 632 Advanced Translation of Literature ARB/FRC (3.0); 3 cr.** Study and analysis of translated works. Translation into Arabic of work which was not translated before.

**TRA 633 Advanced Legal Translation ARB/ENL (2.0); 2 cr.** Translation of highly specialized legal texts.

**TRA 634 Advanced Legal Translation ARB/FRC (2.0); 2 cr.** Translation of highly specialized legal texts.

**TRA 635 Advanced Business & Economic Texts ARB/ENL (2.0); 2 cr.** Translation of highly specialized business, economic, and administrative texts.

**TRA 636 Advanced Business & Economic Texts ARB/FRC (2.0); 2 cr.** Translation of highly specialized business, economic, and administrative texts.

**TRA 637 Advanced Medical Translation ARB/FRC/ENL (2.0); 2 cr.** Medical terminology and phraseology which would allow the translator to correctly translate medical texts. Relevant basic scientific concepts.

**TRA 638 Advanced Translation of Media ARB/ENL (2.0); 2 cr.** Translation of various genres of media.

**TRA 639 Advanced Translation of Media ARB/FRC (2.0); 2 cr.** Translation of various genres of media.

**TRA 690 Internship (1.0); 1 cr.** A supervised practicum designed to allow students to put their knowledge of translation and terminology to work in an actual translation service.

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## **Doctor of Education (Ed. D.) in collaboration with Saint Louis University, USA**

Notre Dame University offers an Ed.D in collaboration with Saint Louis University, USA. The program is made up of 44 credit hours including two obligatory pre-requisite courses. Students go through the 3 year program as a cohort.

### **Admission Requirements**

This program will consider applicants who have an M.A. in Education, or in a related field and who have experience in teaching. Students must submit their files to the NDU Admissions. Office.

### **Graduation Requirements**

To satisfy the requirements for an Ed.D, students must complete 44 credits with a 3.0 G.P.A., sit for written comprehensive exams, an oral examination, and complete and defend a doctoral project.

### **Major Requirements**

EDU 615, EDU 620, EDU 601, EDU 616, EDU 619, EDU 630, EDU 639, EDU 640, EDU 647, EDU 650, EDU 655, EDU 656, EDU 673, EDU 685, EDU 697, EDU 698.

## Program of Study

### Prerequisites

#### Fall One

EDU	615	Introduction to inferential Statistics (NDU)	3 cr.
EDU	620	General Research Methods (NDU)	3cr.

#### Spring One

EDU	630	School Law NDU	2cr.
EDU	619	School/Community Relations (SLU: On-line)	3cr.

#### Summer One Saint Louis University- Cyprus

EDU	697	Research: Topics in Educational Adm. (SLU Cyprus)	3cr.
EDU	655	School District Administration/Leadership (SLU Cyprus)	3cr.
—	—	Selection of Project Protocol	
—	—	Selection of Project Team	
—	—	Appointment of Advisor and Committee	

#### Fall Two

EDU	616	Politics of Education (NDU)	3 cr.
EDU	656	Ethics of School Leadership (SLU: On-line)	3 cr.

#### Spring Two

EDU	698	Project Guidance (SLU: On-line)	1 cr.
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#### Summer Two Saint Louis University-USA

EDU	640	Human Resources Administration (SLU)	3 cr.
EDU	650	Managing the District Curriculum (SLU)	3 cr.
EDU	601	Doctoral Residency	0 cr.

#### Fall Three

EDU	685	Internship- Superintendent (NDU)	4 cr.
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#### Spring Three

EDU	698	Project Guidance (SLU: On-line)	1 cr.
EDU	673	Staff Development and Evaluation (SLU: On-line)	3 cr.
—	—	Final Draft of Doctoral Project Submitted to Committee	
—	—	Written Comprehensive Examination	

#### Summer Three - Saint Louis University USA

EDU	639	Gateway Leadership Conference (SLU)	2 cr.
EDU	647	Planning School Facilities (SLU)	3 cr.
EDU	698	Project Guidance (SLU)	1 cr.
		Oral Examination	

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## Graduate Doctor of Education Courses (Ed.D)

### *Pre-requisite Courses:*

**EDU 615 Introduction to Inferential Statistics (3.0); 3 cr.** Survey of basic statistical methods including descriptive statistics, z and t test of means and proportions, chi-square analyses, correlation and regression analyses. Intended as a terminal course for upper division undergraduates and as a background course for graduate level courses in the program. **RMG 410 (SLU)**

**EDU 620 General Research Methods (3.0); 3 cr.** Prerequisite: REMET 410 or an equivalent introductory inferential statistics course. Survey of the techniques, methods and tools of research in the behavioral sciences and social sciences. General discussion of the research process followed by examination of several different study designs such as observational, experimental, descriptive and sample survey. Overview of different methods of data collection and analysis frequently used in research literature. **RMG 520 (SLU)**

### *Program Course of Studies:*

**EDU 601 Doctoral Residency (0.0); 0 cr.** Student will research and proceed with data collection under the supervision of the advisor. **EDL 601 (SLU)**

**EDU 616 Politics of Education (3.0); 3 cr.** An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school in society. **EDL 614 (SLU)**

**EDU 619 School/Community Relations (3.0); 3 cr.** A study of the nature, scope, principles and practices of public relations including organization and administration. **EDL 520 (SLU)**

**EDU 630 School Law (2.0); 2 cr.** Detailed examination of school laws, legal research, analysis of selected cases. **EDL 630 (SLU)**

**EDU 639 Seminar: Gateway Leadership Conference (2.0); 2 cr.** Designed for advanced degree students who will select a problem in educational administration for intensive study

under the direction of the professor. **EDL 639 (SLU)**

**EDU 640 Human Resources Administration (3.0); 3 cr.** An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation and supervision. **EDL 640 (SLU)**

**EDU 647 Planning School Facilities (3.0); 3 cr.** Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees, bonding, staffing and equipping buildings. **EDL 647 (SLU)**

**EDU 650 Managing the District Curriculum (3.0); 3 cr.** Practice in using the processes of curriculum development through examination of existing programs, developing new segments of curriculum, making curriculum guide revisions or structuring the process of revision. **EDL 645 (SLU)**

**EDU 655 School District Administration/Leadership (3.0); 3 credits** Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state and local relations in education; reality in school administration. **EDL 611 (SLU)**

**EDU 656 Ethics of School Leadership (3.0); 3 cr.** Course centers on identifying, and analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. **EDL 620 (SLU)**

**EDU 673 Staff Development and Evaluation (3.0); 3 cr.** This course considers the importance and difficulty of motivating educators to seek life long personal improvement as reflective professional practitioners. Strategies of adult motivation and techniques of adult behavioral change are studied. Current systems of staff evaluation are analyzed and specific evaluative techniques and methods are practiced. **EDL 573 (SLU)**

**EDU 685 Internship-Superintendent (4.0); 4 cr.** Candidates for the doctorate and specialist degrees in school administration are required to intern with a practicing school administrator for one semester. Advance permission required. Work includes all administrative areas encompassed in the responsibility of the school superintendent. **EDL 584 (SLU)**

**EDU 697 Research Topics in Educational Administration (3.0); 3 cr.** Study of research methods and design applicable to research in Educational Administration. **EDL 697 (SLU)**

**EDU 698 Project/Thesis Guidance (1.0); 1 cr.** Student will receive one on one guidance from the thesis advisor concerning the outcome of their research. **EDL 696 (SLU)**

## **DEPARTMENT OF MASS COMMUNICATION**

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**Chairperson:** *Dr. Joseph Ajami*

**Secretary:** *Ms. Alice Eid*

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### **Associate Professors**

*Ajami, Joseph*, Ph.D., 1987, *Mass Communication*, Ohio University, USA

*Fakih, Khalid*, Ph.D., 1992, *Journalism*, University of Missouri, USA

### **Assistant Professors**

*Chidiac, May*, Doctorate, 2008, *Information Sciences*, Université Pantheon, Assas, Paris II, France

*Darouny, Kamal*, M.A., 1986, *Marketing and Advertising*, Sussex College of Technology, UK

*Donerian, Vatche*, M.A., 1987, *Theater and TV Directing*, Yerevan State Institute of Dramatic and Fine Arts, Armenia

### **Lecturer**

*Lahoud, Sam*, M.A., 2010, *Media Studies: Journalism*, Notre Dame University, Lebanon

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Today we communicate through various means: newspapers, magazines, radio, television, Internet, public relations, advertising, photography, and others.

The Department prepares students for a career in mass communication. It offers specific sequences in print media, electronic media, and advertising and marketing, leading to the degrees of:

**Bachelor of Arts in Advertising and Marketing**

**Bachelor of Arts in Communication Arts – Journalism Emphasis**

**Bachelor of Arts in Communication Arts – Radio and Television Emphasis**

**Minor in Advertising and Marketing**

**Minor in Radio and Television**

**Master of Arts in Media Studies with emphasis areas in:**

**Advertising**

**Electronic Media**

**Journalism**

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## **The Degree of Bachelor of Arts in Advertising and Marketing**

The advertising sequence prepares students for careers in account handling, media planning and management, and creative roles in advertising agencies, in-house advertising, and in the media. The program also incorporates principles of marketing, consumer behavior, promotional strategy, and other pertinent courses.

### **Graduation Requirements**

Students pursuing this major must complete a total of 102 credit hours with a minimum cumulative GPA of 2.3/4.0 in their major courses. These 102 credits are divided as follows:

### **Degree Requirements (102 credits)**

**General Education Requirements** **33 cr.**

**Core Requirements** **18 cr.**  
COA 201, COA 223, COA 252, COA 359, COA 362, PDP 201,

**Major Requirements** **38 cr.**  
ADM 216, ADM 341, ADM 352, ADM 453, ADM 481, ADM 490, FDP 201,  
FDP 214, COA 270, COA 316, COA 475, MRK 201, MRK 311, MRK 321

Students must choose 6 credits from the following pool: **9 cr.**  
ADM 351, COA 275, COA 311, COA 315, COA 350, COA 352, COA 360,  
COA 365, COA 368, COA 369, COA 499, JOU 210, JOU 325, JOU 340, JOU  
370, JOU 460, MRK 313, STA 206

**Free Electives** **4 cr.**

**Bachelor of Arts in Advertising and Marketing  
Suggested Program (102 Credits)**

**Fall Semester I (15 Credits)**

COA	201	Mass Media Essentials	3 cr.
ENL	213	Sophomore Rhetoric (GER)	3 cr.
MRK	201	Fundamentals of Marketing	3 cr.
ADM	216	Principles of Advertising	3 cr.
FDP	201	Basic Design	3 cr.

**Spring Semester I (16 Credits)**

ADM	341	Media Planning and Analysis	3 cr.
STA	202	Statistics for Humanities (GER)	3 cr.
COA	270	Studio Workshop I	1 cr.
MRK	311	Consumer Behavior	3 cr.
—	—	GER	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.

**Summer Session I (6 Credits)**

PDP	201	Basic Photography	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

—	—	GER	3 cr.
ADM	352	Adv. Creativity and Copywriting	3 cr.
FDP	214	Design for Advertising	3 cr.
MRK	321	Promotional Strategy	3 cr.
COA	252	Principles of Public Relations	3 cr.

**Spring Semester II (15 Credits)**

COA	223	Speech Communication	3 cr.
COA	316	Production Techniques for Advertising	3 cr.
—	—	GER	3 cr.
COA	362	Mass Comm Research	3 cr.
COA	359	Media and Society	3 cr.

**Summer Session II ( 6 Credits)**

—	—	Pool course	3 cr.
—	—	GER	3 cr.

**Fall Semester III (16 Credits)**

ADM	453	Global Advertising	3 cr.
—	—	Pool course	3 cr.
COA	475	Computer Graphics and Video Animation	3 cr.
—	—	GER	3 cr.
ADM	481	Internship	1 cr.
—	—	GER	3 cr.

**Spring Semester III (13 Credits)**

ADM	490	Senior Study in Advertising	3 cr.
—	—	GER	3 cr.
—	—	Free Electives	4 cr.
—	—	Pool course	3 cr.

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### Minor in Advertising and Marketing (18 credits)

The NDU Minor in Advertising and Marketing is comprised of 18 credits. Any student may elect to do a Minor in this area provided that he/she is in good academic standing that is if he or she has a G.P.A of 2.0/4 and above. A student can only count up to six credits which he/she may have taken from the list of the required courses for this "Minor" prior to electing a "Minor" in Advertising and Marketing. Minors must be declared at least one year before expected graduation date.

#### Courses required:

ADM 216 Principles of Advertising (3 cr.)  
ADM 341 Media Planning and Analysis (3 cr.)  
ADM 352 Creativity and Copywriting (3 cr.)  
FDP 214 Basic Design for Advertising (3 cr.)

#### And

MRK 311 Consumer Behavior (3 cr.)

#### OR

MRK 321 Promotional Strategy (3 cr.)

#### And

ADM 351 E-Commerce (3 cr.)

#### OR

ADM 453 Global Advertising (3 cr.)

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### Undergraduate Courses: Advertising

#### ADM 216 Principles of Advertising (3.0); 3 cr.

This course introduces the first year advertising student to the field of advertising and its relationship to marketing and mass media. Basic theories of advertising are studied. Elements of successful ads are also analyzed. Local, regional and world advertising agency structures are examined.

#### ADM 341 Media Planning (3.0) 3 cr.

Role of media in achieving marketing and advertising objectives. Examines channels of communication. Students study the process of planning an advertising campaign. A complete campaign including budget, personnel and strategies is required for the course. *Prerequisite:* ADM 216.

#### ADM 351 E-Commerce (3.0) 3cr.

The focus of this course is on today's electronic market environment. Students are to develop proficiencies in interactive business and communication technologies and must have access to an e-mail account. *Prerequisite:* CSC 201 or computer literacy.

#### ADM 352 Creativity and Copywriting (3.0); 3 cr.

The course studies theory and application of

the creative side of advertising. Students practice the various principles through designing and executing print, electronic and outdoor advertising. In class peer evaluation and analysis of ads is carried out. *Prerequisite:* ADM 216.;*Corequisite:* FDP 214.

#### ADM 453 Global Advertising (3.0); 3 cr.

This course analyzes the history, development and current status of international advertising based on the cultural, economic, political and linguistic characteristics of the countries studied. Students are required to develop an innovative project with an international dimension. Importance of diversity to global advertising is stressed. *Prerequisite:* ADM 341; *Corequisite:* ADM 352.

#### ADM 481 Internship in Advertising (1.0); 1 cr.

Supervised work in the "real" world of advertising and/or marketing. *Corequisite:* ADM 453.

#### ADM 490 Senior Study in Advertising (3.0); 3 cr.

Involves the conceptualization of an advertising campaign for a "real" client. Includes an exit exam. *Prerequisite:* COA 362.

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## **The Degree of Bachelor of Arts in Communication Arts**

### **Journalism Emphasis**

This sequence prepares students to become reporters in various print media outlets. Students will also augment their journalistic skills with a variety of public relations courses that will broaden their communication skills and improve their career opportunities in different organizational and professional settings. Students will practice and refine their writing, reporting, and other journalistic skills.

### **Graduation Requirements**

Once admitted to the program, students are required to develop competence in both Arabic and English. They must also complete an internship at one of the media outlets in the Lebanese market. Students pursuing this major must complete a total of 102 credit hours with a minimum cumulative GPA of 2.3 / 4.0 in their major requirements. These 102 credits are divided as follows:

### **Degree Requirements (102 credits)**

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Core Requirements</b> COA 201, COA 223, COA 252, COA 359, COA 450, PDP 201, ARB 212	<b>21 cr.</b>
<b>Major Requirements</b> COA 350, COA 352, JOU 210, JOU 310, JOU 314, JOU 325, JOU 340, JOU 370, JOU 410, JOU 450, JOU 480, JOU 490 Students must choose 9 credits from the following pool: ADM 216, ADM 351, COA 240, COA 270, COA 311, COA 316, COA 360, COA 365, COA 368, COA 369, COA 415, COA 425, COA 426, COA 427, COA 366, COA 367, COA 370, COA 499, POS 212, JOU 460	<b>33 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>

**Bachelor of Art in Communication Arts  
Journalism Emphasis - Suggested Program (102 Credits)**

**Fall Semester I (15 Credits)**

COA	201	Mass Media Essentials	3 cr.
—	—	GER	3 cr.
PDP	201	Photography	3 cr.
ARB	212	Advanced Arabic Grammar	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

COA	223	Speech Communication	3 cr.
COA	252	Principles of Public Relations	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
JOU	210	Mass Media Language	3 cr.
STA	202	Statistics for Humanities (GER)	3 cr.

**Summer Session I (6 Credits)**

—	—	Pool Course	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

COA	359	Media and Society	3 cr.
COA	350	Current Issues	3 cr.
JOU	310	Newswriting and Reporting I	3 cr.
JOU	325	Photojournalism	3 cr.
—	—	GER	3 cr.

**Spring Semester II (14 Credits)**

COA	352	Mass Media Law (Arabic)	3 cr.
JOU	340	PR Techniques	3 cr.
JOU	370	Newspaper Production	2 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Summer Session II ( 6 Credits)**

—	—	Pool course	3 cr.
—	—	GER	3 cr.

**Fall Semester III (16 Credits)**

COA	362	Mass Communication Research	3 cr.
JOU	314	Specialized Translation	3 cr.
JOU	410	Newswriting and Reporting II	3 cr.
JOU	480	Journalism Internship	1 cr.
—	—	Pool Course	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

JOU	490	Senior Study	3 cr.
JOU	450	Specialized Journalism	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate Courses: Communication Arts Journalism Emphasis

**JOU 210 Mass Media Language (3.0); 3 cr.** Principles of effective writing in Arabic with emphasis on grammar, structure, and style. In -class exercises in producing clear, balanced, and vivid basic news stories. *Corequisite:* ARB 212 or ARB 231.

**JOU 310 News Writing and Reporting I (3.0); 3 cr.** Fundamentals of writing for the mass media. Also reporting techniques and information gathering. Elements of news, leads, and styles of advanced news stories. Emphasis on developing stories and interviewing techniques. *Prerequisites:* JOU 210 and COA 201.

**JOU 314 Specialized Translation (3.0); 3 cr.** Provides students with skills needed to handle English language copy. *Prerequisites:* TRA 201 and JOU 210.

**JOU 325 Photojournalism (3.0); 3 cr.** Role of the photographer as a communicator and a member of the editorial team. Photo assignments required. *Prerequisites:* PDP 201 and JOU 210

**JOU 340 Public Relations Techniques (3.0); 3 cr.** The use of different communication tools in reaching specific audiences. *Prerequisite:* COA 252.

**JOU 370 Newspaper Production (2.0); 2 cr.** Students must produce a campus publication. *Prerequisite:* JOU 310.

**JOU 410 Newswriting and Reporting II (3.0); 3 cr.** Practical problems encountered in real situations in covering beats, interviewing techniques and writing headlines. *Prerequisite:* JOU 310.

**JOU 450 Specialized Journalism (3.0); 3 cr.** Different areas of journalism such as foreign affairs, sports, life-style, environment, and others. In Arabic. *Prerequisite:* JOU 310.

**JOU 460 Case Studies in Public Relations (3.0); 3 cr.** Evaluation and analysis of PR campaigns in real-life situations. *Prerequisite:* COA 252.

**JOU 480 Journalism Internship (1.0); 1 cr.** Practical training in a professional print media outlet.

**JOU 490 Senior Study (3.0); 3 cr.** A major final project in print journalism that studies in-depth an area in the field.

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## The Degree of Bachelor of Arts in Communication Arts

### Radio and Television Emphasis

The Radio and Television program at NDU prepares students for opportunities in electronic media production, programming and "on-air" broadcasting, scriptwriting, directing, and film techniques. In addition to a variety of courses in social sciences, English, and other GER courses, the program stresses the skills that will help prepare Radio and Television students in their careers. Introductory and advanced instruction in audio and video techniques are supported by hands-on experiences in our well-equipped studio.

### Graduation Requirements

Students pursuing this major must complete a total of 103 credit hours with a minimum cumulative GPA of 2.3 / 4.0 in their major requirements.

The program culminates in a senior project that incorporates the skills acquired during the years spent at NDU. A "C" grade and above on this project is required for graduation. The 103 credits are divided as follows:

### Degree Requirements (103 credits)

**General Education Requirements** **33 cr.**

**Core Requirements** **9 cr.**

COA 201, COA 359, COA 362

**Major Requirements** **37 cr.**

COA 225, COA 226, COA 272, COA 273, COA 275, COA 276, COA 310, COA 311, COA 312, COA 315, COA 325, COA 330, COA 430, COA 480, COA 490.

Students must choose one group of the following concentration areas: **12 cr.**

**Scriptwriting and Directing:** COA 435, COA 445, COA 455, COA 457

**Audio and Sound Production:** COA 436, COA 446, COA 456, COA 466

**Film and Video Techniques:** COA 437, COA 447, COA 455, COA 457

**Electronic News:** COA 415, COA 425, COA 426, COA 427

Students must choose 12 credits from the following pool: **9 cr.**

ADM 216, COA 203, COA 204, COA 210, COA 213, COA 215, COA 216, COA 223, COA 252, COA 313, COA 320, COA 350, COA 355, COA 360, COA 365, COA 366, COA 367, COA 369, COA 370, COA 413, COA 416, COA 417, COA 475, COA 476, COA 499, CSC 202, CSC 277, CSC 343, FDP 201, FDP 214, JOU 210, JOU 310, JOU 340, JOU 460, MUS 211, MUS 221, MUS 331, MUS 475, PDP 201

**Free Electives** **3 cr.**

**Bachelor of Arts in Communication Arts**  
**Radio and Television Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

COA	201	Mass Media Essentials	3 cr.
COA	225	Lighting I	2 cr.
COA	272	Workshop in Audio and Video	2 cr.
COA	275	Editing I	2 cr.
ENL	213	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

COA	226	Lighting II	2 cr.
COA	273	Workshop in Audio, Video and Film	2 cr.
COA	276	Editing II	2 cr.
ENL	—	GER	3 cr.
—	—	GER	3 cr.
—	—	Pool Course	3 cr.

**Summer Session I (9 Credits)**

REG	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

COA	310	Scriptwriting	3 cr.
COA	311	Radio Programming	3 cr.
COA	312	TV Production Techniques	3 cr.
COA	359	Mass Media and Society	3 cr.
—	—	GER	3 cr.

**Spring Semester II (16 Credits)**

COA	315	World Cinema Survey	3 cr.
COA	325	Directing and Acting Skills	3 cr.
COA	330	Documentaries & Non Theatrical Film	3 cr.
COA	362	Mass Communications Research	3 cr.
COA	480	Internship for Radio, TV and Film	1 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

—	—	GER	3 cr.
—	—	Pool Course	3 cr.

**Fall Semester III (15 Credits)**

COA	430	Television Drama	3 cr.
COA	490	Senior Study	3 cr.
—	—	Concentration Course	3 cr.
—	—	Concentration Course	3 cr.
—	—	GER	3 cr.

**Spring Semester III (12 Credits)**

—	—	Concentration Course	3 cr.
—	—	Concentration Course	3 cr.
—	—	Pool Course	3 cr.
—	—	Free Elective	3 cr.

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### **Minor in Radio and Television**

The NDU Minor in Radio and Television is comprised of **17 credits**. Any student with a good academic standing that is if he/she has a G.P.A of 2.0/4 and above may enroll in this minor. He or she may only count six credits which he/she may have taken from the list of the R/TV Minor requirements while pursuing another major. Minors must be declared at least one year before expected graduation date.

#### **Courses required:**

COA 225 Lighting 1	(2 cr.)
COA 270 Studio Workshop	(1 cr.)
COA 275 Editing 1	(2 cr.)
COA 312 TV Production Techniques	(3 cr.)
COA 310 Scriptwriting	(3 cr.)

COA 330 Documentary and Non Theatrical Film (3 cr.)

#### **OR**

COA 311 Radio Programming (3 cr.)

And **One** course from the following:

COA 325 Directing and Acting Skills	(3 cr.)
COA 430 Television Drama	(3 cr.)
COA 457 Cinematography	(3 cr.)
COA 475 Computer Graphics and Animation	(3 cr.)

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## Undergraduate Courses: Communication Arts Radio and Television Emphasis

**COA 201 Mass Media Essentials (3.0); 3 cr.** This course focuses on the study of various types of mass media. It surveys the historical economic regulatory and other aspects of the mass media.

**COA 203 Make up and Color (0.2) 1 cr.** Introduction to the basic principles of makeup for film and video, and to theatrical makeup application as it relates to camera.

**COA 204 Set Design (0.2); 1cr.** Basic techniques of set design for the stage and the TV. Emphasis on the use of imagery to support the dramatic intent of a particular production. Class project will engage students in using a variety of mediums to explore how architecture, the arrangement of space, and the elements of design are used dramatically. Also introduces the use of the virtual studio.

**COA 205 Archive Organization (1.0); 1 cr.** Teaches students the effective use of archive resources in a library setting.

**COA 210 Stage Acting (3.0); 3 cr.** Teaches acting for the stage, body movement, and basic physical warm-up techniques. Includes exploration of stage space, building characters, and acting situations through improvisation and text work.

**COA 213 History of Film (3.0); 3 cr.** Overview of history of motion pictures and their artistic, technological, and industrial development. Includes an introduction to major film movements, including their formation, development, aesthetic and thematic qualities, and to leading film artists.

**COA 215 History of the Theater (3.0); 3 cr.** Study of the history of the western theater from its origin till the 20th century. Major theater movements, schools, and genres, including their formation, development, aesthetic and thematic qualities; includes an introduction to leading theater artists. Also includes an overview of Asian and oriental theater.

**COA 216 Sacred Drama: Gods, Muses, and the Storyteller. (3.0); 3 cr.** What is the role, if not the duty, of the storyteller, especially when the storyteller is visited by a Muse or supernatural visitor and aided in the artistic adventure? This course answers the question with examples from poetry, theater, film, dance,

and art, with a study of the influence of mythology on the performing arts and on arts in general.

**COA 223 Speech Communication (3.0); 3 cr.** Trains students in researching, organizing and delivering various types of speeches. *Prerequisites:* COA 201.

**COA 225 Lighting I (2.0); 2 cr.** Theoretical and practical use of lighting in TV studio productions: drama, talk shows, and news. *Corequisite:* COA 272.

**COA 226 Lighting II (1.2); 2 cr.** Continuation of COA 225 with emphasis on cool lighting and outdoor lighting for video and film camera. *Prerequisite:* COA 225

**COA 252 Public Relations (3.0); 3 cr.** History, principles and practices of public relations with emphasis on publicity, public opinion and crisis management.

**COA 270 Studio Workshop I (1.0); 1 cr.** Functions and operations of radio and TV equipment. Students will spend 80 percent of their time working directly with the equipment and developing solid familiarity with cameras, digital technology, and other useful tools. Essential for subsequent R/TV courses. Intended for ADV/MRK students.

**COA 272 Workshop in Audio and Video (2.0); 2 cr.** Teaches the students image and sound techniques, function, and operations of radio and TV analog and digital equipment.

**COA 273 Workshop in Audio, Video and Film (2.0); 2 cr.** Continuation of COA 272. A workshop on sound, camera, and editing equipment, in addition to working with 16mm film and 35mm Camera and the techniques used in shooting and developing films. *Prerequisite:* COA 272.

**COA 275 Editing I (2.0); 2 cr.** Provides students with the basic skills needed for working on different types of editing systems- Linear and Non-Linear. Topics include basic setup, adjusting and customizing preferences, and various editing and trimming techniques, among others. *Corequisite:* COA 272 only for students majoring in R/TV.

**COA 276 Editing II (2.0); 2 cr.** Continuation of COA 275. This course provides students with an

overview of off-line and on-line video editing, music editing (an ability to apply music choices in creating soundtrack), editing theory, paper editing, working with editors, and possible post production pathways. It will also introduce students to the potential of digital technologies in the creation of television programs, the production of graphics, digital special effects, and the uses of high-end compositing systems. *Prerequisite:* COA 275.

**COA 310 Scriptwriting (3.0); 3 cr.** Students will study film terms and formats, work with treatment, scenario and shooting scripts, analyze film and television clips, shorts, tapes, and full-length films with emphasis on understanding the writer's perspective. Numerous writing assignments and exercises will be assigned with the intent of developing a student's ability to write for a visual medium. Students must write a script of a short film or video.

**COA 311 Radio Programming (3.0); 3 cr.** Audio production concepts and techniques using audio laboratory studio equipment. Practical experience in producing, editing, and other aspects of radio programming emphasized. Students visit local radio stations.

**COA 312 TV Production Techniques (3.0); 3 cr.** Introduction to multi-camera studio production and location video recording. Explores directing techniques, operation of studio and control room, conceptualization, basic scriptwriting, audio board operations, and lighting in a studio setting. *Prerequisites:* COA 275.

**COA 313 Art of the Film (3.0) 3 cr.** Stylistic analysis of filmmaking, emphasizing the technical and creative process. Screening of different film genres and studying of cinematography techniques.

**COA 315 World Cinema Survey (3.0); 3 cr.** Overview of world cinema including American (north and Latin), European, Asian, African, Middle Eastern, and Lebanese cinema. Includes historical review and their influence on global cinema.

**COA 316 Production Techniques for Advertising (3.0); 3 cr.** This course introduces advertising and marketing students to the tools, techniques, and production skills essential to conceive, design, edit, and produce real-life television commercials and radio spots in a studio setting. Students will be involved in

hands-on practice executing original storyboards. Oral presentations are required. *Corequisite:* COA 270

**COA 320 The Film Director (3.0); 3 cr.** An introductory study on the work of the director, from the scriptwriting to the staging process, including pre-production, production, and postproduction. The work with actors, the managerial responsibilities. *Prerequisites:* COA 273 and COA 276; *Corequisite:* COA 310.

**COA 325 Directing and Acting Skills (3.0); 3 cr.** Teaches acting and directing actors and the director-actor relationship, with focus on different methods and styles of acting, in relationship to the script and the characters. Includes building of a character, creating a role, and performing in front of an audience and in front of a camera. *Corequisite:* COA 310.

**COA 330 Documentary and Non-Theatrical Film (3.0); 3 cr.** A study of non-theatrical films, such as documentary, news, educational and public relations films, video clips, etc. Involves shooting and editing reports and a video clip. Students will also produce a short documentary by the end of the semester. *Prerequisite:* COA 312

**COA 350 Current Issues (3.0); 3 cr.** In this course students will be introduced to local, regional, and international events and issues that are affecting the world today. The role and responsibility of the world citizen will be emphasized as the class conducts research on, develops understanding of, and examines the coverage given by the media, to various issues. Class discussions and presentations of various political, economic, and social issues constitute a sizable bulk of the course's material. Topics may include: Globalization, Environmental concerns, Terrorism, Nuclear Proliferation, World hunger, drugs, the relationship between developing countries and developed countries.

**COA 352 Censorship and Responsibility in Media and Film (3.0); 3 cr.** A study of different types of censorship and their relationship to moral codes, religions, politics, laws, and society. Overview of media law in Lebanon.

**COA 355 Mass Media in Lebanon and the Middle East (3.0); 3 cr.** Communication in Lebanon and the Middle East; cultural, economic, political, and social influences. Role of communication media in affecting social change in different countries. *Prerequisite:* COA 201.

**COA 359 Mass Media and Society (3.0); 3 cr.** Interactive relationship between media and society. Relationships among the media, the individual, the group, society, and the culture. Issues discussed include: Impact of media messages; stereotyping; Media and Religion; Rock Music, and impact of Advertising among others. *Prerequisite:* COA 201

**COA 360 Media Ethics (3.0); 3 cr.** Analysis of ethical issues pertaining to the media: Dubious methods in news gathering, conflict of interests, invasion of privacy, and shocking pictures among others.

**COA 362 Mass Communication Research (3.0); 3 cr.** Students will become familiar with research design, data collection analysis, and the various quantitative and qualitative means of measurement of public opinion and hypothesis testing of media-related issues. Students will practice conducting a focus group and interpreting the results. They will write and conduct a questionnaire. A fully formatted, documented research paper incorporating the principles of the course is required. May not be taken concurrently with COA 490.

**COA 365 Talk Shows (3.0); 3 cr.** Preparing, hosting, and executing a TV program that deals with various issues in front of a live audience. *Corequisite:* COA 312 or by permission.

**COA 366 Diction and Presentation (3.0); 3 cr.** Arabic and English. In this course students will learn how to speak for different types of programs. They will do exercises on pronunciation in Arabic and English, and they will learn the phonetics of both languages.

**COA 367 Foreign Correspondence (3.0); 3 cr.** The role of the foreign correspondent in news gathering. The history of foreign correspondence, techniques, roles, and other tips. *Prerequisite:* COA 201.

**COA 368 International Communication (3.0); 3 cr.** Mass media systems of the world. Flow of information, and role of media in the development of the Third World. *Prerequisite:* COA 201.

**COA 369 Selected Topics I (3.0); 3 cr.** Rotating topics in audio, video and, film production. Representative topics include music for film and television, digital audio effects, documentary production, lighting for cinematography, and directing for film. Other

topics may be recommended by the department. *Prerequisite:* COA 201 or by permission.

**COA 370 Selected Topics II (3.0); 3 cr.** Individual study topics on audio, video, and film production to be proposed by students or instructors, and approved by the department prior to commencing work. Other non-technical topics may be offered. *Prerequisite:* COA 201 or by permission

**COA 413 Film Movements and Genres (3.0); 3 cr.** Analysis of major international film movements such as: German Expressionism, Italian New-Realism, Latin American and, and New Chinese Cinema. Analysis of specific film genres such as: western, comedy, musical, and documentary.

**COA 415 Broadcast News Operations (3.0); 3 cr.** Gathering, preparation, and presentation of a generic broadcast news product. Teaches students the process of directing news in all its phases, including equipment operation and crew management (camera operators, anchors, VTR operator, prompter, character generator, etc.). *Prerequisite:* COA 312 or by permission

**COA 416 Film Analysis and Aesthetics (3.0); 3 cr.** Structure, composition, design, and effect are studied through close frame-by-frame examination of motion pictures. Focuses on a particular director (Godard, Hitchcock, Altman, Losey, Bergman...), period, or style (film noir, suspense....) and studies how meaning is structured and perceived in the screen image. Includes close examination of the ways scholars, critics, and filmmakers have explained and discussed the materials used to make movies and how these materials may be used to construct films and produce meaning. Experiences of the viewer, critic, and community are discussed in addition to the role of aestheticians and theorists.

**COA 417 Comparative Cinema (3.0); 3 cr.** Compares trends, genres, and directors of various nations. Investigates several genres: the documentary, science-fiction, dramatic, comic, political, and romantic films. Covers early animation and special effects, serials, avant-garde, surrealism, "poetic realism," fantasy, etc.

**COA 425 Writing and Reporting for the Electronic Media (3.0); 3 cr.** Principles and practices of news-writing and reporting for the electronic media. Includes an overview of the major forms of writing, news styles, news gathering, and news evaluation. *Prerequisite:* Senior Standing.

**COA 426 Electronic News Gathering (3.0); 3 cr.** Shooting, editing and producing for the electronic news media. Lecture and lab course provides students with experience as producers and directors for news programs. Also includes an overview of ENG equipment as well as EFP (Electronic Field Production) techniques and equipment and digital video production on location. *Prerequisite:* COA 312

**COA 427 Media and Information Society (3.0) 3 cr.** Introduces the latest technologies in the news field; online news reporting, web journalism, blogging; electronic publishing, design and techniques of electronic publishing using a journalistic approach. *Corequisite:* COA 426.

**COA 430 TV Drama (3.0); 3 cr.** This course involves both the theory and the practical elements needed to shoot, direct, and edit a TV dramatic production. Students shoot before a live audience. Final project requires a complete tv drama beginning with the original script to the final tape. *Prerequisite:* COA 310.

**COA 435 Writing for TV and Film (3.0); 3 cr.** An advanced inquiry into the art of investigating, structuring, and writing original screenplays. Mastery of researching and developing authentic characters, as well as generating solid story plot devices using professional screenplay style. Different film genres and story techniques will also be explored, in addition to the process of literary adaptation and how to adapt a play, novel, or short story into a feature-length film. *Prerequisite:* COA 310.

**COA 436 Advanced Radio Production (3.0); 3 cr.** Advanced training in the art and technique of audio production in radio. Includes producing radio programs. *Prerequisite:* COA 311.

**COA 437 Lighting for Film (3.0); 3 cr.** Operations with camera, lighting, and grip equipment as they apply to different film forms (narrative, documentary, experimental), genres, and styles. In-class and outside class group assigned filming exercises. Film screenings and field trips to complement class lectures, demonstrations, and discussions. *Prerequisite:* COA 226.

**COA 445 Directing Actors for Camera (3.0); 3 cr.** Directing actors through exploration of equipment used in media performance: blue screen acting, ear prompting, teleprompting, and microphone applications in voice performance

and voice over. Continued exploration and skill-building of techniques used in performance before the camera including but not limited to advanced character development, make-up techniques, and special problems in character preparation for feature film. *Prerequisite:* COA 325.

**COA 446 Theory of Sound (3.0); 3 cr.** This course focuses on sound theory, sound as media, and the relationship between sound and image. These topics will be examined through reading and writing assignments, screenings and listening sessions, in-class presentations, recording assignments. Concepts of different theorists in sound will be introduced to students. Workshops on sound recording and sound editing may be held during the second half of the semester based on the technical requirements of student projects. This class encourages a critical, creative approach to the medium, non-traditional solutions, and awareness of the history of sound technology and media production. *Prerequisite:* COA 311, senior standing.

**COA 447 Lighting Design and Techniques (3.0); 3 cr.** Lighting design for stage and video design, organization, graphic representation of lighting for stage, video and film production. Laboratory work on actual stage presentations, video productions, and film shoots. Venues include performing arts stages, video studios, and sound stages along with shooting on location. *Prerequisite:* COA 226

**COA 455 Directing Techniques and Aesthetics (3.0); 3 cr.** An advanced study of the job of a director, beginning with an artistic identity, to the screen craft and how to deal with the directing process through all the production stages. *Prerequisites:* COA 310, COA 312.

**COA 456 Sound Design and Postproduction (3.0); 3 cr.** A comprehensive technical examination of the role of sound as an emotional motivator and major storytelling component in both fiction and nonfiction films. Covers location and sound recording, track building, mix preparation, music editing and scoring, and the spectrum of postproduction technologies. Introduces current digital innovations in the field and in postproduction, and provides a workshop for solving ongoing editing and track-building problems. *Corequisite:* COA 446.

**COA 457 Cinematography (3.0); 3 cr.** Cinematographic techniques for film and video. Analysis of cinematographic styles, including

qualities of camera movement and composition, lenses, and lighting as expressive tools. Explores aesthetics, techniques, and responsibilities of the cinematographer. Hands-on experience shooting scenes with film and video cameras, lighting, and grip equipment. *Prerequisite:* COA 226.

**COA 466 Sound for Animation (3.0); 3 cr.** The principles of sound track design to accompany the unique properties of the animated image. Techniques of musical synchronization and lip-synched character. *Corequisite:* COA 475.

**COA 475 Computer Graphics and Video Animation (3.0); 3 cr.** Applying computer graphics in developing video animation projects. Includes the use of computer animation as applied to a variety of art media. Principles of movement and timing, lighting, cinematography, and multi-plane dimensionality as applicable to computer and traditional drawn animation. Drawn representation of telephoto or wide-angle lens perspective and depth of field. *Prerequisite:* COA 312.

**COA 476 Compositing (3.0); 3 cr.** Explores basic and intermediate aspects of compositing, animating, and creating special effects and motion graphics with compositing software. The student learns to add effects, enhance the look of existing footage, and create entire animations from inception. Practical application and use of compositing software in the commercial world. *Corequisite:* COA 312 .

**COA 480 Internship for Radio, TV, and Film; 1 cr.** Supervised off-campus work experience in a job that relates to the student's career objectives. *Prerequisite:* Senior Standing.

**COA 490 Senior Study; 3 cr.** Overview of film production phases and procedures. Senior project presentation. May vary according to concentration choice. *Prerequisite:* senior standing. A "C" grade or above is required.

**COA 499 Independent Study (3.0); 3 cr.** Advanced topics in mass communication chosen to meet individual student needs and interests, supervised by assigned instructors. *Prerequisite:* senior standing or permission by the head of the department.

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## The Degree of Master of Arts in Media Studies

The department of Mass Communication offers the Master's of Arts degree in Media Studies with a choice of concentration in the areas of Advertising, Journalism, and Electronic Media.

The program provides students with conceptual and analytical tools and practical experience in order to prepare them to pursue careers in communication, to further academic enhancement at the doctoral level, and to help those already working in those fields upgrade their knowledge in their chosen area of study.

### Admission Requirements:

The program admits students holding Bachelor degrees in any of the areas listed above as well as those holding degrees in other majors.

Students from non related majors must take and pass a number of preparatory courses (a maximum of three courses) which the department deems necessary to pursue a Master of Arts in Media Studies. A student must obtain at least a **B** in any remedial courses.

Candidates should have a GPA of 3.0. Applicants with a GPA between 2.8 and 3.0 may be admitted on a probationary basis. They must achieve a GPA of 3.0 in their first semester in order to continue in the program.

Candidates must also submit three letters of recommendation, an updated C.V., and a personal statement explaining their educational goals and reasons for selecting this area of study. Other university graduate admission requirements may apply as specified in this catalog.

### Graduation Requirements:

All students must take a total of 15 credits in the general field of Mass Communication in addition to 15 credit hours in the concentration area. The remaining three credits will be selected from a pool of courses offered by the program or by another program at NDU after securing the approval of the chair.

Students must write a 6-credit thesis to bring the total to 39 hours required for graduation.

Students must maintain an overall GPA of 3.0/4.0 for the 39 credits required to graduate.

Students must repeat any course on which they earned a **C<sup>-</sup>** grade or less.

## Degree Requirements (39 credits)

<b>Core Courses</b>	<b>15 cr.</b>
COA 610, COA 652, COA 680, COA 681, and JOU 631	
<b>Major Requirements - Advertising</b>	<b>21 cr.</b>
ADM 620, ADM 621, ADM 650, ADM 651, ADM 681.	15 cr.
ADM 690 (Thesis)	6 cr.
<b>Major Requirements – Electronic Media</b>	<b>21 cr.</b>
COA 611, COA 620, COA 630, COA 650, COA 651	15 cr.
COA 690 (Film or Thesis)	6 cr.
<b>Major Requirements - Journalism</b>	<b>21 cr.</b>
JOU 610, JOU 620, JOU 621, JOU 630, JOU 650	15 cr.
JOU 690 (Thesis)	6 cr.
<b>Free Electives</b>	<b>3 cr.</b>

*Note: The 6-hour thesis may be replaced with a major TV, video, or film production for those who select Electronic Media as their area of emphasis. Arrangements will be made with student's advisor and the department.*

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## Graduate Courses: Media Studies

**ADM 620 Advertising & Marketing Management (3.0); 3 cr.** The course examines the general array of agency personnel and studies the functions of each department including the duties and responsibilities of key decision-makers in the agency.

**ADM 621 Seminar in Integrated Marketing Communication (3.0); 3 cr.** The course applies the theories of integrated communication tools such as marketing, advertising, public relations, e-commerce, and others. It also looks at IMC's usage, management, and limitations.

**ADM 650 Advanced Media Planning (3.0); 3 cr.** Discussion of up-to-date media planning theories and concepts and their implications in the modern media systems. Studies the effects of horizontal and vertical media planning.

**ADM 651 Advanced Creative Strategy in Advertising (3.0); 3 cr.** Social science findings as guides for effective creative process by devising advertising message content using various creative approaches. Advanced writing and production of advertising messages for various media. Use of consumer behavior concepts in shaping advertising messages and improving media selection.

**ADM 660 Independent Study (3.0); 3 cr.** Topic takes into consideration the instructor's specialization and the student's interest. Requires completion of research paper. *Prerequisite:* written proposal and approval of instructor and department.

**ADM 681 Seminar in Advertising and Society (3.0); 3 cr.** Role of advertising in cultural, economic, and communication contexts. Actual campaigns and their implications in the modern world. Also includes the study of linguistics and semantics in advertising.

**ADM 690 Thesis (6.0); 6cr.** Specific research on a significant topic selected by the candidate upon consultation with advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

**COA 610 Theories of Mass Communication (3.0); 3 cr.** Studies various theories that explain the origins, developments, uses, abuses and effects of communication messages and explains the relationship between theoretical concepts and their application. Areas of study include media and violence, agenda-setting theory, uses and gratifications approach, etc.

**COA 611 Issues in Communication Technology (3.0); 3 cr.** Study of new technology and its actual and potential repercussions on media messages, the communication process and on society at large. Issues include restructuring and redefining the mass media and the characteristics of the emerging technologies.

**COA 620 Comparative Broadcasting (3.0); 3 cr.** A study of global electronic media systems. A comprehensive examination of rules governing the regulations and flow of programming between nations. Also study of the new satellite and transmission systems.

**COA 630 Broadcast Station Management (3.0); 3 cr.** Study of the problems of management, programming, sales, promotion, and marketing. Exploration of issues such as decision-making, news evaluation, budgeting in both commercial and noncommercial broadcast media.

**COA 631 Media and Politics: (3.0); 3 cr.** The impact of mass media on the political process especially in democratic societies. The interplay of influence between the two. Role of media consultants is also examined. *Prerequisite:* COA 610.

**COA 650 Advanced Video Production (3.0); 3 cr.** Examination of aesthetic decisions and skills in the planning and production of television programs: initial research through writing, to final production. Students are expected to develop and execute several programs for television.

**COA 651 Advanced Electronic Newsgathering and Reporting (3.0); 3 cr.** Real life experiences in gathering, writing, editing, and presenting news for the electronic media. Also, website reporting and various sources of news and information will be examined. *Prerequisite:* COA 650.

**COA 652 Advanced Research Methods in Mass Communication (3.0); 3 cr.** Techniques for study of communication content and messages, audiences and effects. Emphasis on research methods, and the data gathering, sampling and the application of those methods in Mass Communication and Advertising. *Corequisite:* COA 610.

**COA 660 Independent Study (3.0); 3 cr.** Topic takes into consideration the instructor's specialization and the student's interest. Requires completion of research paper. *Prerequisite:* written proposal and approval of instructor and department.

**COA 680 Seminar in Mass Communication Law and Ethics (3.0); 3 cr.** Study of legal and ethical controls of media such as government's regulations of the media and other Lebanese "taboos." Codes of ethics and traditional societal or self-imposed guidelines that govern the performance of the media will be addressed. Incorporated in this course is the Catholic church's stand on the legal and ethical functions of the mass media. *Corequisite:* COA 610.

**COA 681 Seminar in Cross-Cultural Communication (3.0); 3 cr.** The study of the impact of culture, norms, languages and values on the shaping and the perception of communication messages within and across national and international boundaries. Issues may include verbal and non-verbal communication, and others. *Prerequisite:* COA 610.

**COA 682 Seminar on the Lebanese Media (3.0); 3 cr.** An in-depth survey of the Lebanese media (both print and broadcast). Areas include history, economics, and trends. The course examines current figures and issues peculiar to the Lebanese media.

**COA 690 Thesis (6.0); 6 cr.** Specific research on a significant topic in the field selected by the candidate upon consultation with advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

**JOU 610 Newsroom Management (3.0); 3 cr.** Internal management of newspaper operation, status of personnel, and effects of technological

developments. Defining objectivity and improving news coverage.

**JOU 620 The Art of Interviewing (3.0); 3 cr.** Techniques and tools of gathering information from news sources.

**JOU 621 Editorial Operation (3.0); 3 cr.** Discussion of decision-making process in the newsroom. Various elements influencing the day-to-day operation of the print media. Roles of owners, and gatekeepers are examined. *Corequisite:* JOU 610.

**JOU 630 PR Programs and Campaigns (3.0); 3 cr.** Overall planning and operation of PR programs by various industries and institutions. Analysis and discussion of specific problems in real-life cases.

**JOU 631 International Public Relations (3.0); 3 cr.** Discussion of the role of public relations in the new age of global marketing and communication. Issues include global campaigns, international corporate PR, and cyberspace PR.

**JOU 650 Advanced Reporting and Newswriting (3.0); 3 cr.** In-depth reporting: theory and practice. Investigative and interpretative reporting. Also examines most recent means of gathering information and data needed to produce thorough, well-written journalistic work. *Corequisite:* JOU 620.

**JOU 680 Seminar in Selected Topics (3.0); 3 cr.** Discussion of various topics such as freedom of press, media and gender, media and religion, and other topics.

**JOU 690 Thesis (6.0); 6 cr.** Specific research on a significant topic selected by the candidate upon consultation with the advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

## DEPARTMENT OF SOCIAL AND BEHAVIORAL SCIENCES

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**Chairperson:** *Dr. Mansour Eid*

**Secretary:** *Ms. Christine Noufaily*

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### **Professors**

*Alam, Edward*, Ph.D., 1996, *Philosophy*, University of Utah, USA

*Eid, Mansour*, Doctorate, 1985, *Arabic Language and Literature*, Université Saint-Joseph, Lebanon

*Rihani, Ameen A.*, Ph.D., 1996, *Bilingual Literature*, Lebanese University, Lebanon

### **Associate Professors**

*Fahed, Ziad*, Doctorate, 2001, *Théologie Canonique*, Université Catholique de Lyon, France

*Matar, Suhail*, C.A.P.E.S., 1969, *Arabic Language and Literature*, Lebanese University, Lebanon

*Salameh, Doumit*, Ph. D., 1988, *Philosophy*, St. Louis University, USA

*Yaacoub, Youssef*, Ph.D., 1990, *Philosophy of Education/Minor Counseling Psychology* Loyola University of Chicago, USA

### **Assistant Professors**

*Antaby, Georges (Fr.)*, Ph.D., 2007, *Philosophy*, University of Ottawa, Canada

*El- Doaihi, Jamil*, Ph.D., 1998, *Arabic Literature*, Sydney University, Australia

*El Khoury, Akram (Fr.)*, Ph.D., 2006, *Canon Law*, Pontificia Universitas Lateranensis-Rome, Italy

*Karam, Clovis*, Doctorate, 1984, *Scholastic Philosophy*, Université Catholique de Lyon, France

*Sarkis, Walid*, Doctorate, 2009, *Clinical Psychology*, Lebanese University, Lebanon

### **Visiting Faculty Member**

*Akl, Said*, Poet, and Philosopher

### **Senior Lecturers**

*Abou-Jawdeh, Simon*, D.E.S., 1992, *Clinical Psychology*, Lebanese University, Lebanon

*Wehbe, Boulos ( Fr.)*, M.A., 1981, *Middle Eastern Studies*, American University of Beirut, Lebanon.

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The Social and Behavioral Sciences (SBS) Department offers a BA and an MA in Arabic Language and Literature, and a BA in Psychology with three concentrations – Clinical, Educational, and Industrial. In addition to these two majors, the SBS Department offers:

A Minor in Arabic

A Minor in Psychology

And,

- A cluster of undergraduate level courses, otherwise known as General Education Requirement (GER) courses - which are necessary for a comprehensive university education.
- A four week Summer Arabic Program which is intended for foreign students who want to learn Arabic.

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## **The Degree of Bachelor of Arts in Arabic Language and Literature**

Advisor: *Eid, Mansour*, Ph.D.

The Bachelor degree in Arabic Language and Literature covers the following areas: syntax, etymology, contemporary and classical literary works, comparative literature, along with emphasis on Lebanese writers' contribution to Arab and world literature. Methods of criticism are also highlighted. A degree in Arabic Language and Literature opens the door to a career in teaching, research, or government administrative positions.

### **Admission Requirements**

In addition to the University admission requirements, candidates must take the Arabic Entrance Test (AET).

### **Graduation Requirements**

Students enrolled in the degree of Bachelor of Arts in Arabic Language and Literature must complete a total of 103 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and major requirements. These courses are divided into:

### **Degree Requirements (103 credits)**

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Core Requirements</b> ARB 213, ARB 214, ARB 215, ARB 216, ARB 311, ARB 313, ARB 314, ARB 321, ARB 323, ARB 331, ARB 333	<b>31 cr.</b>
<b>Major Requirements</b> ARB 317, ARB 318, ARB 332, ARB 334, ARB 335, ARB 336, ARB 415, ARB 416, ARB 423, ARB 424, ARB 425	<b>33 cr.</b>
<b>Free Elective</b>	<b>6 cr.</b>

**Bachelor of Arts in Arabic Language and Literature**  
**Suggested program (103 credits)**

**Fall Semester I (14 Credits)**

ENL	213	Sophomore Rhetoric (GER)	3 cr.
ARB	211	Appreciation of Arabic Literature	3 cr.
ARB	213	Literary Genres	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (11 Credits)**

ARB	214	Rhetoric and Metrics	3 cr.
ARB	215	Literary Schools	2 cr.
ENL	230	English in the Workplace	3 cr.
ARB	311	Arabic Grammar and Dic.	3 cr.

**Summer Session I (9 Credits)**

ARB	216	Research Methods	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

ARB	313	Linguistics	3 cr.
ARB	314	The Modern Movement in Lebanon	3 cr.
ARB	317	Modern Arabic Literature in Lebanon	3 cr.
—	—	Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

ARB	318	Lebanese Lit. Overseas	4 cr.
ARB	321	Ancient Western Literature	2 cr.
ARB	323	Western Renaissance Literature	3 cr.
ARB	331	Pre-Islamic & Islamic Literature	3 cr.
ARB	333	Modernism in Abbasid Poetry	3 cr.

**Summer Session II (8 Credits)**

ARB	332	The Holy Koran & Literature	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (16 Credits)**

ARB	334	Prose in the Abbasid Era	3 cr.
ARB	335	Andalusian Literature	3 cr.
ARB	336	Lit. of the Modern Ar. Renaissance	4 cr.
ARB	415	Arabic Modernization Movement	3 cr.
ARB	416	Pioneers of Arabic Lit.	3 cr.

**Spring Semester III (15 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.
ARB	423	The Evolution of the Critical Move. in Leb.	3 cr.
ARB	424	Experimental Lebanese Lit.	3 cr.
ARB	425	Colloquial Literature	3 cr.

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## **Minor in Arabic Language and Literature (15 credits)**

The minor in Arabic offered by the SBS Department would be of particular benefit to students in the following majors:

Translation and Interpretation  
Advertising and Marketing  
Journalism  
Business  
Radio/TV  
Political Science and Diplomacy  
Engineering

In order to complete a minor in Arabic Language and Literature, the student must take the two courses below:

ARB 212          Applied Arabic Grammar  
ARB 231          Technical Arabic

### **Two from the following pool:**

ARB 211          Appreciation of Arabic Literature  
ARB 224          Arabic Literature & Human Thought  
ARB 317          Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> Century)  
ARB 333          Modernism in Abbasid Poetry

### **One of the following courses:**

ARB 302          Practice in Uses of Arabic  
ARB 423          The Evolution of the Critical Movement in Lebanon  
ARB 415          The Arabic Modernization Movement

**Total number of credits = 15 credits**

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## Undergraduate Courses: Arabic Language and Literature

**ARB 101 Arabic Essay Reading and Writing I (3.0); 3 cr.** Concentrates on the essay, its development and its various types. For Freshman students.

**ARB 102 Arabic Essay Reading and Writing II (3.0); 3 cr.** Continuation of ARB 101. *Prerequisite:* ARB 101 or placement. For Freshman students.

**ARB 111 Standard Arabic (3.0); 3 cr.** Designed to help non-Arabic speaking students study Standard Arabic. For Freshman students.

**ARB 201 Introduction to Arabic Syntax (3.0); 3 cr.** Addresses the rise of the schools of Arabic syntax; morphological, and syntactic rules are studied in selected texts.

**ARB 210 Literary Texts (3.0); 3 cr.** A study of literary texts from different ages, with emphasis on the cultural components of the Arabic text and its artistic and aesthetic elements.

**ARB 211 Appreciation of Arabic Literature (3.0); 3 cr.** Addresses essential characteristics of literature as well as literature themes, schools, and genres. *Prerequisite:* Sophomore Standing.

**ARB 212 Advanced Arabic Grammar (3.0); 3 cr.** Designed to improve students' command of Arabic grammatical structures and their application in discourse. *Prerequisite:* Sophomore Standing.

**ARB 213 Literary Genres (2.0); 2 cr.** Offers a study of the aesthetic characteristics of poetry, epic, theater, essay, elocution, and narration.

**ARB 214 Arabic Rhetoric and Prosody (3.0); 3 cr.** Focuses on the rise of Arabic rhetoric and its development: rhetoric, semantics, metaphor, prosody, and rhyme. Stylistics and writing crafts in all their forms are highlighted. *Prerequisite:* ARB 201.

**ARB 215 Literary Schools (2.0); 2 cr.** A study of the classic, romantic, realist, symbolic, existentialist, naturalist, and surrealist schools through selected texts. *Prerequisite:* ARB 211

**ARB 216 Research Methods (3.0); 3 cr.** A study of scientific research methodology and its implementation in contemporary literary studies.

**ARB 221 History of Civilizations and Religions (3.0); 3 cr.** A comprehensive view of the history of civilizations, the role of religions in the development of thought and action, and its

relation to arts in general, and literature in particular.

**ARB 224 Arabic Literature and Human Thought (3.0); 3 cr.** This course studies the relationship between philosophical thought of selected Arab and Lebanese writers and the philosophical concepts in Arabic literature from "al Jahiliyah" until the present. Students will analyse and discuss the various philosophical views and theories in the passages studied.

**ARB 231 Technical Arabic (3.0); 3 cr.** Designed to train students in using proper Arabic linguistic tools pertaining to various technical, scientific, and professional settings. *Prerequisite:* Sophomore Standing.

**ARB 301 Introduction to Comparative Literature (3.0); 3 cr.** A pragmatic introduction to comparative literature and its various schools and critical approaches through selected works.

**ARB 302 Practice in Uses of Arabic (3.0); 3 cr.** is a course in the use of the Arabic language. It provides insight into the connections and relations between various forms of specialized knowledge, and the full range of expressions which the Arabic language permits. Course includes Advertising, Journalism, Radio/TV language varieties.

**ARB 311 Arabic Grammar and Dictionaries (3.0); 3 cr.** This is an in-depth study of Arabic morphology and syntax, in conjunction with glossary building.

**ARB 312 Arabic Philology (3.0); 3 cr.** Consists of a study of the development of Arabic philology and its characteristics. Phonetics, etymology, derivations, post classical arabization and borrowed words, dialectology, and colloquial vs classical modern Arabic. Arabic writing and calligraphy are highlighted.

**ARB 313 Linguistics (3.0); 3 cr.** A comprehensive approach to concepts of syntax, phraseology, styles, morphology, phonetics and phonology.

**ARB 314 Linguistic Phenomenon in Lebanon (3.0); 3 cr.** Explores the contribution of the modern Lebanese Arabic language. Trends in linguistic thought, semantics, morphology, and syntax are studied.

**ARB 317 Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> Century) (3.0); 3**

**cr.** Cultural effects and literary evolution are studied through selected texts.

**ARB 318 Lebanese Literature Overseas (4.0); 4 cr.** Emigration and its effects on Lebanese literature in content and form are critically addressed. Selections pertaining to writers in the Writer's League and Andalusian Union are studied in depth.

**ARB 321 Ancient Western Literature (2.0); 2 cr.** Studies the characteristics of ancient Western literature. The effects of Greek and Latin writings on world thought are highlighted.

**ARB 323 Western Renaissance Literature (3.0); 3 cr.** French, English, Italian, Russian, Spanish, and German literary selections pertaining to the European Renaissance are studied.

**ARB 331 Pre-Islamic and Islamic Literature (3.0); 3 cr.** This course addresses studies on the Pre-Islamic period of Arabic literature and its characteristics through selected texts as well as the transformation of Arabic literature under the influence of Islam during the period of Rashidian successors and the Ummayyads.

**ARB 332 The Holy Qur'an and Literature (2.0); 2 cr.** This course offers a study of the Qur'anic language and its effect on Arabic literature.

**ARB 333 Modernism in Abbasid Poetry (3.0); 3 cr.** A study of the evolution of poetry in the Abbasid era through selected texts. The renovation trend and its reflection on literature are also addressed. The Sho'ubian movement, Sufism, and their effect on philosophical thought and translations are highlighted.

**ARB 334 Prose in the Abbasid Era (3.0); 3 cr.** This course analyzes the development of prose in the Abbasid era through selected texts. The renovation trend and its reflection on literature are also addressed.

**ARB 335 Andalusian Literature (3.0); 3 cr.** This course consists of a study of the evolution of Andalusian Arabic literature, its tradition, evolution and its large range of subjects in poetry and prose. The relation between East and West through the Andalusian artistic flora is also highlighted through selected texts.

**ARB 336 Literature of Modern Arabic Renaissance (4.0); 4 cr.** This course analyzes the effects of Western thought on the Eastern Renaissance and its reflection on Arabic literature. Also, the conflict between tradition and evolution is studied through selected texts.

**ARB 415 The Arabic Modernization Movement (3.0); 3 cr.** Studies on the development of Arabic poetry in literature and criticism through selected texts.

**ARB 416 Pioneers of Arabic Literature (3.0); 3 cr.** This course consists of a study of groundbreaking 20<sup>th</sup> century Arabic literature.

**ARB 421 Lebanese Literature in English (3.0); 3 cr.** Selected Lebanese writings in English are addressed in this course.

**ARB 422 Lebanese Literature in French (3.0); 3 cr.** Selected Lebanese writings in French are studied in this course.

**ARB 423 The Evolution of the Critical Movement in Lebanon (3.0); 3 cr.** A study of the Lebanese contribution to Arabic criticism, trends of criticism in Lebanon in relation to Arabic criticism in the modern age, and the role of journalism in literary criticism.

**ARB 424 Experimental Lebanese Literature (3.0); 3 cr.** The works of prominent Lebanese writers are studied in this course.

**ARB 425 Colloquial Literature (3.0); 3 cr.** This course focuses on the form and content of the spoken language through selections in fiction and poetry.

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## The Degree of Master of Arts in Arabic Language and Literature

The Master of Arts in Arabic Language and Literature offers a large selection of courses designed to deepen the level already attained at the undergraduate level. Both ancient and modern prose and poetry are studied in depth.

### Admission Requirements

In order to be admitted to the Master program, candidates must fulfill the following:

1. Hold a Bachelor degree in Arabic Language and Literature from a recognized institution of higher learning
2. Comply with NDU rules and regulations for graduate work
3. Sit for the Arabic Entrance Test offered by NDU (AET).
4. Provide three letters of recommendation

### Graduation Requirements

Students seeking the degree of Master of Arts in Arabic Language and Literature must meet the University graduation requirements and complete a total of 30 credits with a minimum overall average of 3.0/4.0. Courses are divided into:

#### Degree Requirements (30 credits)

<b>Major Requirements</b> ARB 601, ARB 611, ARB 612, ARB 613, ARB 614, ARB 621	<b>18 cr.</b>
<b>Free Elective</b> ARB 622, ARB 623, ARB 624, ARB 631, ARB 632, ARB 633, ARB 634, ARB 641	<b>6 cr.</b>
<b>Thesis</b> ARB 699	<b>6 cr.</b>

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## Graduate Courses: Arabic Language and Literature

**ARB 601 Bibliography and Methods of Research (3.0); 3 cr.** Materials, tools, and methods of research are studied in this course.

**ARB 611 Analytical Study of Abbasid Prose (3.0); 3 cr.** Designed to offer a study of Arabic prose in its first stages, from the Islamic Age to the end of the Abbaid Period, focusing on the stages of transformation and modernization.

**ARB 612 Analytical Study of Modern Prose (3.0); 3 cr.** Starting from the end of World War I, this course focuses on the prose stations of transformation and modernization.

**ARB 613 Parallelism in Ancient Arabic Poetry (3.0); 3 cr.** Offers a comparative study of Ancient Arabic literature from the Pre-Islamic Age to the Abbasid Age, focusing on the interaction of the different trends of the most important poets and on the elements of imitation and renovation.

**ARB 614 Analytical Study of Modern Poetry (3.0); 3 cr.** Covers poetry starting from the end of World War I, focusing on the stages of transformation and modernization.

**ARB 621 Study of a Contemporary Literary Work (3.0); 3 cr.** A modern literary work written by a 20<sup>th</sup> century poet, author, or novelists, is studied and analyzed on the basis of modern critical trends.

**ARB 622 Trends of Ancient Arabic Criticism (3.0); 3 cr.** Application of Arabic critical methods to ancient Arabic literature i.e., prose and poetry.

**ARB 623 Parallelism between the Koufi and Basra Schools (3.0); 3 cr.** A comparative study

of Arabic grammar as presented by the Koufi and Basra schools.

**ARB 624 Methods of Teaching Arabic (3.0); 3 cr.** Covers the methods of teaching Arabic grammar, poetry, and prose, (text to the rule and vice versa).

**ARB 631 Twentieth Century Prose (3.0); 3 cr.** The works and characteristics of one prominent writer of the 20th century are studied in depth.

**ARB 632 Renaissance Prose Writing (3.0); 3 cr.** Studies and analyzes prose works starting from the early Arabic Renaissance until the end of World War I, focusing on the transformation and renovation stages.

**ARB 633 Prominent 20th Century Poet (3.0); 3 cr.** Offers a study of the work and characteristics of a prominent 20<sup>th</sup> century poet as well as his/her relation to renovation and modernization.

**ARB 634 Transformation in Renaissance Age Poetry (3.0); 3 cr.** Consists of analysis and study of poetry starting from the early Renaissance Age until the end of World War I, focusing on the transformation stages.

**ARB 641 Arabic Dictionaries (3.0); 3 cr.** Introduction to Arabic lexicography. An in-depth study of one dictionary identifying its special characteristics and its relation to other dictionaries.

**ARB 699 Thesis (6.0); 6 cr.** Preparation of a thesis with the help of an advisor. The themes and conditions of the thesis are defined in accordance with the requirements set for the Master degree.

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## **The Degree of Bachelor of Arts in Psychology**

Advisor: *Yaacoub, Youssef*, Ph.D.

The psychology program offered by the SBS Department at NDU provides students with three essential fields of concentration:

Clinical Psychology  
Educational Psychology  
Industrial Psychology

The psychology program at NDU is specifically developed to promote the ability to deliver service skills within the community. At the BA level, students will not be qualified to function independently as a private psychologist; however, they will be able to cope with work in a community setting.

The program will train a student to be aware of problems that exist and of the possible approaches to resolve them. Using psychological assessment, strategies, and methods of intervention, the student will work within the community, continuously evaluating the ways to create better adjustment within it in relation to psychological, physical, social, political, and religious domains.

### **Admission Requirements**

For a student to be admitted to the program, a grade of “C” or above is required in the following courses: PSL 201, STA 202, ENL 213, ENL 223.

### **Graduation Requirements**

In order to graduate, a student must meet the General Education Requirements, and successfully complete a total of 106 credits with a minimum GPA of 2.0/4.0, and a minimum average of 2.3/4.0 in the major and concentration requirements. Electives may be chosen from other concentration courses within the major of Psychology or from the different majors offered by the University

### **Degree Requirements (97 credits)**

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Major Requirements</b> PSL 201, MAT 202, PSL 211, PSL 217, PSL 317, PSL 319, PSL 321, PSL 411, PSL 413, PSL 415, PSL 417, PSL 481	<b>36 cr.</b>
<b>Free Electives</b>	<b>1 cr.</b>
<b>Concentration – Clinical</b> PSL 310, PSL 315, PSL 213, PSL 230, PSL 382, PSL 484, PSL 215, PSL 345, PSL 320, PSL 323	<b>30 cr.</b>
<b>Concentration – Industrial</b> PSL 322, BAD 201, PSL 362, PSL 323, PSL 332, BAD 317, PSL 386, PSL 215, BAD 427, PSL 424	<b>30 cr.</b>
<b>Concentration – Educational</b> PSL 313, PSL 315, PSL 213, PSL 324, EDU 422, EDU 350, EDU 330 (EDU 331, EDU 332 or EDU 333), PSL 385, EDU 362, PSL 345	<b>30 cr.</b>

**Bachelor of Arts in Psychology**  
**Clinical Psychology Emphasis - Suggested Program (97 credits)**

**Fall Semester I (15 cr.)**

ENL	213	Sophomore Rhetoric (GER)	3 cr.
MAT	202	Mathematics for Arts	3 cr.
—	—	GER	3 cr.
PSL	201	Introduction to Psychology	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 cr.)**

ENL	230	English in the Workplace (GER)	3 cr.
PSL	211	Psychology of the Young Child	3 cr.
PSL	217	Psychology of Personality	3 cr.
PSL	413	History and Systems of Psychology	3 cr.
—	—	GER	3 cr.

**Summer Semester I (6 cr.)**

—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester II (15 cr.)**

PSL	315	Sensation and Perception	3 cr.
PSL	317	Cognitive Psychology	3 cr.
PSL	319	Abnormal Psychology	3 cr.
PSL	310	Psychology of the Family	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester II (12 cr.)**

PSL	213	Psychology of Learning	3 cr.
PSL	321	Experimental Psychology	3 cr.
PSL	230	Theories of Psychotherapy	3 cr.
PSL	415	Intelligence Testing	3 cr.

**Summer Semester II (9 cr.)**

PSL	382	Practicum I: Clinical	3 cr.
—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester III (15 cr.)**

PSL	411	Stress: Causes, Consequences and Management	3 cr.
PSL	484	Practicum II: Clinical	3 cr.
PSL	215	Social Psychology	3 cr.
PSL	481	Undergraduate Seminar in Psychology	3 cr.
PSL	323	Deviance	3 cr.

**Spring Semester III (10 cr.)**

PSL	417	Personality Assessment	3 cr.
PSL	345	Counseling Psychology	3 cr.
PSL	320	Psychopathology	3 cr.
—	—	Free Elective	1 cr.

**Bachelor of Arts in Psychology**  
**Educational Psychology Emphasis - Suggested Program (97 credits)**

**Fall Semester I (15 cr.)**

ENL	213	Sophomore Rhetoric (GER)	3 cr.
MAT	202	Mathematics for Arts	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
PSL	201	Intro. to Psychology	3 cr.

**Spring Semester I (15 cr.)**

ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.
PSL	211	Psychology of the Young Child	3 cr.
PSL	217	Psychology of Personality	3 cr.
PSL	413	History and Systems of Psychology	3 cr.

**Summer Semester I (6 cr.)**

—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester II (15 cr.)**

PSL	313	Psychology of Adolescence	3 cr.
PSL	315	Sensation and Perception	3 cr.
PSL	317	Cognitive Psychology	3 cr.
PSL	213	Psychology of Learning	3 cr.
PSL	324	Educational Psychology	3 cr.

**Spring Semester II (15 cr.)**

PSL	321	Experimental Psychology	3 cr.
PSL	319	Abnormal Psychology	3 cr.
EDU	430	Test, Measurement and Evaluation	3 cr.
EDU	350	Methods of Teaching: Elementary	3 cr.
EDU	330	Curriculum Development and Evaluation: Elementary OR/	3 cr.
EDU	—	EDU 331, EDU 332, EDU 333	

**Summer Semester II (6 cr.)**

—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester III (15 cr.)**

PSL	411	Stress: Causes, Consequences and Management	3 cr.
PSL	385	Practicum I: Educational	3 cr.
PSL	415	Intelligence Testing	3 cr.
PHL	311	Ethics and the Modern World (GER)	3 cr.
PSL	481	Undergraduate Seminar in Psychology	3 cr.

**Spring Semester III (10 cr.)**

PSL	417	Personality Assessment	3 cr.
PSL	345	Counseling Psychology	3 cr.
EDU	362	Education and the Lebanese Law	3 cr.
—	—	Elective	1 cr.

**Bachelor of Arts in Psychology**  
**Industrial Psychology Emphasis - Suggested Program (97 credits)**

**Fall Semester I (15 cr.)**

ENL	213	Sophomore Rhetoric (GER)	3 cr.
MAT	202	Mathematics for Arts.	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
PSL	201	Intro. to Psychology	3 cr.

**Spring Semester I (12 cr.)**

—	—	GER	3 cr.
PSL	211	Psychology of the Young Child	3 cr.
PSL	217	Psychology of Personality	3 cr.
PSL	413	History and Systems of Psychology	3 cr.

**Summer Semester I (6 cr.)**

—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester II (15 cr.)**

PSL	317	Cognitive Psychology	3 cr.
PSL	319	Abnormal Psychology	3 cr.
PSL	322	Industrial Psychology	3 cr.
PSL	362	Psychology Work and Law	3 cr.
BAD	201	Fundamentals of Management	3 cr.

**Spring Semester II (15 cr.)**

PSL	321	Experimental Psychology	3 cr.
PSL	323	Deviance	3 cr.
PSL	332	Personnel and Human Factors in the Work Community	3 cr.
BAD	317	Organizational Behaviour	3 cr.
—	—	GER	3 cr.

**Summer Semester II (9 cr.)**

PSL	386	Practicum I: Industrial	3 cr.
—	—	General Education Requirement	3 cr.
—	—	General Education Requirement	3 cr.

**Fall Semester III (15 cr.)**

PSL	411	Stress: Causes, Consequences and Management	3 cr.
PSL	215	Social Psychology	3 cr.
PSL	415	Intelligence Testing	3 cr.
PSL	481	Undergraduate Seminar in Psychology	3 cr.
—	—	General Education Requirement	3 cr.

**Spring Semester III (10 cr.)**

PSL	417	Personality Assessment	3 cr.
BAD	427	Human Resource Management	3 cr.
PSL	424	Community Psychology	3 cr.
—	—	Free Elective	1 cr.

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## Minor in Psychology

The minor in Psychology is particularly useful for students who wish to complement their chosen major with psychology courses.

A minor in psychology is merited upon successful completion of **18** credit hours in psychology. The passing grade per course is “**C**”.

Students following a bachelor’s degree in any other major and who already passed Psychology 201 with a C are required to take 15 credits of psychology from the courses listed below.

The program of the minor in psychology consists of six courses taken from three levels of study:

The student should complete the six courses in the list below:

- PSL 201 Introduction to Psychology
- PSL 211 Psychology of the Young Child
- PSL 217 Personality Psychology
- PSL 319 Abnormal Psychology
- PSL 345 Counseling Psychology
- PSL 481 Undergraduate Seminar in Psychology

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## Undergraduate Courses: Psychology

**PSL 101 Principles of Psychology (3.0); 3 cr.** Introduces students to the basic concepts of psychology. Topics include learning, memory, motivation, and habits. For Freshman students.

**PSL 201 Introduction to Psychology (3.0); 3 cr.** Offers a critical survey of general topics, principles, and findings of modern psychology.

**PSL 211 Psychology of the Young Child (3.0); 3 cr.** Covers the study of the individual from conception through the early school years. Emphasis is placed on the child between 3 and 5 years old.

**PSL 213 Psychology of Learning (3.0); 3 cr.** Introduces various principles and theories of learning and memory. *Prerequisite:* PSL 201.

**PSL 215 Social Psychology (3.0); 3 cr.** This course explores the principles of personality theories such as psychoanalytic, analytic psychology, neo-Freudian, behavioral, cognitive and humanistic. Inherited and learned traits are also covered. *Prerequisite:* PSL 201.

**PSL 217 Psychology of Personality (3.0); 3 cr.** Examines personality theories, methods and applications to social and clinical concerns. Classic theories of personality are discussed including psychoanalytic, behavioral, trait, humanistic, cognitive and social roles are explored and evaluated. *Prerequisite:* PSL 201.

**PSL 230 Theories of Psychotherapy (3.0); 3 cr.** Places an emphasis on understanding the theories and techniques of psychotherapy. Topics considered: individual, family, and group therapy. *Prerequisite:* PSL 201

**PSL 310 Psychology of the Family (3.0); 3 cr.** Explores relations between the individual and the family within a community. Focus is placed on diverse family patterns due to social class, race, ethnicity, and gender within a historical and sociopolitical context. By examining epidemiological, cross cultural, and clinical data, a student is introduced to intervention techniques to reduce malfunction and/or abusive situations. *Prerequisite:* PSL 201.

**PSL 313 Psychology of Adolescence (3.0); 3 cr.** Introduces theories and research on social, cognitive, sexual and identity development in adolescence in order to promote a healthier adult. Implications within the community are focused on. *Prerequisite:* PSL 201.

**PSL 315 Sensation and Perception (3.0); 3 cr.** Examines basic data and theories concerning the sensory system. The focus is on understanding sensory and perceptual processes as they relate to higher cognitive functions. *Prerequisite:* PSL 201.

**PSL 317 Cognitive Psychology (3.0); 3 cr.** Addresses the theoretical and experimental foundations for current understanding of how humans acquire and use knowledge. Piaget, Bruner, and Uygotsky theories of cognitive growth are studied. Topics discussed include the development of language, reasoning, problem solving, creativity, and intelligence. *Prerequisite:* PSL 201.

**PSL 319 Abnormal Psychology (3.0); 3 cr.** Introduces abnormal behavior and resulting disorders. Emphasis is on theories, etiology, classifications and various modalities of treatments. *Prerequisites:* PSL 201, PSL 217.

**PSL 320 Psychopathology (3.0); 3 cr.** Focuses on psychological and/or organic determinants of behavior disorders. *Prerequisite:* PSL 319.

**PSL 321 Experimental Psychology (3.0); 3 cr.** Introduces the research process in psychology. Topics include methodology, data collection, descriptive statistics, analysis, and report writing. *Prerequisites:* STA 201, PSL 213 or PSL 317.

**PSL 322 Industrial Psychology (3.0); 3 cr.** Applies a socio-psychological approach to an individual in a work setting. Topics discussed include management in an organization to promote productivity, change, role definition, and leadership qualities. *Prerequisites:* PSL 201.

**PSL 323 Deviance (3.0); 3 cr.** Focuses on deviant behavior as a social process. Antecedents, determinants, social relations processes and consequences of deviant acts are emphasized. Topics include juvenile delinquency, homosexuality, homicide, alcoholism, abuse, drugs, suicide, and mental illness. *Prerequisites:* PSL 201.

**PSL 324 Educational Psychology (3.0); 3 cr.** Introduces basic principles of psychology applied to the field of education. Topics include learning and instruction, motivation, classroom management, and testing and evaluation. *Prerequisite:* PSL 201.

**PSL 332 Personnel and Human Factors in the Work Community (3.0); 3 cr.** Addresses the human capabilities, needs, and limitations within a system. Concentration on job analysis, satisfaction, testing, training, group dynamics, leadership and social influence, motivation, equipment design. Consumer behavior and its effect on productivity and work quality within the community are examined. *Prerequisite:* PSL 322.

**PSL 345 Counseling Psychology (3.0); 3 cr.** Prevention of psychological crisis is the focus of the course. Practices of the various schools of psychology are explored such as behaviorism, psychoanalysis, phenomenology, rational emotive therapy, Existentialism and other contemporary theories. *Prerequisites:* PSL 217.

**PSL 362 Psychology of Work and Law (3.0); 3 cr.** This course provides an introduction to the application of psychological methodology and research on practical and applied problems. Areas concerned include marketing, advertising, management, and law. Psychological human factors serve as background to this course. *Prerequisite:* PSL 201

**PSL 382 Practicum I: Clinical (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 385 Practicum I: Educational (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 386 Practicum I: Industrial (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 411 Stress Causes, Consequences and Management (3.0); 3 cr.** Gives students an understanding of the meaning of stress, its definition and, explanation, enabling them to recognize factors that may influence the individual or the situation. Possible outcomes - at the behavioral, cognitive and physical level -

are studied to promote adaptive means of coping and stress management. *Prerequisite:* PSL 201.

**PSL 413 History and Systems of Psychology (3.0); 3 cr.** Surveys the major schools of psychology; introducing the major psychologists and approaches within the field to give students an understanding of how psychology development into a science. *Prerequisite:* PSL 201.

**PSL 415 Intelligence Testing (3.0); 3 cr.** Allows the student to gain knowledge of the skills needed in administering, scoring and interpreting intelligence tests. Test focus will be on WAIS for adults, WAIS for children, and the Stanford Binet. *Prerequisites:* STA 202, PSL 211, PSL 317.

**PSL 417 Personality Assessment (3.0); 3 cr.** Allows the students to gain knowledge of the skills needed to use the various instruments in assessing personality. Emphasis is on research and methodological steps in evaluating an individual's personality. *Prerequisites:* STA 202, PSL 217, PSL 319.

**PSL 424 Community Psychology (3.0); 3 cr.** Concentrates on the interaction between individual and environment. Emphasis is placed on various models of intervention as they relate to both individual and community needs. Topics include poverty, prejudice, diversity, change, personal space, crowding, territoriality, and social stress. *Prerequisites:* PSL 215, PSL 322.

**PSL 481 Undergraduate Seminar in Psychology (3.0); 3 cr.** This course focuses on selected topics in psychology, varying from year to year depending on student, community and curriculum needs and on availability of professionals in relation to selected topics. Senior Standing.

**PSL 484 Practicum II: Clinical (1.3); 3 cr.** Provides students with supervised work experience within their concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* Junior or Senior standing.

**PSL 491 Special Topics in Psychology (3.0); 3 cr.** This course is designed to be given to a student either independently or in a group setting. Topic reading and research is supervised by a faculty member. *Prerequisites:* STA 202, PSL 321, senior standing.

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## Undergraduate Courses: Human Thought

**HUT 305 Human Thought to 1500 (3.0); 3 cr.** Traces the development of human thought from the initial stage of thinking to the end of the 16th century.

**HUT 306 Human Thought from 1500 to the Present (3.0); 3 cr.** Introduces the

issues/challenges which man faced and is facing from the Reformation to the present.

**HUT 411 Aesthetics (3.0); 3 cr.** Acquaints students with the art of detecting, producing, and appreciating beauty in works of art. *Prerequisite:* ENL 213.

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## Undergraduate Courses: Philosophy

**PHL 101 Introduction to Philosophy (3.0); 3 cr.** Covers the history of philosophical thought by providing a preview of the major works of prominent philosophers, such as Plato, Aristotle, Augustine, Aquinas, and Descartes, to name a few. For Freshman students.

**PHL 111 Introduction to Ethics (3.0); 3 cr.** This is a philosophy course that introduces students to ethical (moral) thinking. It also highlights the fact that we are moral agents, i.e. we are endowed with a sense of responsibility, and with a capacity to choose and make decisions. We address things and actions as good or bad, and judge decisions as right or wrong. We also feel obligated to be just and honest. We face life problems we need to examine (euthanasia, genetic engineering, among others) and make a decision. Decisions may be made based on different factors: looking for what is

right for me or for anyone? What is beneficial? Is God a factor in making such decisions? This course aims to improve thinking about the considerations that may count as reasons for and against the moral judgments students are tempted to make. For Freshman students.

**PHL 211 Logic and the Scientific Method (3.0); 3 cr.** Explores the methods of enquiry practiced by the natural, social, and behavioral sciences.

**PHL 311 Ethics and the Modern World (3.0); 3 cr.** Offers a general analysis of major schools in ethics, by defining each school's concept of right and wrong, good and bad, and its consequent approach in providing solutions to selected ethical problems. Texts directly related to major schools are treated. *Prerequisite:* ENL 213.

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## Undergraduate Courses: Religion

**REG 101 Introduction to Religion (3.0); 3 cr.** This course offers an elementary comprehensive approach to the characteristics of religions that have influenced history: The major concept(s) of what man is; the essential need man has for religion; the meaning, function, and objective(s) of religion; the different approaches to salvation; religion's basic constituents; the different concepts of God in relation to man and to the universe; the different forms of communication between man and God(s)... and finally the ever rising focal importance of religion, and therefore of God, in human life. For Freshman students.

**REG 212 Religion and Social Issues (3.0); 3 cr.** This course introduces the contributions of the three major monotheistic religions to reach a better understanding of the relationship of the human being to the universe: God, Human Being and Nature. The mainstream beliefs of the three religions will be examined through an overview of major issues relevant to the religions studied.

**REG 213 Catholicism (3.0); 3 cr.** This course offers studies on the Catholic doctrine regarding both faith and morals. *Prerequisite:* ENL 105.

**REG 215 World Religions (3.0); 3 cr.** This course explores the variety of ways people have articulated their connections with the sacred. Major religious traditions are addressed, namely, Christianity, Judaism, Islam, Hinduism, Buddhism, Confucianism, and Taoism. Ancient religious cultures such as the Mesopotamian, Persian, and Egyptian are also covered.

**REG 313 The Maronites: Faith and Cultural Heritage (3.0); 3 cr.** This course is an introduction to the cultural heritage of the Maronite people. It addresses Maronite theology and spirituality in the context of secular, social, and ecclesiastical history from ancient through contemporary times, with a particular emphasis on the question of Maronite identity, while highlighting contributions of the Maronite faith

and cultural heritage to the development of the region.

**REG 314 Marriage and Family in the Catholic Church (3.0); 3 cr.** This course will examine traditional and contemporary views of marriage and family in the light of Catholic theology and doctrine. An inquiry into the sacramental nature of marriage will shed light upon the Catholic view of the Family as “a little Trinity” and “a domestic Church”. The course will therefore attempt to present the Catholic teaching on marriage and the family based on basic Trinitarian and Ecclesiological Catholic

truths. Investigation into the question of the nature of the human being as man and as woman founded on Patristic exegesis of Sacred Scripture will inform deeply the content of the course. A particular emphasis will be given to the ancient and contemporary Syriac-Maronite contributions to the Catholic view of marriage and the family on both the theological and practical levels.

**REG 412 History of Religious Thought in the Middle East (3.0); 3 cr.** This course offers studies on the major theological interpretations of the three monotheistic religions as presented by their major thinkers. *Prerequisite:* REG 212.

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### Undergraduate Courses: Sociology

**SOL 101 Essentials of Sociology (3.0); 3 cr.** This course introduces students to the basic theories and theoretical perspectives of sociology. Areas included are family and gender roles, work and occupations, race and ethnicity. Students will also study their own community beginning with the student community of their own class. For Freshman Students.

**SOL 201 Introduction to Sociology (3.0); 3 cr.** Designed to introduce students to the basic principles that govern social relationships and scientific points of view.

**SOL 301 Introduction to Anthropology (3.0); 3 cr.** Introduces fundamental concepts of anthropology. Discusses the nature of man, culture, and society.

**SOL 312 Social Problems (3.0); 3 cr.** Covers social problems in contemporary society with special reference to Middle Eastern society. *Prerequisite:* SOL 201.

**SOL 313 Family Violence and Child Abuse (3.0); 3 cr.** Integrates current knowledge about family violence from the areas of psychology, sociology, social work, and law enforcement.

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## The Degree of Master of Arts in Psychology- Educational Psychology

### Mission Statement:

The M.A. program in Psychology at NDU offered by the Department of Social and Behavioral Sciences in the Faculty of Humanities is designed to offer students with a theoretical and practical understanding of the principles of psychology within the framework of the area of concentration. Consequently, it trains the students to perform psychological services so as to function competently in a variety of applied settings such as to work in community health units, healthcare organizations, hospitals, schools, universities, industries, medical systems, counseling centers, governmental agencies, and military services.

- **Master's degree in Educational Psychology:** A program that focuses on the application of psychology to the study of the behavior of individuals in the roles of teacher and learner, the nature and effects of learning environments, and the psychological effects of methods, resources, organization and non-school experience on the educational process. It includes instruction in learning theory, human growth and development, research methods, and psychological evaluation.
- Students accepted in the program must fulfill the 36 credit-hours required or the 30 credit-hours course work in addition to a 6 credit-hours thesis. The Grade Point Average must not be less than a B or 3.00/4.00. Students, in case of failure in one of the courses, are given one chance to repeat the course work. A second failure will result in the expulsion of the student from the program. Following registration a three years time limit is given to the students to complete his/her degree. Students are not allowed to repeat more than two courses.

### Admission Requirements

The minimum requirements for admission to the M.A. program in Educational Psychology are:

1. A Bachelor's degree in psychology or its equivalent from an accredited university; a Bachelor degree in any other major will be evaluated separately.
2. A cumulative undergraduate grade point average of a minimum GPA 2.75, as long as they satisfy the general admission requirements for graduate studies of NDU.
3. A personal statement of background, goals and values.
4. Three professional recommendations from instructors of the student's B.A. program.
5. A personal interview at the discretion of the department.

### Transfer

Credits from accredited universities can be transferable according to the following conditions:

- Acceptance by the Admission Office of Notre Dame University (NDU).
- Any course whose grade is below 80, i.e., B is not transferable. This is according to the NDU grading policy and the NDU Bylaws.
- Only nine credit-hours are granted to the new student provided that the transferable course/s is/are transferred from an accredited university and correspond/s to the NDU course requirements.

### **Educational Outcomes**

Upon the completion of the Masters Program in Educational Psychology students must be prepared for:

- A professional understanding of the individuals in the roles of a teacher and a learner.
- The nature and effects of the learning environment.

The effects of psychological methods, resources, organization and the informal and the formal experiences on the educational process

### **Degree Requirements (36 credits)**

<b>Core Courses</b>			<b>9 cr.</b>
PSL 601	Professional Counseling Skills		
PSL 602	Assessment & Psychometric Methods		
PSL 609	Research Methods and Design		
<b>Track Option</b>			<b>6cr.</b>
<b>Research Track:</b>	PSL 699	Thesis	<b>6 cr.</b>
Or			
<b>Applied Track:</b>	PSL 692	Practicum II - Educational	<b>3 cr.</b>
	PSL 695	Practicum III - Educational	<b>3 cr.</b>
<b>Educational Psychology Major Courses</b>			<b>21 cr.</b>
PSL 610	Developmental Psychology		<b>3 cr.</b>
PSL 622	Theory of Learning and Cognitive Processes		<b>3 cr.</b>
PSL 631	Psychoeducational Assessment		<b>3 cr.</b>
PSL 642	Practicum I - Educational		<b>3 cr.</b>
PSL 662	Consultation, Intervention and Prevention		<b>3 cr.</b>
PSL 682	Seminar in Educational Psychology		<b>3 cr.</b>
<b>Elective</b>			<b>3 cr.</b>

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## Graduate Courses: Psychology

**PSL 601 Professional Counseling Skills (3.0); 3cr**, The course provides practical experience in developing basic clinical skills, such as effective inquiry, empathic listening, helping responses, and interpretation. Emphasis on matching therapist style with client characteristics; students are trained to work with clients of diverse backgrounds and in different settings.

**PSL 602 Assessment & Psychometric Methods (3.0); 3cr**, The course reviews the fundamentals of testing and assessment skills in administering and interpreting standardized tests in the areas of personality assessment and intelligence testing. Special emphasis will be on Rorschach, TAT, MMPI, WAIS-III, WISC-III and Kauffman ABC.

**PSL 609 Research Method and Designs (3.0); 3cr**, With the goal of gaining competence in critical evaluation of published research; this course will provide training in the application of research techniques to problems in psychology and human services. Quantitative and Qualitative research design, conducting, reporting and analyzing assessment and program evaluation.

**PSL 610 Developmental Psychology (3.0); 3cr**, The course studies the human lifespan development; a foundation for understanding principles and concepts of physical, cognitive, personality, emotional and social development from conception through death. It also introduces developmental disabilities.

**PSL 622 Theory of Learning and Cognitive Processes (3.0); 3cr**, The course explores theoretical areas of learning and cognition, including cognitive psychology, memory, information processing, attention, problem solving, learning strategies and reinforcing as well as the design of classroom learning situation.

**PSL 631 Psychoeducational Assessment (3.0); 3cr**, The course focuses on administering, scoring and interpreting standardized

instruments and tests to assess cognitive abilities, learning behaviors, emotional disturbances, social maladaptive and sensory motor functioning of school-age children with emphasis on psychoeducational diagnosis.

**PSL 642 Practicum I (3.0); 3cr** Educational Psychology (to be approved by the advisor).

**PSL 662 Consultation, Intervention and Prevention (3.0); 3cr**, The course builds a framework for educational psychologists to address the concepts, processes and issues related to the practice of school-based consultation as an intervention technique of educational psychologists.

**PSL 682 Seminar in Educational Psychology (3.0); 3cr**, This course is a forum for student to put together knowledge and ideas across the subdisciplines of psychology and an impetus for expansion of thinking. It includes but not limited to: *Socio-developmental*: issues relating to education, topics include; role theory, attitude theory formation and change, transitions from home to school, Elementary/Secondary, High School/University to work. *Instructional Psychology*: it includes designing, implementing and evaluating learning strategies and programs from preschool to high school. *Instructional Decision Making*: focuses on direct and indirect approaches to interact and help students, teachers and families to reduce behavioral and academic problems. Assists students with developmental disabilities. *Contemporary Educational Problems and Motivation. Developing Human Potentials*: techniques that emphasize human relation skills, self-image, values, and stress management.

**PSL 692 Practicum II (3.0); 3cr**. Educational Psychology (to be approved by the advisor).

**PSL 695 Practicum III (3.0); 3cr**. Educational Psychology (to be approved by the advisor).

**PSL 699 Thesis (6.0); 6cr**. to be approved by the advisor.

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## Summer Arabic Program

sbs@ndu.edu.lb or summerarabic@ndu.edu.lb

### Program Objective

Make the Arabic language (colloquial, formal, and written) accessible to students in the most efficient and beneficial way possible.

### Program Overview

This program engages students in the culture of contemporary Lebanon, one of the world's most dynamic countries. Participants study at Notre Dame University, Lebanon, where the SAP program is set for teaching formal and colloquial Arabic at the preliminary, preparatory, intermediate, and advanced levels. Intensive personalized classroom instruction is supplemented by review sessions, individual tutorials, and daily practice with Lebanese conversation partners chosen mostly from NDU students and staff. Group excursions in Lebanon give students insight into Lebanese culture, society, and lifestyle, and provide students with opportunities to use their language skills with native speakers.

### Program Duration

5 weeks: Classes begin the first week of July.

**N.B.** Credits acquired in the SAP Sessions are transferable

### Admission Requirements:

Anyone who is interested in the program is kindly requested to submit the following documents:

- Application form (downloaded from website [www.ndu.edu.lb](http://www.ndu.edu.lb) under Summer Arabic Program – Faculty of Humanities)
- Official transcript of grades (if applicable)
- Arabic language teacher's recommendation (if applicable)
- Writing sample from the most recent Arabic course (if applicable)
- Non-refundable application fee of US\$30 (check order made payable to Notre Dame University, Lebanon)
- Application Deadline is June 15<sup>th</sup>

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## Courses: Summer Arabic Program (SAP)

The SAP is made up of 4 levels:

### Level I (Preliminary Arabic):

**ARB 100 Emphasis A: The Formal Language; 3 cr.** Designed to initiate non-Arabic-speaking students to the study of standard Arabic, the course aims at enabling foreign students to use and properly pronounce simple Arabic words and to listen, speak, read and write simple sentences. This course also offers a preliminary approach to Arabic grammar. Beginners need not have any previous knowledge of Arabic.

**ARB 104 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3 cr.** Emphasis is placed on the elementary means of expression, the basics of pronunciation, and the knowledge of

articulation. The course initiates speech and dialogue through audiovisual aids, periodic stays with families, programmed visits to industrial plants, shops, markets, cafes, and sight-seeing in groups or individually. Developing elementary vocabulary, learning proper pronunciation, getting the feel of the language. No previous knowledge of Arabic is required.

### Level II (Preparatory) :

**ARB 203 Emphasis A: The Formal Language; 3 cr.** This course introduces basic vocabulary and sentence structure in standard Arabic, and focuses on developing basic skills of listening, speaking, reading, and writing simple sentences that are used frequently. Designed to help non-Arabic speaking students study standard Arabic, the course aims at enabling foreign students to use simple Arabic words and

basic phrases, to listen, speak, use and compose sentence structures, and to acquire the basics of Arabic grammar. *Prerequisite:* ARB 100 or equivalent.

**ARB 202 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3cr.** In this course the emphasis is placed on the basic means of expression and the basics of pronunciation and articulation. It introduces the students to speech and dialogue and to the description of facts and recounting of events through audiovisual aids, periodic stays with families, programmed visits to industrial plants, shops, markets, cafes, and sight-seeing in groups or individually, etc. Developing a basic vocabulary, learning proper pronunciation, getting the feel of the language. *Prerequisite:* ARB 104 or equivalent.

**Level III (Intermediate):**

**ARB 205 Emphasis A: The Formal Language; 3 cr.** This course is designed to improve student's writing and reading skills through the following approaches: in-depth applied study of grammar and parsing (قواعد النحو) والاعراب); familiarity with figures speech and of style; development of advanced skills in pronunciation. The course aims at improving the student's linguistic competence in preparation for further Arabic studies. *Prerequisite:* ARB 203 or equivalent.

**ARB 204 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3 cr.** This course develops basic language skills used in day-to-day conversation. Exercises focus on structured practice in vocabulary, listening, and articulating. The content themes include: shopping, answering or making telephone calls,

visiting a doctor, looking for a job, giving a present, attending wedding ceremonies, enjoying local cuisine, taking holidays, etc... Provides students with a rich package of selected vocabulary suitable for different occasions, helps students to adapt to social settings appropriate for different occasions. *Prerequisite:* ARB 202 or equivalent.

**Level IV (Advanced Arabic):**

**ARB 225 Emphasis A: The Formal Language 3 cr.** This course focuses on further language skills in simple modern written styles through reading and writing together with improving fluency in oral communication. It includes the study of Arabic prose and poetry texts. Oral presentations and written reports are required. The aim of this course is to improve students' ability to read, write, and understand correct, simple and practical modern Arabic. *Prerequisite:* The successful completion of Preparatory and Intermediate Arabic or their equivalents.

**ARB 226 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3 cr.** In this course the student will practice holding conversations on common daily concerns. The content themes include: shopping, answering or making telephone calls, visiting a doctor, looking for a job, giving a present, learning adequate behavior at social occasions (etiquette for weddings, birthday parties, regular daily visits, enjoying local cuisine, taking holidays, etc.) The aim of this course is to give students the opportunity to develop their communication skills in the spoken language in order to achieve spontaneity in speech and a smooth social integration.

# **FACULTY OF NATURAL AND APPLIED SCIENCES (FNAS)**

Dr. George M. Eid, *Dean*

## **DEPARTMENT OF COMPUTER SCIENCE**

Dr. Hoda Maalouf, *Chairperson*

## **DEPARTMENT OF MATHEMATICS AND STATISTICS**

Dr. Bassem Ghalayini, *Chairperson*

**Actuarial Science and Insurance Program**

Mrs. Claudia Freiji-Bou Nassif, *Academic Advisor*

## **DEPARTMENT OF PHYSICS & ASTRONOMY**

Dr. Bassem Sabra, *Chairperson*

## **DEPARTMENT OF SCIENCES**

Dr. Colette Kabrita Bou-Serhal, *Chairperson*

**Freshman Science Program**

Dr. Elsa Sattout, *Academic Advisor*

## FACULTY DIRECTORY

### **Office of the Dean**

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e-mail: [fnas@ndu.edu.lb](mailto:fnas@ndu.edu.lb)

### **Department of Mathematics & Statistics**

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### **Department of Computer Science**

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### **Department of Physics & Astronomy**

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### **Department of Sciences**

FNAS Building, 3rd floor, Room S 306  
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e-mail: [sciences@ndu.edu.lb](mailto:sciences@ndu.edu.lb)

### **Actuarial Science & Insurance Program**

FNAS Building, 2nd floor, Room S 214  
Tel: 09–218950/51/52 (Extension 2093)  
e-mail: [cnaassif@ndu.edu.lb](mailto:cnaassif@ndu.edu.lb)

### **Freshman Science Program**

FNAS Building, 2nd floor, Room S 228  
Tel: 09–218950/51/52 (Extension 2619)  
e-mail: [esattout@ndu.edu.lb](mailto:esattout@ndu.edu.lb)

# FACULTY OF NATURAL AND APPLIED SCIENCES

## LIST OF FULL-TIME FACULTY MEMBERS

### Professors

<sup>1</sup>*Eid, George M.*, Ph.D., 1988, *Mathematics*, Polytechnic University, New York, USA  
*Chedid, Fouad*, Ph.D., 1990, *Computer Science*, Illinois Institute of Technology, USA

### Associate Professors

<sup>1</sup>*El-Hage, Youssef Kamal*, Ph.D., 1990, *Physics*, Technische Universität München, Germany; M.A., 1985, *Philosophy*, Lebanese University, Lebanon  
*Farhat, Hikmat*, Ph.D., 1998, *Chemical Physics*, McGill University, Canada  
*Haddad, John*, Ph.D., 1992, *Statistics*, University of Waterloo, Canada  
*Hage, Tanos G.*, Ph.D., 1995, *Plant Biochemistry and Molecular Biology*, Pennsylvania State University, USA  
*Hajjar, Roger*, Ph.D., 1997, *Physics and Astronomy*, Université de Montréal, Canada  
*Keirouz Malhab*, Ph.D., 1991, *Mathematics*, Purdue University, USA  
*Khair, Marie*, Doctorate, 1996, *Computer Science*, Aristotle University of Thessaloniki, Greece  
*Khalaf-Keirouz, Leila*, Doctorate, 1995, *Environmental Geology*, Westfälische Wilhelms-Universität, Germany  
*Maalouf, Hoda*, Ph.D., 1998, *Communication Engineering*, Imperial College, University of London, England  
*Saliba, Holem*, Ph.D., 1997, *Mathematics*, Moscow State University, Russia

### Assistant Professors

*Aad, Pauline*, Ph.D., 2008, *Animal Breeding and Reproduction*, Oklahoma State University, USA  
*Chalita, Khalil*, Doctorate., 2005, *Computer Science*, Paul Sabatier University, France  
*Dib, Robert*, Doctorate, 1998, *Biochemistry*, Université de Nantes, France  
*El-Khalidi, Khaldoun*, Doctorate, 1996, *Computer Science*, Université de Franche-Comté, France  
*Fayad, Amer*, Ph.D., 2003, *Plant Pathology, Physiology, and Weed Science*, Virginia Polytechnic Institute and State University, USA  
*Ghalayini, Bassem*, Ph.D., 1995, *Applied Mathematics*, University of California, Los Angeles, USA  
*Gebzan, Marwan*, Doctorate, 2007, *Astrophysics*, Université de Montpellier, France  
*Hawi, Nazir*, Ed. D., 2008, *Education*, University of Leicester, England  
*Jajou, Amer F.*, Ph.D., 1987, *Operations Research*, Univerzita Karlova, Czechoslovakia  
*Kabrita-Bou Serhal, Colette*, Ph.D., 1998, *Circadian Biology*, Northeastern University, Boston, USA  
*Maalouf, Ramez*, Ph.D., 1994, *Mathematics*, Imperial College, University of London, England  
*Moufarij, Mazin*, Ph.D., 2004, *Pharmacology Genetics*, La Trobe University, Australia  
*Rached, Ziad*, Ph.D., 2002, *Mathematics*, Queen's University, Canada  
*Rahmé, Kamil*, Doctorate, 2008, *Macromolecular and Supramolecular Chemistry*, Université de Toulouse, France  
*Sabra, Bassem*, Ph.D., 2000, *Physics*, Ohio University, USA  
*Sattout, Elsa*, Ph.D., 2005, *Agricultural Botany*, University of Reading, UK  
*Tannous, Marie*, Ph.D., 1998, *Clinical Chemistry*, University of Windsor, Canada

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<sup>1</sup> On tenure appointment

<sup>1</sup>*Tratrat, Christophe*, Doctorate, 1999, *Chemistry*, Univerité de Paris V, France

### **Senior Lecturers**

*Baroud, Fawzi*, M.S., 1985, *Systems Management*, Florida Institute of Technology, USA

*Saadeh, Ban*, M.S., 1978, *Mathematics*, American University of Beirut, Lebanon

### **Lecturers**

*Freiji-Bou Nassif, Claudia*, M.S., 1991, *Applied Statistics*, Ohio State University, USA;  
M.S., 1998, *Financial Economics*, University of London

*Hajjar-Muça, Theresa*, M.P.H., 1994, *Biostatistics*, American University of Beirut, Lebanon

*Maroun, Bachir*, M.S., 2001, *Computer Science*, Notre Dame University-Louaize, Lebanon

*Sawma, Victor*, M.S., 2003, *Computer Science*, University of Ottawa, Canada

*Tannous, Heba*, Master of Commerce 1997, *Information Systems*, the University of Queensland, Australia

### **List of Full Time Laboratory Instructors**

*El Ghossein-Maalouf, Nada*, M.S., 1996, *Microbiology*, American University of Beirut, Lebanon

*El-Hage, El-Amm, Rita*, M.P.H., 1988, *Public Health*, American University of Beirut, Lebanon

*Zoghbi, Catherine*, DEA, 2003, *Physics*, Lebanese University, Lebanon

### **Lab Assistant**

*Saliba-Tabet, Elizabeth*, B.S., 1999, *Biology*, Lebanese University, Lebanon

### **Administrative Staff**

*Chalhoub-Abboud, Yolla*, Business Marketing, 2007-2008, Division of Continuing Education, Notre Dame University, Lebanon, *Secretary*, Department of Sciences

*Yazbeck-Kosseify, Eliana*, B.S., 2003, Arabic Literature, Lebanese University, Lebanon, *Secretary*, Department of Computer Science

*Geara-Nakad, Nelly*, Extension courses in Business and Computer, 1997, American Language Center, Lebanon, *Administrative Assistant*, Dean's Office

*El Khoury, Sandra-Doris*, BBA, 2009, *Management*, Notre Dame University, Louaize, Lebanon, *Secretary*, Department of Mathematics & Statistics

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<sup>1</sup> On leave of absence for the academic year 2010-2011

# FACULTY OF NATURAL AND APPLIED SCIENCES

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Dean: *Dr. George M. Eid*

Administrative Assistant: *Mrs Nelly Geara-Nakad.*

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## HISTORICAL OVERVIEW

Although the FNAS was established since the official inception of NDU in the academic year 1987-1988, it was only in 1991-1992 that our Faculty started legally, with licensed diplomas, by offering two majors: a **BS in Computer Science** and a **BS in Mathematics** (Date of the legal licensing for both: 16/5/1991)<sup>1</sup>. Each major was affiliated to a separate department, the *Department of Computer Science (DCS)* and the Department of Mathematics, respectively, but there was a chairperson only for the first. The next step was taken in 1993, with the licensing of two additional majors: a **BS in Actuarial Science** (03/06/1993), housed in the department of mathematics and a **BS in biology** (25/11/1993). As of 1993-1994, the *Department of Mathematics* began to have a chairperson. The *Department of Sciences (DS)* was established as of 1995-1996, maybe a year earlier, but with no chairpersons for both. The department of mathematics were renamed the *Department of Mathematics and Statistics (DMS)* as of 1995-1996. From this time on, the FNAS departmental trilogy kept its nomenclature up to the present<sup>2</sup>. The DS officially acquired its first chairperson in 1997-1998, respectively.

An important step was taken in 1994 with the introduction of the first Masters program in the FNAS: the **MS in Computer Science** (DCS; 14/01/1994). The next move had to wait for three more years, with the introduction of a **BS in Environmental Science** (DS; 23/01/1997). Around the Fall semester of the academic year 2000-2001, five new majors were obtained in a row: a **BS in Physics** (DS; 24/01/2000), and four majors licensed on the same date (24/03/2000): a **BS in Applied Statistics** (DMS), a **BS in Geographic Information Systems** (DCS), a **BS in Business Computing** (DCS), and a **BS in Medical Lab Technology** (DS). In 2001, the second Masters program in the FNAS was licensed: it was the **MS in Mathematics** (DMS; 30/11/2001).

Then, the DS was enriched with two new majors: a **BS in Nutrition & Dietetics** (01/10/2004), and a **BS in Chemistry** (15/04/2005).

And as a result of the launching of the Faculty of Nursing and Health Sciences at NDU on October 1<sup>st</sup>, 2008 (officially licensed on 05/09/2008), both the BS in Nutrition & Dietetics and the BS in Medical Lab Technology were transferred to the new Faculty as of its starting date.

The Department of sciences also supervises a *Freshman Sciences Program* since 1997. This program is meant for those students who have lived outside the country, had at least two years of secondary education abroad, and are one year short of having a certificate equivalent to the Lebanese Baccalaureate, which is the necessary condition for admitting a student into a University major program. A successful completion of the Freshman Sciences program would be recognized by the Lebanese Ministry of Education as equivalent to the Lebanese Baccalaureate.

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<sup>1</sup> In the sequel, the official licensing dates will be given between brackets.

<sup>2</sup> When necessary, both the acronym of the corresponding department and the official licensing date for each major will be given between brackets.

In Fall 2010, the BS degree in Physics and its related physics and astronomy courses were split from the DS, to create the new Department of Physics & Astronomy that launched in collaboration with Université Saint-Joseph de Beyrouth (USJ) a joint graduate program in Astrophysics.

The following tables summarize, per department, the chronology of the degrees offered (or previously offered) by the FNAS:

<b>Programs</b>	<b>Department</b>	<b>Licensing Dates</b>
B.S. Mathematics	Mathematics and Statistics	16/05/1991
B.S. Actuarial Science	Mathematics and Statistics	03/06/1993
B.S. Applied Statistics	Mathematics and Statistics	24/03/2000
M.S. Mathematics	Mathematics and Statistics	30/11/2001

<b>Programs</b>	<b>Department</b>	<b>Licensing Dates</b>
B.S. Computer Science	Computer Science	16/05/1991
M.S. Computer Science	Computer Science	14/01/1994
B.S. Geographic Information Systems	Computer Science	24/03/2000
B.S. Business Computing	Computer Science	24/03/2000

<b>Programs</b>	<b>Department</b>	<b>Licensing Dates</b>
B.S. Biology	Sciences	25/11/1993
B.S. Environmental Science	Sciences	23/01/1997
B.S. Physics	Sciences (until October 1, 2010)	24/01/2000
B.S. Medical Lab Technology	Sciences (until October 1, 2008)	24/03/2000
B.S. Nutrition & Dietetics	Sciences (until October 1, 2008)	01/10/2004
B.S. Chemistry	Sciences	15/04/2005
Freshman Sciences Program	Sciences	1997

<b>Programs</b>	<b>Department</b>	<b>Licensing Dates</b>
B.S. Physics	Physics & Astronomy	24/01/2000
M.S. Astrophysics	Physics & Astronomy	01/10/2010

The following tables list the names and mandates of the Faculty deans and the department chairpersons since the licensing of the first FNAS programs of study in 1991-1992:

<b>FNAS Dean</b>	<b>Mandate</b>
Dr. Michel Kraidy	01/10/91 – 09/30/1993
Dr. George M. Eid	01/10/93 – 09/30/2000
Dr. Youssef Kamal El-Hage	01/10/2000 – 08/02/2001
Dr. Jean Fares	09/02/2001 – 30/09/2006
Dr. Youssef Kamal El-Hage	01/10/2006 – 30/09/2009
Dr. George M. Eid	01/10/2009 – Present

<b>Chairperson-DCS</b>	<b>Mandate</b>
Mr. Pierre Khorassandjian	01/10/1991 – 30/09/1995
Dr. George Maani (acting)	01/10/1995 – 30/09/1996
Dr. Jean Fares	01/10/1996 – 30/09/1997
Dr. Fouad Chedid	01/10/1997 – 30/09/2001

Dr. Hoda Maalouf	01/10/2001 – 28/02/2006
Dr. Hikmat Farhat	01/03/2006 – 30/09/2008
Dr. Fouad Chedid	01/10/2008 – 30/09/2010
Dr. Hoda Maalouf	01/10/2010 – Present

<b>Chairperson-DMS</b>	<b>Mandate</b>
Dr. George M. Eid	01/10/1993 – 30/09/1994
Dr. Jean Fares	01/10/1994 – 08/02/2001
Dr. Amer Jajou	09/02/2001 – 30/09/2006
Dr. Elias Saleeby	01/10/2006 – 30/09/2008
Dr. Ramez Maalouf	01/10/2008 – 30/09/2010
Dr. Bassem Ghalayini	01/10/2010 - Present

<b>Chairperson-DS</b>	<b>Mandate</b>
Dr. Layla Khalaf	01/10/1997 – 30/09/2001
Dr. Doris Jaalouk	01/10/2001 – 30/09/2004
Dr. Tanos G. Hage	01/10/2004 – 30/09/2007
Dr. Antoine Farhat	01/10/2007 – 30/09/2008
Dr. Tanos G. Hage	01/10/2008 – 30/09/2010
Dr. Colette Kabrita Bou-Serhal	01/10/2010 – Present

## **MISSION, VISION AND VALUES**

### **Mission**

Consonant with the mission statement of Notre Dame University-Louaize (NDU), the Faculty of Natural and Applied Sciences (FNAS) addresses itself to meeting the academic needs of students majoring in the scientific disciplines as well as the requirements of every other NDU student for scientific literacy. The FNAS is committed to provide excellent teaching with a strong emphasis on laboratory work and student research that wed theory and practice, to promote sustained intellectual vitality in computer science, mathematics and the natural sciences, to develop and disseminate scientific knowledge through research and outreach activities, and to guide students towards acquiring leadership and management roles in the professions. To meet these objectives, the FNAS acknowledges its responsibility in embodying an academic environment that is respectful, innovative, adaptive, and accountable.

### **Vision**

The Faculty of Natural and Applied Sciences will be a reputable locus of educational and intellectual excellence in the exact sciences, fostering creative learning systems, building a solid research tradition, sustaining an environment that supports the education of the whole person, and promoting a culture of joyful quest of the ultimate truth (*Gaudium de Veritate*) about man and nature.

### **Values**

The Faculty of Natural and Applied Sciences shares the following values that reflect its culture and priorities and are inspired by the core values to which the whole NDU community is dedicated:

- Academic Excellence: Whether in education or in research, we seek academic excellence as a landmark of our curricula, believing in a fruitful connection between good research and creative classroom instruction.
- Lifelong Learning: We are committed to inculcate lifelong learning and the concept of continuous self-development.
- Intellectual Freedom: We respect the right of all to pursue knowledge freely, scholarly, ethically, and critically.
- Integrity: We believe in equity and honesty and aspire to incorporate these values in every aspect of our personal and academic lives.
- Dialogue: We encourage constant dialogue between officers, faculty and students, and are under obligation to listen to the concerns and critiques of our students.
- Accountability: We accept the responsibility of being accountable for our actions, and are dedicated to a transparent and efficient use of resources.
- Service: We value the virtue of service as a golden path towards becoming true leaders and as the fullest expression of our humanity.
- Diversity: We value the diversity of religious, ethnic and cultural backgrounds among our students, our faculty and our staff within the vision and framework set by the apostolic constitution “Ex Corde Ecclesiae” on Catholic universities (August 15, 1990).
- Faith: We believe that faith in God, who manifested His love to the entire human family in Jesus Christ, shapes our profound commitment to serve the University and the community.

## **FACULTY PROFILE**

The FNAS provides students at the undergraduate and graduate levels with a modern and comprehensive education in all fields of natural and applied sciences. This education develops both their theoretical knowledge and technical competence within the comprehensive objective of helping them build a rich cultural identity, sound citizenship, irreproachable morality and firm faith, in conformity with the University mission. Our full-time faculty members are predominantly Ph.D. holders who are engaged in research, teaching, curriculum development and academic administration. Curricula are constantly adjusted to meet acknowledged academic standards and to go along with new advances in didactics and research. The FNAS subscribes to a sizable number of scholarly journals to keep up with new scientific, technological, pedagogical and cultural developments. The science laboratories and the computer center are endowed with modern equipment that is regularly upgraded.

### **Departments**

The FNAS consists of the following departments:

- Department of Computer Science.
- Department of Mathematics and Statistics.
- Department of Sciences.
- Department of Physics & Astronomy

### **The Undergraduate Program**

Each undergraduate program offered at the FNAS is composed of three components:

- General Education Requirements (GER)
- Core and Major Requirements.
- Free Elective Requirements.

### **Undergraduate Degrees**

The **Department of Computer Science** offers undergraduate programs leading to the degrees of:

- BS in Business Computing (91 credits).
- BS in Computer Science (104 credits).
- BS in Computer Science (concentration: <sup>1</sup>CIS) (102 credits).
- BS in Computer Science (concentration: <sup>2</sup>CGA) (108 credits).
- BS in Geographic Information Systems (90 credits).

The **Department of Mathematics and Statistics** offers undergraduate programs leading to the degrees of:

- BS in Actuarial Science and Insurance (112 credits).
- BS in Applied Statistics (90 credits).
- BS in Mathematics (103 credits).

The **Department of Physics & Astronomy** offers an undergraduate program leading to the degree of:

- BS in Physics (95 credits)

The **Department of Sciences** offers undergraduate programs leading to the degrees of:

- BS in Biology (102 credits).
- BS in Chemistry (98 credits).
- BS in Environmental Science (104 credits).

The Department of Sciences also offers a **Freshman Science** program. This program leads to a certificate that is equivalent to the official Lebanese Baccalaureate Part II (Scientific Strands).

### **Minors**

As of the academic year 2008 - 2009, the FNAS launched five minors in:

- Mathematics
- Mathematical Insurance
- Applied Statistics
- Geographic Information Science
- Physics

The first three minors are offered by the Department of Mathematics and Statistics, the fourth by the Department of Computer Science, and the last by the Department of Physics & Astronomy.

### **Graduate Programs and Degrees**

The FNAS offers graduate programs in computer science and mathematics that lead to the degrees of

- Master of Science (MS) in Astrophysics
- Master of Science (MS) in Computer Science.
- MS in CS (Computer Information Systems).
- MS in Mathematics.

This graduate program has two options: a “*course-work*” option and a “*thesis*” option.

### **In Short: All FNAS Programs of Study**

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<sup>1</sup> Computer Information Systems

<sup>2</sup> Computer Graphics & Animation.

The following table encapsulates, in alphabetical order, all programs of study offered by the FNAS along with the corresponding total number of credits required:

<b>Programs of study</b>	<b>Degrees, Minors &amp; Certificates</b>	<b>Credits</b>
Actuarial Science and Insurance	BS	112
Applied Statistics	BS	90
	Minor	18
Biology	BS	102
Business Computing	BS	91
Chemistry	BS	98
Computer Science	BS	104
	MS	30
Computer Science (CIS)	BS	102
	MS	30
Computer Science (CGA)	BS	108
Environmental Science	BS	104
Freshman Science	Certificate	Min. of 30
Geographic Information Systems	BS	90
Geographic Information Systems	Minor	15
Mathematical Insurance	Minor	18
Mathematics	BS	103
	MS	33
Mathematics	Minor	15
Physics	BS	95
Astrophysics	MS	36
Physics	Minor	16

## DEPARTMENT OF COMPUTER SCIENCE

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**Chairperson:** *Dr. Hoda Maalouf*

**Secretary:** *Mrs. Eliana Yazbeck-Kosseify*

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### Professor

**Chedid, Fouad**, Ph.D., 1990, *Parallel and Distributed Computing, Algorithms Theoretical Computer Science*, Illinois Institute of Technology, USA

### Associate Professors

**Farhat, Hikmat**, Ph.D., 1998, *Computer Networks, Information Security*, Mc-Gill University, Canada

**Khair, Marie**, Doctorate, 1996, *Databases, Computer Security, Medical Informatics*, Aristotle University of Thessaloniki, Greece

**Maalouf, Hoda**, Ph.D., 1998, *Digital Communications, Computer Networks, Computer Architecture*, Imperial College, University of London, England

### Assistant Professors

**Challita, Khalil**, Doctorate, 2005, *Complexity Theory, Qualitative Spatial Reasoning, Temporal Logic*, Paul Sabatier University, France

**El-Khalidi, Khaldoun**, Doctorate, 1996, *Image Processing, OOP.*, Université de Franche-Comté, Besançon, France

**Hawi, Nazir**, Ed. D., 2008, *Education*, University of Leicester, England

### Lecturers

**Maroun, Bachir**, M.S., 2001, *Computer Science*, Notre Dame University-Louaize, Lebanon (SC)

**Sawma, Victor**, M.S. 2003, *Computer Science*, University of Ottawa, Canada

**Tannous, Heba**, Master of Commerce, 1997, *Information Systems*, the University of Queensland, Australia (NLC)

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### Programs of Study

The Department of Computer Science offers both undergraduate and graduate programs leading to the degrees of:

- BS in Business Computing (91 Credits).
- BS in Computer Science (104 Credits).
- BS in Computer Science – (CIS) (102 Credits).
- BS in Computer Science – (CGA) (108 Credits).
- BS in Geographic Information Systems (90 Credits).
- MS in Computer Science (30 Credits).
- MS in Computer Science – (CIS) (30 Credits).

The department also offers the following minor for the first time:

- Minor in Geographic Information Systems (15 Credits).

### Our Undergraduate Program

Our undergraduate program is designed to prepare students for graduate studies in computer science, computer information systems (CIS), computer graphics & animation (CGA), business computing, geographic information systems, or for a professional career in computer-based environments.

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## The Degree of Bachelor of Science in Computer Science

Students enrolled in the Computer Science program will acquire enough technical and theoretical background to become inventors of technology rather than skilled user of technologies invented by others. The breadth of the program allows our graduates to design and implement non-trivial software, be leaders in complicated software projects, and come up with innovative ways to use computers systems.

### Admission Requirements

For admission requirements to the degree of BS in Computer Science, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in computer science, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 104 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying their graduation.

### Degree Requirements (104 credits)

#### General Education Requirements

33 cr.

#### A - Communication Skills in English and Arabic

9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3 cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B - Philosophy and Religion

3 cr.

- One course from the subcategory *Religion* (3 cr.) REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3 cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

9 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

3 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and Technology

6 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science* (3 cr.)

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, GIS 211

- One course from the subcategory *Natural Sciences* (3 cr.)

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207

**Core Requirements** **25 cr.**  
CSC 212, CSC 213, (CSC 219 or CSC 222), CSC 313, CSC 371, MAT 211, MAT 213,  
MAT 215, MAT 224.

**Major Requirements** **40 cr.**  
CSC 218, CSC 311, CSC 316, CSC 325, CSC 385, CSC 414, CSC 423, CSC 425,  
CSC 426, CSC 431, CSC 480, CSC 490, MAT 325.  
Choose one course from the following list: CSC 318, CSC 323, CSC 387, CSC 3 cr.  
412, CSC 417, CSC 422, CSC 432, CSC 463, CSC 485, MAT 339.

**Free Electives** **6 cr.**

**Bachelor of Science in Computer Science  
Suggested Program (104 Credits)**

**Fall Semester I (12 Credits)**

CSC	201	Computers and Their Use (GER)	3 cr.
CSC	212	Program Design & Data Abstraction I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
MAT	213	Calculus III	3 cr.

**Spring Semester I (15 Credits)**

CSC	213	Program Design & Data Abstraction II	3 cr.
MAT	215	Linear Algebra I	3 cr.
MAT	224	Calculus IV	3 cr.
ENL	230	English in the Work Place (GER)	3 cr.
REG	—	GER	3 cr.

**Summer Session I (9 Credits)**

MAT	211	Discrete Mathematics	3 cr.
CSC <sup>1</sup>	—	—	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

CSC	313	Data Structures Using C++	3 cr.
CSC	218	Principles of Communication Systems	3 cr.
CSC	385	Internet Computing	3 cr.
MAT	325	Elements of Probability	3 cr.
GER	—	GER	3 cr.

**Spring Semester II (16 Credits)**

CSC	325	Analysis of Algorithms	3 cr.
CSC	316	Computers Security and Their Data	3 cr.
ARB	—	GER	3 cr.
CSC	371	Workshop in Advanced Programming	1 cr.
CSC	311	Theory of Computation	3 cr.
GER	—	GER	3 cr.

**Summer Session II (6 Credits)**

CSC	423	Software Engineering	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

CSC	414	Applied Operating Systems	3 cr.
CSC	425	Data Communications & Computer Networks	3 cr.
CSC	426	Principles of Database Systems	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (16 Credits)**

CSC	431	Compiler Design	3 cr.
CSC	490	Senior Study	3 cr.
CSC	480	Internship	1 cr.
CSC	—	Technical Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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<sup>1</sup> CSC 219 or CSC 222: Digital Computer Fundamentals or Computer Organization and Assembly Language

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## The Degree of Bachelor of Science in Computer Science

### Computer Information Systems (CIS) Emphasis

The aim of our program in Computer Information Systems is for our graduates to have the right combination of knowledge and practical expertise to manage the information technology infrastructure of any organization. The CIS program replaces theoretical courses in the CS program by more practical courses.

#### Admission Requirements

For admission requirements to the degree of BS in Computer Science with a concentration in Computer Information Systems, refer to the section entitled “Undergraduate Admission” of this catalog.

#### Graduation Requirements

To receive the degree of BS in Computer Science (CIS), a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 102 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying their graduation.

### Degree Requirements (102 credits)

#### General Education Requirements

33

cr.

#### A - Communication Skills in English and Arabic

9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3 cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B - Philosophy and Religion

6 cr.

- One course from the subcategory *Religion* (3 cr.)

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr .)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and technology

6 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science* (3 cr.)

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, GIS 211

- One course from the subcategory *Natural Sciences* (3 cr.)

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207

**Core Requirements** **25 cr.**  
CSC 212, CSC 213, (CSC 219 or CSC 222), CSC 313, CSC 371, MAT 211, MAT 213, MAT 215, MAT 224.

**Major Requirements** **38 cr.**  
CSC 218, CSC 226, CSC 305, CSC 316, CSC 376, CSC 385, CSC 414, CSC 423, CSC 425, CSC 446, CSC 480, CSC 490, STA 210.

Choose one course from the following list: CSC 318, CSC 323, CSC 325, CSC 387, CSC 412, CSC 417, CSC 422, CSC 432, CSC 463, CSC 485, MAT 339. 3 cr.

**Free Electives** **6 cr.**

**Bachelor of Science in Computer Science**  
**Computer Information Systems Emphasis - Suggested Program (102 Credits)**

**Fall Semester I (12 Credits)**

CSC	201	Computers and Their Use (GER)	3 cr.
CSC	212	Program Design & Data Abstraction I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
MAT	213	Calculus III	3 cr.

**Spring Semester I (15 Credits)**

CSC	213	Program Design & Data Abstraction II	3 cr.
MAT	215	Linear Algebra I	3 cr.
MAT	224	Calculus IV	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
—	—	GER	3 cr.

**Summer Session I (9 Credits)**

CSC <sup>1</sup>			3 cr.
MAT	211	Discrete Mathematics	3 cr.
REG	—	(GER)	3 cr.

**Fall Semester II (15 Credits)**

CSC	313	Data Structures Using C++	3 cr.
CSC	218	Principles of Communications Systems	3 cr.
CSC	226	Database Programming for Business	3 cr.
—	—	GER	3 cr.
STA	210	Statistics for Business and Economics	3 cr.

**Spring Semester II (16 Credits)**

CSC	305	System Analysis and Design	3 cr.
CSC	385	Internet Computing	3 cr.
CSC	371	Workshop in Advanced Programming	1 cr.
CSC	—	Technical Elective	3 cr.
—	—	GER	3 cr.
GER	—	GER	3 cr.

**Summer Session II (6 Credits)**

ARB	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

CSC	316	Computer Security & Their Data	3 cr.
CSC	425	Data Communications & Computer Networks	3 cr.
CSC	423	Software Engineering	3 cr.
CSC	446	Applied Database Systems	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (14 Credits)**

CSC	414	Applied Operating Systems	3 cr.
CSC	490	Senior Study	3 cr.
CSC	480	Internship	1 cr.
CSC	376	Applied Security Lab	1 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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<sup>1</sup> CSC 219 or CSC 222

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## The Degree of Bachelor of Science in Computer Science

### Computer Graphics and Animation (CGA) Emphasis

The B.S. in Computer Science (CGA) is the study of the technical foundations, design and development of Computer Graphics and Animation. This program prepares students for careers as graphics software developers and for graduate study in computer graphics.

#### Admission Requirements

For admission requirements to the degree of BS in Computer Science (CGA), refer to the section entitled "Undergraduate Admission" of this catalog.

#### Graduation Requirements

To receive the degree of BS in Computer Science (CGA), a student must fulfill all requirements of his/her degree program, complete all required courses, accumulate a total of 104 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying their graduation.

### Degree Requirements (108 Credits)

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	6 cr.
- Two courses from the category <i>Cultural Studies and Social Sciences (6 cr .)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	6 cr.
- Two courses from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> HIT 201, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	3 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, GIS 211	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207	

**Core Requirements** **27 cr.**  
CSC 212, CSC 213, MAT 211, MAT 213, MAT 215, MAT 224, FAP 211, ARP  
213, ARP 223.

**Major Requirements** **42 cr.**  
CSC 231, CSC 277, CSC 278, CSC 279, CSC 313, CSC 325, CSC 343, CSC 375,  
CSC 412, CSC 422, CSC 423, CSC 435, CSC 443, CSC 490.

**Free Electives** **6 cr.**

**Bachelor of Science in Computer Science**  
**Computer Graphics and Animation Emphasis - Suggested Program (108 Credits)**

**Fall Semester I (15 Credits)**

FAP	211	Drawing I	3 cr.
CSC	202	Computers for Visual Arts	3 cr.
CSC	212	Program Design & Data Abstraction I	3 cr.
ARP	213	Basic Technical Skills	3 cr.
ENL	213	Sophomore English Rethoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

ARP	223	Descriptive Geometry	3 cr.
CSC	213	Program Design & Data Abstraction II	3 cr.
MAT	211	Discrete Mathematics	3 cr.
ENL	230	English in the Work Place (GER)	3 cr.
GER	—	GER	

**Summer Semester I (9 Credits)**

MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.
ARB	—	GER	3 cr.

**Fall Semester II (15 Credits)**

MAT	224	Calculus IV	3 cr.
CSC	277	Software Packages for Computer Graphics I	3 cr.
CSC	313	Data Structures using C++	3 cr.
CSC	231	Multimedia Applications	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

CSC	278	Software Packages for Computer Graphics II	3 cr.
CSC	422	Introduction to Image Processing	3 cr.
CSC	375	Computer Modeling and Simulation	3 cr.
CSC	412	Introduction to Computer Graphics	3 cr.
—	—	GER	3 cr.

**Summer Semester II (9 Credits)**

—	—	GER	3 cr.
CSC	435	Operating Systems and Networks	3 cr.
REG	—	GER	3 cr.

**Fall Semester III (12 Credits)**

CSC	343	Character Animation	3 cr.
CSC	423	Software Engineering	3 cr.
CSC	325	Introduction to Algorithms	3 cr.
CSC	279	Software Packages for Computer Graphics III	3 cr.
GER	—	GER	3 cr.

**Spring Semester III (15 Credits)**

CSC	443	Computer Games Design	3 cr.
CSC	490	Senior Study	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

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## The Degree of Bachelor of Science in Business Computing

A business computing graduate will play a key role in determining the requirements for an organization's information systems. After completing this program our students will have a sound understanding of organizational principles and the information that a computing system can provide to aid the enterprise.

### Admission Requirements

For admission requirements to the degree of BS in Business Computing with a concentration in Computer Information Systems, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in Business Computing, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 91 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying their graduation.

### Degree Requirements (91 credits)

#### General Education Requirements

30 cr.

##### A - Communication Skills in English and Arabic

9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3cr.).

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B - Philosophy and Religion

6 cr.

- One course from the subcategory *Religion* (3cr.)

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

##### C - Cultural Studies and Social Sciences

6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215,

PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

##### D - Citizenship

6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

##### E - Science and Technology

3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science* (3 cr.)

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA

210, GIS 211

OR

- One course from the subcategory *Natural Sciences* (3 cr.)

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211,

HEA 201, NTR 201, PHS 207

#### Core Requirements

28 cr.

CSC 216, CSC 217, CSC 226, CSC 480, ACO 201, ECN 211, MAT 205, MAT 214,  
STA 206, STA 207

**Major Requirements**

**27 cr.**

CSC 305, CSC 306, CSC 417, CSC 435, CSC 446, CSC 490, ACO 202, ECN 212.

Choose one course from the following list (3 cr.)

CSC 316, CSC 318, CSC 323, CSC 385, CSC 387, CSC 423, CSC 426

**Free Electives**

**6 cr.**

**Bachelor of Science in Business Computing  
Suggested Program (91 Credits)**

**Fall Semester I (12 Credits)**

CSC	201	Computers and Their Use (GER)	3 cr.
MAT	205	Math for Business and Economics II	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
—	—	GER	3 cr.

**Spring Semester I (12 Credits)**

CSC	216	Computer Programming I	3 cr.
CSC	226	Database Programming for Business	3 cr.
STA	206	Applied Statistics for Business & Economics I	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.

**Summer Semester I (6 Credits)**

ARB	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

CSC	217	Computer Programming II	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
STA	207	Applied Statistics for Business & Economics II	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

CSC	306	Web Design	3 cr.
CSC	305	System Analysis and Design	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
MAT	214	Applied Linear Algebra	3 cr.
—	—	GER	3 cr.

**Fall Semester III (16 Credits)**

CSC	435	Operating Systems and Networks	3 cr.
CSC	417	Advanced Programming Technologies	3 cr.
ACO	201	Principles of Accounting I	3 cr.
REG	212/ 213	GER	3 cr.
CSC	480	Internship	1 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

CSC	446	Applied Database Systems	3 cr.
CSC	490	Senior Project	3 cr.
ACO	202	Principle of Accounting II	3 cr.
CSC <sup>1</sup>	—		3 cr.
—	—	Free Elective	3 cr.

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<sup>1</sup> Choose one course from the following list: CSC 316, CSC 318, CSC 323, CSC 385, CSC 387, CSC 423, CSC 426

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## Undergraduate Courses: Computer Science

**CSC 200 Keyboarding (0.2); 1 cr.** This course introduces the basic skills in operating an electronic keyboard and prepares students to proper typing procedures.

**CSC 201 Computers and Their Use (3.0); 3 cr.** This course introduces the difference and interface between hardware and software. It prepares the students, to use computers as a tool.

**CSC 202 Computers for Visual Arts (3.0); 3 cr.** This course introduces the basic concepts of computers and prepares visual arts students to the use of the state-of-the-art software packages for their projects.

**CSC 204 Programming Logic (3.0); 3 cr.** This is a language independent course that focuses on programming logic. Students learn to develop essential tools for problem solving such as hierarchy charts, pseudocode, and flowcharts. It places special emphasis on concepts such as visual, event-driven, and object-oriented programming. The course serves as a strong and thorough preparation for a sequence of up to date computer programming courses.

**CSC 209 Introduction to Computers (3.0); 3 cr.** An introduction to the history of computers and their use. Topics include hardware components, system software, interacting with the computer, data storage and retrieval, introduction to data communications and computer networks, the Internet, the use of computers in a variety of personal and professional context including word processing, spreadsheet analysis, database management, electronic presentation, and an introduction to computer programming using Pascal.

**CSC 211 Fundamentals of Computing Using Pascal (4.0); 4 cr.** The programming language PASCAL is used to provide the concepts of problem analysis and program design. Programming topics include control structures, I/O, arrays, functions and procedures.

**CSC 212 Program Design and Data Abstraction I (3.0); 3 cr.** This course is an introduction to computer programming using C++. Topics include problem solving using computers; structural programming; control structures; arrays; functions; pointers; recursion; data abstraction; classes; introduction to object-oriented programming paradigm.

**CSC 213 Program Design and Data Abstraction II (3.0); 3 cr.** This course is a continuation of CSC 212. Emphasis is placed on the object-oriented features of C++. Topics include classes; operator overloading; inheritance; virtual functions; polymorphism; stream I/O; templates; file processing. *Prerequisite:* CSC 212.

**CSC 214 Fundamentals of Computing For Engineers (3.0); 3 cr.** The programming language FORTRAN is used to provide the concepts of problem analysis and program design. Programming topics include control structures, I/O, arrays, functions and procedures.

**CSC 215 File Processing and Business Programming Using COBOL (3.0); 3 cr.** Introduces concepts and techniques for the organization and manipulation of files through the study of the business oriented programming language COBOL. *Prerequisite:* CSC 204 or CSC 212.

**CSC 216 Computer Programming I (3.0); 3 cr.** This course is an introduction to computer programming using Visual Basic. Topics include problem solving using computers, object-oriented, event-driven programming (OOED), form and control properties, variables, assignments statements, arithmetic, control structures, arrays, functions, subs, and modules. *Prerequisite:* CSC 201.

**CSC 217 Computer Programming II (3.0); 3 cr.** This course is a continuation of CSC 216. Topics include security and files in Visual Basic (VB), using VB to work with databases, using VB to create graphics, and creating objects in VB. *Prerequisite:* CSC 216.

**CSC 218 Principles of Communication Systems (3.0); 3 cr.** Spectral analysis, random variables and processes, introduction to queuing theory, analogue communication, digital communication, analogue to digital conversion, digital-modulation techniques, representation of noise, demodulation techniques, introduction to information theory. *Prerequisite:* CSC 212.

**CSC 219 Digital Computer Fundamentals (3.0); 3 cr.** Fundamentals of logic design, the design of switching circuits using small and medium scale integrated devices. Flip flops, counters, decoders, multiplexes, and registers.

**CSC 220 Programming in Java I (3.0); 3 cr.** Object-Oriented programming using Java. Topics include: Objects, classes, Methods, Interface Access, Composition, Inheritance, Polymorphism, Interfaces & Inner Classes. Introduction to predefined Classes: Array List, Vector, String & String Buffer. Handling Errors with Exception, I/O system, Templates/Generics. *Prerequisite:* CSC 212

**CSC 221 Introduction to Database Programming for Business (2.0); 2 cr.** Analysis, design and implementation of computerized business projects using the FoxPro language. *Prerequisite:* CSC 201.

**CSC 222 Computer Organization and Assembly Language (3.0); 3 cr.** Machine level architecture, functional units, memory, debugging, input/output structures, storage systems, instruction sets, machine cycle, assemblers, macroassemblers and microprocessors.

**CSC 226 Database Programming for Business (3.0); 3cr.** This course covers the concept of database and database modeling using ER and EER. The procedure of transforming the conceptual model to logical model (relational) is introduced, the SQL language, the relational algebra and the database design. *Prerequisite:* CSC 201.

**CSC 231 Multimedia Applications (3.0); 3 cr.** An Introduction to the multimedia world and a preparation to some of the well known software packages. *Prerequisite:* CSC 212 or CSC 217.

**CSC 270 Computer Aided Engineering Design (0.3); 1 cr.** Introduction to computer aided drawing. Applications of existing CAD software to engineering problems.

**CSC 271 Workshop in Desktop Publishing (0.3); 1 cr.** Laboratory sessions to gain practical experience with typesetting, procedures in a multilingual environment which includes Arabic. *Prerequisite:* CSC 201.

**CSC 272 Workshop in Computer Aided Engineering Design (1.4); 3cr.** Aims at applying CAD concepts in developing engineering projects. *Prerequisites:* CSC 201 or CEN 170.

**CSC 273 Workshop in Computer Aided Architectural Design (1.4); 3 cr.** Aims at applying CAD concepts in developing architectural projects.

**CSC 274 Software Packages for Architect I (2.0); 2 cr.** Aims at using 3D Studio VIZ for creating complex 3D Models, Rendering and animation.

**CSC 275 Software Packages for Architect II (2.0); 2 cr.** The main purpose of this course is to communicate to students the ability of working on Photoshop as a final Rendering Software which follows AutoCad and 3Dmax. Also, illustrator Software will be taught for creating professional looking graphics such as logos, working with creative type effects and photographs from line drawings.

**CSC 277 Software Packages for Computer Graphics I (0.3); 3 cr.** Introduction to 3-D studio program to students in computer graphics.

**CSC 278 Software Packages for Computer Graphics II (0.3); 3 cr.** This course covers the tools available in Alias/Wavefront's Maya software for the creation of 3D digital animation. *Prerequisite:* CSC 231.

**CSC 279 Software Packages for Computer Graphics III (0.3); 3 cr.** This course is mostly training on 3<sup>rd</sup> party software or plugins for major applications in the market (Autodesk 3D studio max, Autodesk Maya...).

**CSC 300 Advanced Keyboarding(0.2); 1 cr.** Continuation of CSC 200. *Prerequisite:* CSC 200.

**CSC 301 Management Information Systems (3.0); 3cr.** This course is an introduction to the fundamentals of information technologies and to the strategic opportunities and challenges presented by these technologies. The topics covered in this course are strategic uses of information systems, information technology in business: hardware, software, telecommunications. Data and knowledge management, artificial intelligence and expert systems. *Prerequisite:* CSC 216 or CSC 212.

**CSC 305 System Analysis and Design (3.0); 3cr.** Business systems as tools for solving information flow problems within the framework of a structured methodology. Case studies provide the students with practical applications. *Prerequisite:* CSC 221 or CSC 226.

**CSC 306 Web Design (3.0); 3cr.** This course teaches the design of Web sites through an advanced software package. The course takes the students stage-by-stage through the design of specific sites, ranging from personal sites to

creating and managing a corporate intranet. Emphasis on advanced topics such as scripting, databases, and the design of site interaction. *Prerequisite:* CSC 217 or CSC 213.

**CSC 311 Theory of Computation (3.0); 3 cr.** Strings and languages, regular sets, finite automata, Kleene's theorem, languages and grammars, Chomsky classification, Turing machines, complexity. *Prerequisites:* CSC 313 and MAT 211.

**CSC 312 Computer Architecture (3.0); 3 cr.** Von Neumann architecture, machine instructions and formats, addressing techniques, microprogramming, fast arithmetic, advanced memory and I/O practices. *Prerequisite:* CSC 219 or CSC 222 or EEN 220.

**CSC 313 Data structures using C++ (3.0); 3cr.** The course will introduce students to the use of Abstract Data type and Data Structures. Topics include: Linked Lists and Recursion, Stacks, queues and their applications, Trees, Balanced trees (AVL, Red-Black) and their implementations, Maps and Hashing, Priority Queues, Heaps, Huffman coding, Graphs vocabulary and implementation, Backtracking. *Prerequisite:* CSC 213.

**CSC 314 Programming Languages (3.0); 3 cr.** A comparative study of programming languages: syntax, semanticist and implementation. Students will also have to learn and gain working familiarity with the ANSI Standard C programming language. *Prerequisite:* CSC 212.

**CSC 315 Computer Information Systems (3.0); 3 cr.** Business systems as tools for solving information flow problems within the framework of a structured methodology. Case studies provide the students with practical applications. *Prerequisite:* CSC 221 or CSC 226.

**CSC 316 Computers Security and Their Data (3.0); 3 cr.** This course covers the main concepts of computer security specially, the ones concerned with the latest technology. Encryption (symmetric & asymmetric), and the most important protocols using encryption are introduced. Also, program security, viruses, operating system security, network security and firewalls are explained. *Prerequisite:* CSC 217 or CSC 213.

**CSC 318 Geographic Information Systems (3.0); 3 cr.** Principles techniques and applications of geographic information systems.

**CSC 320 Programming in Java II (3.0); 3 cr.** This course is the continuity of Java I. Topics include: Creating Windows & Applets, 2D and 3D painting, Run-Time Type Identification, Multiple Threads, Introduction to Distributed Computing: JSP, JDBC, RMI. *Prerequisite:* CSC 220.

**CSC 321 Advanced Software Packages (3.0); 3 cr.** An in-depth practical experience with new generation software packages in the areas of office automation and management. *Prerequisite:* CSC 221 or CSC 226.

**CSC 323 Object-Oriented Programming Using C++ (3.0); 3 cr.** Abstract data types, classes, objects basic properties, inheritance, polymorphism and dynamic binding, multiple inheritance, object-oriented software engineering, modeling and prototyping. *Prerequisite:* CSC 213 or CSC 217.

**CSC 325 Analysis of Algorithms (3.0); 3cr.** An introduction to the analysis of the efficiency and accuracy of algorithms. Dynamic Programming. Greedy Algorithms. Graph Algorithms. Selected topics. *Prerequisite:* CSC 313.

**CSC 343 Character Animation (0.3); 3 cr.** This course introduces the professional tools required for building and animating 3D characters. *Prerequisite:* CSC 277 or CSC 278.

**CSC 330 Commercial Software Development (3.0); 3cr.** Topics include software design, development, testing, documentation, and maintenance. Also examines team work, scheduling, prime management, and project management topics. Students develop, test, and market a commercial piece of software in a team setting. *Prerequisite:* CSC 305 or CSC 315.

**CSC 371 Workshop in Advanced Programming (0.3); 1 cr.** Language laboratory with projects requiring the proper choice of data structures, control structures, and tools of software based on solid theoretical computing concepts. Laboratory 2 hours per week, tutorial 1 hour per week.

**CSC 372 Mathematical Software Packages (1.0); 1 cr.** Introduction to computer programming and simulation using mathematical software packages such as Matlab, Maple, Mathematica.

**CSC 375 Computer Modeling and Simulation (3.0); 3 cr.** Introduction to basic concepts of simulation modeling: data acquisition, model

construction and validation, experimentation, implementing the results. Discrete systems simulation using Matlab software. *Prerequisite:* CSC 313 or CSC 320.

**CSC 376 Applied Security lab (1.2); 1 cr.** This course applies the theoretical concepts of encryption by building or using some security packages. It studies and compares different security features of the current commercial anti-virus and anti-intrusion software, operating systems, database management systems, firewalls and risk analysis packages. *Prerequisite:* CSC 316 CSC 316.

**CSC 385 Internet Computing (3.0); 3 cr.** The topics covered in the course include Introduction to Internet, WWW, XHTML, Javascript, MySQL, Apache, PHP, and XML. *Prerequisite:* CSC 213 or CSC 217 or CSC 220.

**CSC 387 Advanced programming using Java (3.0); 3cr.** From C++ to Java, interfaces, inner classes, I/O system, Templates/Generics. Creating Windows & Applets, 2D and 3D painting, Multiple Threads, Java Database Connectivity (JDBC), Java Networking; Client/Server Architecture, Servlet, Java Server Page (JSP). *Prerequisite:* CSC 213.

**CSC 412 Introduction to Computer Graphics (3.0); 3 cr.** Video basics, raster scan graphics, Bresenham algorithm, viewports, geometric forms and models, polygon filling and antialiasing, halftoning, convex boundaries, interior and exterior clipping, hidden lines and hidden surfaces. *Prerequisite:* CSC 313 or CSC 320.

**CSC 414 Applied Operating Systems (3.0); 3 cr.** Fundamental concepts that are applicable to a variety of operating systems. Detailed case studies of Unix, Linux and Windows NT systems. *Prerequisite:* CSC 312.

**CSC 415 Introduction to Operating Systems (3.0); 3 cr.** Topics include operating system concepts; system calls; interprocess communication; race condition; mutual exclusion with/without busy waiting; semaphores; monitors; the problem deadlock; process scheduling; memory management, file systems; security; I/O. *Prerequisites:* CSC 312.

**CSC 416 Fundamentals of Data Retrieval (3.0); 3cr.** Topics include information system types and related file structures, inverted files, text analysis and automatic indexing; database management systems and query languages,

overview on natural language processing. *Prerequisite:* CSC 313.

**CSC 417 Advanced Programming Technologies (0.3); 3 cr.** This course covers advanced programming topics using Visual Basic.NET. This includes databases, Web applications, XML, Web services, mobile applications. *Prerequisite:* CSC 213 or CSC 217.

**CSC 422 Introduction to Image Processing (3.0); 3 cr.** Image perception, sampling and quantization techniques, image transforms, image enhancement techniques like noise reduction, blurring, sharpening, edge detection, and contrast enhancing. *Prerequisite:* CSC 213 or CSC 220.

**CSC 423 Software Engineering (3.0); 3 cr.** Techniques of software development, testing, and management. *Prerequisite:* CSC 213 or CSC 217.

**CSC 425 Data Communications and Computer Networks (3.0); 3 cr.** Topics include data communications; transmission media; asynchronous/synchronous transmission; error control; data link control protocols; LAN types and protocols; high-speed LANs; MANs; bridges; WANs; packet/circuit switched data networks; internetworking; Internet IP. *Prerequisites:* CSC 218 or CSC 312.

**CSC 426 Principles of Database Systems (3.0); 3 cr.** The objective of this course is to introduce the fundamental concepts necessary for designing, using and implementing database systems. The course will study data modeling by understanding the concepts data schema, data representation, relations and attributes, normalization, data description language, data definition language and data manipulation languages. The course will also provide an introduction to the next generations systems and basically OODBS. Also the course will cover a number of issues that are important in the design of DBMS including recovery, consistency, security, integrity and query optimization. *Prerequisite:* CSC 213 or CSC 217.

**CSC 430 Computer Graphics and Animation (3.0); 3 cr.** Topics include: mathematical techniques for curve and surfaces; color systems; fractals hidden lines and hidden shad up; surface mapping and ray tracing; techniques of animation. *Prerequisite:* CSC 412 or its equivalence.

**CSC 431 Compiler Design (3.0); 3 cr.** Principles and practices in the design of programming language compilers. Topics: lexical analysis, parsing theory (LL, LR, and LALR parsing), symbol tables, type checking, common representations for arrays, runtime conventions for procedure calls, storage allocation for variables, and generation of code. Students construct two compilers as the programming projects: the first is a simple predictive parser and the second is a rather large project using Lex and Yacc. *Prerequisites:* CSC 311.

**CSC 432 Introduction to Artificial Intelligence (3.0); 3 cr.** Basic concepts of artificial intelligence, predicate calculus, proof by refutation (Oring algorithm), natural language processing, game trees, heuristic, introduces two programming languages LISP and PROLOG. *Prerequisite:* CSC 313.

**CSC 433 Applied Artificial Intelligence (3.0); 3 cr.** The aim of this course is to introduce Game-related Artificial Intelligence fundamental concepts: Intelligent agents, Heuristic Search, Planning, Uncertainty and Decisions Making (Fuzzy Logic), Learning (Genetic Algorithms). *Prerequisites:* CSC 320 and MAT 340.

**CSC 435 Operating Systems and Networks (3.0); 3 cr.** This course provides an introduction to the concepts underlying operating systems and computer networks. Detailed studies of Unix, Linux, Windows NT, Ethernet and TCP/IP protocols. Senior Standing.

**CSC 443 Computer Games Design (3.0); 3 cr.** In this course, the student learns about the main components that are required to design a computer game. The work includes project design activities where the students will be expected to make use of existing programming tools. *Prerequisites:* CSC 343.

**CSC 446 Applied Database Systems (3.0); 3 cr.** This course is intended to be a practical study of the fundamentals of current database technologies and database management systems.

Wide range of topics will be covered including uses of databases, database architecture, design, real world implementations, security and integrity issues, performance and concurrency. *Prerequisite:* CSC 221 or CSC 226.

**CSC 463 Advanced Software Development (3.0); 3 cr.** This course addresses advanced topics in programming using the relatively new programming language C#.NET, a part of the .NET IDE envelope. The language is intriguing and is intended to programming, using an object-oriented approach, Internet applications with emphasis on Windows interfaced packaged software. It is an integration language that agrees well with almost any other application across the internet. *Prerequisite:* CSC 213.

**CSC 475 Network Programming Lab (1.2); 1 cr.** Applied networking and distributed computing in Java. Networking with sockets. TCP/IP, Multicast, HTTP, RMI, Finger, and ping clients and servers. Multiprotocol chat systems & whiteboards. *Prerequisite:* CSC 425.

**CSC 476 Database Programming lab (1.2); 1 cr.** This course applies the theoretical concepts of database design using a specific application on a commercial database management system. The general concepts of this DBMS including transaction handling, optimization, recovery, and security are checked and compared with other commercial DBMS. *Prerequisites:* CSC 426 or CSC 446.

**CSC 480 Internship 1 cr.** Assigned work at an industrial establishment. The grade will be based on employer's evaluation, written report and oral discussions. *Prerequisite:* Senior Standing.

**CSC 485 Seminar (3.0); 3 cr.** This course is designed to provide students an opportunity to study some topics in computer science that have not been included in the curriculum. *Prerequisite:* Senior Standing.

**CSC 490 Senior Study 3 cr.** Assigned project supervised by a faculty member. The grade will be based on project evaluation and individual oral presentation. *Prerequisite:* Senior Standing.

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## The Degree of Bachelor of Science in Geographic Information Systems

Geographic Information Systems is a growing field in computer technology. Our program in GIS offers a hands-on learning environment that prepares our students to join many of the emerging areas of applications of GIS such as infrastructure management, public health and safety as well as other business uses.

### Admission Requirements

For admission requirements to the degree of BS in Geographic Information Systems, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in Geographic Information Systems, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 90 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying their graduation.

### Degree Requirements (90 credits)

#### General Education Requirements

30 cr.

#### A - Communication Skills in English and Arabic

9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B - Philosophy and Religion

6 cr.

- One course from the subcategory *Religion* (3cr.)

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215,

PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and Technology

3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science* (3 cr.)

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA

210,

#### Or

- One course from the subcategory *Natural Sciences* (3 cr.)

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211,

HEA 201, NTR 201, PHS 207

*Students majoring in Geographic Information Systems are not allowed to count GIS courses within the pool of required GER courses.*

**Core Requirements** **24 cr.**  
CSC 216, CSC 217, CSC 226, CSC 417, CSC 435, MAT 215, STA 210  
Choose one course from the following list: CSC 301, CSC 305, CSC 306, CSC 316,  
CSC 323, CSC 385, CSC 387, CSC 423.

**Major Requirements** **30 cr.**  
CEN 250, CEN 251, CSC 446, GIS 211, GIS 311, GIS 321, GIS 331, GIS 352, GIS  
441, GIS 452, GIS 490

**Free Elective** **6 cr.**

**Bachelor of Science in Geographic Information Systems**  
**Suggested Program (90 Credits)**

**Fall Semester I (12 Credits)**

CSC	201	Computers and Their Use (GER)	3 cr.
GIS <sup>1</sup>	211	Principles of GIS	3 cr.
MAT	215	Linear Algebra I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

CSC	216	Computer Programming I	3 cr.
GIS	311	Desktop GIS	3 cr.
CSC	226	Introduction to Database Programming for Business	3 cr.
STA	210	Statistics for Business and Economics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.

**Summer Session (6 Credit)**

ARB	211/	GER	3 cr.
	231		
REG	212/	GER	3 cr.
	213		

**Fall Semester II (14 Credits)**

GIS	321	Spatial Analysis & Modeling	3 cr.
CSC	217	Computer Programming II	3 cr.
—	—	Free Elective	3 cr.
CEN	250	Surveying	2 cr.
CSC <sup>2</sup>	—	—	2 cr.

**Spring Semester II (13 Credits)**

GIS	331	Implementations of GIS	3 cr.
GIS	441	Cartography, Geodesy and GPS	3 cr.
CEN	251	Field Surveying	1 cr.
CSC	417	Advanced Programming Technologies	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

GIS	352	Theories of Remote Sensing	3 cr.
CSC	435	Operating Systems & Networks	3 cr.
CSC	446	Applied Database Systems	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (12 Credits)**

GIS	452	Advanced Remote Sensing	3 cr.
GIS	490	GIS Senior Project	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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<sup>1</sup> GIS 211 or CSC 318 could be taken.

<sup>2</sup> Choose one course from the following list: CSC 301, CSC 305, CSC 306, CSC 316, CSC 323, CSC 385, CSC 387, CSC 423.

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## **Minor in Geographic Information Systems (15 credits)**

The main goal behind starting a minor in Geographic Information Science is to provide students from different backgrounds with the capacity to apply GIS in their area of knowledge and to enhance their skills in a rapidly expanding market of computer-based technology.

Geographic Information Systems has been growing at an extraordinary rate. In fact, computer cartography has revolutionized traditional cartography to vastly improve map making and visualization of geographic information in a multimedia environment.

Geographic Information Systems includes Geographic Information Systems, Global Positioning Systems and Remote Sensing:

- A Geographic Information Systems (GIS) is a computer-based tool for mapping and analyzing things that exist, and events that happen on earth. GIS technology is a special case of information systems where database consists of features, activities, or events that are definable in space as points, lines, or areas.
- Global Positioning System (GPS) is a satellite system that allows users to collect precise geographic data for use in mapping.
- Remote sensing refers to any technique whereby information about objects and the environment is obtained from a distance with the aid of aircrafts and satellites.

There is a strong demand for people who are trained in Geographic Information Systems and this minor will assist the students in finding a large variety of jobs in this rapidly growing field.

Students declaring this minor will receive extensive training in processing vector and raster data, making spatial analysis, GIS modeling, and displaying the information products in a professional cartographic way. Thus, the GIS minor will not only provide the fundamentals of GIS to students without any previous knowledge of GIS, but will prepare them for careers in virtually all areas of the public or private sector where GIS is increasingly in use.

In short:

- GIS is very useful for efficient management, thorough policy analysis and cost-effective decision making.
- GIS is a powerful planning and maintenance tool for any business or engineering project.
- GIS mapping, editing and geo-processing is widely deployed in the defense industry and in many social, political and environmental studies.

The multidisciplinary nature of the geographic information systems allows students from any field of study— i.e. whose majors include engineering, natural and applied sciences, business, management, marketing, public administration, social sciences, political science, architecture, education and others— to declare this minor.

### **Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### **Pool of Courses**

CSC 318; GIS 311; GIS 352; GIS 441; GIS 321 or GIS 452

### **Graduation Requirements and Suggested Schedule**

To satisfy the graduation requirements of a minor in Geographic Information Systems, a student must pass **five courses** from the pool of courses as follows:

- First semester (2 courses; 6 credits)  
CSC 318 or GIS 211; GIS 352
- Second semester (2 courses; 6 credits)  
GIS 311; GIS 441
- Third semester (1 course; 3 credits)  
GIS 321 or GIS 452

D is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

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## Undergraduate Courses: Geographic Information Systems

**GIS 211 Principles of Geographical Information Sciences (3.0); 3 cr.** An introduction to Geographical Information System, data structure and information, topology, attributes and database organization, map basics and cartographic representations, and Remote Sensing & GPS.

**GIS 311 Desktop GIS (3.0); 3 cr.** Topics include spatial data entry, data format and structure, maps and raster image registration and rectification, data base design and management, spatial data analysis (vector representation), and handling all types of geographical data with Arc Info Workstation. *Prerequisite:* GIS 211 or CSC 318

**GIS 321 Spatial analysis and Modeling (3.0); 3 cr.** Introduction to spatial analysis, vector spatial analysis, network analysis, raster spatial data development, raster analysis, surface modeling, 3-D analysis. *Prerequisite:* GIS 311.

**GIS 331 Implementations of GIS (3.0); 3 cr.** This course focuses on applications in vector data analysis and manipulation, network analysis, spatial analysis, surface modeling, 3-D modeling, and field trips. *Prerequisite:* GIS 321.

**GIS 341 Cartography and Automated Mapping (3.0); 3 cr.** Elements of thematic cartography, cartographic theory, and cartographic projections. Properties of photogrammetric and remotely sensed images; photography, elements of map, photograph, and image interpretation.

**GIS 351 Photogrammetry and Remote Sensing (3.0); 3 cr.** the nature of remote sensing. Optical radiation models. Sensor models. Data models. Spectral and spatial transforms. Correction and calibration. Image registration and fusion. Introduction to photogrammetry. Basic elements and techniques of image interpretation. Various aerial camera systems and platforms. Films and filter

combination. Geometry and Aerial photography. Scale and area and height measurement. Stereoscopy. Flight planing and ground control of aerial photography. Orthophotography.

**GIS 352 Theories of Remote Sensing (3.0); 3 cr.** Concepts of Remote Sensing, physics of Remote Sensing, introduction to air photo interpretation, photogrammetry, Remote Sensing sensors and platforms, digital image processing, and overview of applications of remote Sensing.

**GIS 411 Geodetic Science and Satellite Positioning (3.0); 3 cr.** Description of the geodetic mode of the Earth. Relationship between terrestrial observations and grid coordinates. Use of satellites for navigation and positioning. History and review of satellite positioning systems. Measurement techniques using gps. Future trends in satellite positioning technology. *Prerequisite:* MAT 213.

**GIS 441 Cartography, Geodesy and GPS (3.0); 3 cr.** This course introduces the nature of cartography, basic geodesy, map projections, scaling, referencing and coordinate systems, cartographic perception and design. It also describes Global Positioning System (GPS), map data collection and design.

**GIS 452 Advanced Remote Sensing (3.0); 3 cr.** This course focuses on hands on applications of Remote Sensing data collection, data preparation and processing, image distortion, radiometric and geometric corrections, image enhancement and classification, image mosaicking, space triangulation, and digital representation of relief stereoscopy. *Prerequisite:* GIS 352.

**GIS 490 Senior Project (3.0); 3 cr.** Assigned project supervised by a faculty member. The grade will be based on project evaluation and individual oral presentation. *Prerequisite:* Senior Standing.

## Our Graduate Program

Our graduate program in Computer Science is designed to prepare students to do research in advanced topics in Computer Science and to gain further practical skills and knowledge in the computer profession.

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### The Degree of Master of Science in Computer Science

#### Admission Requirements

In addition to the university graduate admission requirements, candidates are expected to have a sufficient background in computer science and mathematics. Those who do not meet these requirements may be given provisional admission pending satisfactory completion of some undergraduate courses. The credits earned for these courses will not be counted towards the 30 credits required for the degree of Master of Science (MS) in computer science.

#### Graduation Requirements

To satisfy the requirements for the degree of MS in Computer Science, the student must complete a total of 30 credits with an overall average of at least 3.0/4.0. A student can complete the required 30 credits by following one of the two options:

1. **Course-work option:** 15 credits of required courses and 15 credits of elective courses.
2. **Thesis option:** 15 credits of required courses, 9 credits of elective courses and a 6-credit thesis.

The thesis option is more research oriented and therefore more appropriate for students planning to pursue a Ph. D. The course-work option is more hands-on and project oriented and therefore more appropriate for students planning to join the market place.

#### **Degree Requirements (*Course Work Option*) (30 Credits)**

**1- Complete the following five required courses** **15 cr.**  
CSC 611, CSC 616, CSC 622, CSC 626, MAT 661.

**2- Complete five elective courses from the following list** **15 cr.**  
CSC 603, CSC 621, CSC 623, CSC 625, CSC 631, CSC 632, CSC 636, CSC 647, CSC 670

**3-Pass two comprehensive examinations after having completed at least 18 credits with an overall average of 3.0/4.0:**

The first exam is composed of topics covered in CSC 616 and CSC 626. The second exam is composed of topics covered in CSC 611, CSC 622 and MAT 661.

**MS in Computer Science (Course Work Option)  
Suggested Program (30 Credits)**

**Fall Semester (6 Credits)**

CSC	611	Advanced Theory of Computation	3 cr.
CSC	6xx	Elective	3 cr.

**Spring Semester (9 credits)**

CSC	616	Advanced Database Systems	3 cr.
CSC	6xx	Elective	3 cr.
CSC	6xx	Elective	3 cr.

**Fall Semester II (9 Credits)**

CSC	622	Advanced Analysis of Algorithms	3 cr.
CSC	626	Computer Communication and Networks	3 cr.
CSC	6xx	Elective	3 cr.

**Spring Semester II (6 Credits)**

MAT	661	Computational Mathematics	3 cr.
CSC	6xx	Elective	3 cr.

**Degree Requirements (*Thesis Option*)  
(30 Credits)**

**1- Complete the following five required courses** **15 cr.**  
CSC 611, CSC 616, CS 622, CSC 626, MAT 661.

**2- Complete three elective courses from the following list** **9 cr.**  
CSC 603, CSC 621, CSC 623, CSC 625, CSC 631, CSC 632, CSC 636, CSC 647,  
CSC 670

**3- Complete the MS thesis requirements** **6 cr.**  
CSC 691 and CSC 692

**Master of Science in Computer Science (Thesis Option)  
Suggested Program (30 Credits)**

**Fall Semester (6 Credits)**

CSC	611	Advanced Theory of Computation	3 cr.
CSC	626	Commuter Communications & Networks	3 cr.

**Spring Semester (9 credits)**

MAT	661	Computational Mathematics I	3 cr.
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**Spring Semester I (9 Credits)**

CSC	616	Advanced Database Systems	3 cr.
CSC	622	Advanced Analysis of Algorithms	3 cr.
CSC	6xx	Elective	3 cr.

**Fall Semester II (6 Credits)**

CSC	691	Master Thesis in Computer Science I	3 cr.
CSC	6xx	Elective	3 cr.

**Spring Semester II (6 Credits)**

CSC	692	Master Thesis in Computer Science II	3 cr.
CSC	6xx	Elective	3 cr.

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## The Degree of Master of Science in Computer Science

### Computer Information Systems Emphasis

The purpose of the graduate program CS-CIS is to teach students how to combine general management knowledge with the latest software tools and techniques to create information systems which allow organizations to compete in on the global market place. Graduates will be prepared for careers in a variety of areas such as programming, system development, database administration, network development & support, and consulting.

#### Admission Requirements

In addition to the university graduate admission requirements, candidates are expected to have a sufficient background in computer science and mathematics. Those who do not meet these requirements may be given provisional admission pending satisfactory completion of a set of undergraduate courses. The credits earned for these courses will not be counted towards the 30 credits required for the degree of Master of Science in CS-CIS.

#### Graduation Requirements

To satisfy the requirements for the degree of Master of Science in CS-CIS, the student must complete a total of 30 credits with an overall average of at least 3.0/4.0. A student can complete the required 30 credits by following one of the two options:

1. **Thesis option:** 15 credits of required courses, 9 credits of elective courses and a 6-credit thesis.
2. **Course-work option:** 15 credits of required courses, 15 credits of elective courses.

The thesis option is more research oriented and therefore more appropriate for students planning to pursue a Ph. D. The course-work option is more hands-on and project oriented and therefore more appropriate for students planning to join the market place

### Degree Requirements of CS CIS Emphasis (*Course Work Option*) - (30 Credits)

**1- Complete the following five required courses** **15 cr.**  
CSC 605, CSC 616, CSC 623, CSC 626, STA 614

**2- Complete five elective courses from the following list** **15 cr.**  
CSC 603, CSC 621, CSC 625, CSC 631, CSC 632, CSC 636,  
CSC 647, CSC 670, PRM 601, PRM 603, PRM 605, BAD 630, BAD 634.  
At least two courses from this pool should be Computer Science (CSC prefix) courses.

**3- Pass a comprehensive examination after having completed at least 18 credits with an overall average of 3.0/4.0**

The exam will cover topics from CSC 616, CSC 623 and CSC 626.

**MS in Computer Science  
CIS Emphasis (CourseWork Option) - Suggested Program (30 Credits)**

**Fall Semester I (9 Credits)**

CSC	605	System Analysis and Design	3 cr.
STA	614	Advanced Statistical Methods for Business Decision Systems	3 cr.
CSC	6xx	Elective	3 cr.

**Spring Semester I (9 Credits)**

CSC	616	Advanced Database Systems	3 cr.
CSC	6xx	Elective	3 cr.
		Elective	3 cr.

**Fall Semester II (6 Credits)**

CSC	626	Computer Communications & Networks	3 cr.
CSC	6xx	Elective	3 cr.

**Spring Semester II (6 Credits)**

CSC	623	Advanced Software Engineering	3 cr.
—	—	Elective	3 cr.

**Degree Requirements of CS  
CIS Emphasis (Thesis Option) - (30 Credits)**

**1- Complete the following five required courses** **15 cr.**

CSC 605, CSC 616, CSC 623, CSC 626, STA 614.

**2- Complete three elective courses from the following list** **9 cr.**

CSC 603, CSC 621, CSC 625, CSC 631, CSC 632, CSC 636, CSC 647, CSC 670, PRM 601, PRM 603, PRM 605, BAD 630, BAD 634. At least two courses from this pool should be Computer Science (CSC prefix) courses.

**3- Complete the MS thesis requirements** **6 cr.**

CSC 691 and CSC 692

**Master of Science in Computer Science  
CIS Emphasis (Thesis Option) - Suggested Program (30 Credits)**

**Fall Semester I (9 Credits)**

CSC	605	System Analysis and Design	3 cr.
STA	614	Advanced Statistical Methods for Business Decision Systems	3 cr.
		Elective	3 cr.

**Spring Semester I (9 Credits)**

CSC	616	Advanced Database Systems	3 cr.
CSC	626	Computer Communication and Networks	3 cr.
CSC	6xx	Elective	3 cr.

**Fall Semester II (6 Credits)**

CSC	623	Advanced Software Engineering	3 cr.
CSC	691	Master Thesis I	3 cr.

**Spring Semester II (6 Credits)**

CSC	692	Master Thesis II	3 cr.
		Elective	3 cr.

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## **Regulations concerning the “thesis courses” of the Master of Science in Computer Science or in CS: CIS Emphasis**

### **Master Thesis**

Students may register for the thesis (CSC 691 & CSC 692) upon the completion of at least 18 credits with an overall average of at least 3.3/4.0 and after receiving the approval of both the department chairperson and the thesis advisor.

### **Duration of Work**

The work for the thesis is expected to be completed within a period of two semesters. Otherwise, the student shall register for one credit every semester thereafter.

### **Jury for the Oral Defense**

After receiving a written note of completion along with five bound copies of the master thesis from the master thesis advisor, the department chairperson shall appoint the jury for the oral defense and its chairperson, and shall distribute to each member one copy of the master thesis. The jury shall consist of the master thesis advisor and three full-time faculty members one of whom is from outside the department.

### **Schedule for the Oral Defense**

The oral defense for the master thesis shall be scheduled by the jury chairperson one month from the date of the appointment of the jury at the latest.

### **Evaluation and Grade**

Bound master thesis copies are required for the evaluation. The jury shall evaluate the work for the master thesis and assign the appropriate grade by a majority vote. In case of a tie, the committee chairperson shall have the casting vote.

### **Final Copy of the Master Thesis**

The student shall submit seven bounded copies of the approved final copy of the master thesis to the jury chairperson who, in turn, shall distribute them to the Library, Faculty, Department, and to each member of the jury.

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## Graduate Courses: Computer Science

**CSC 603 Objected-Oriented Applications (3.0); 3 cr.** Emphasizes the use of Object-Oriented Architectures and Components in order to build business to business and business to client applications. The multi-tier architecture will be studied in depth through Enterprise Java Beans (EJB) specifications. The development environment is Jbuilder 4 of Borland.

**CSC 605 System Analysis and Design (3.0); 3 cr.** Emphasizes the design aspects of systems development, including logical and physical design, implementation, testing and operation. State-of the art system development process, methods and tools are presented.

**CSC 606 Operating Systems and Security (3.0); 3 cr.** This is a hands-on system vulnerabilities like stack and heap overflows, return to libc attacks etc... Attack counter measures such as stack guard and address space randomization are discussed. The students are expected to write their own exploits in addition to applying known exploits in a controlled linux/x86 environment. Viruses and worms are covered along with defenses like disinfection, integrity checking and sandboxing.

**CSC 611 Advanced Theory of Computation (3.0); 3 cr.** Topics include: primitive recursive functions, Church thesis, recursive and recursively enumerable sets, time and space complexity measures, the classes P and NP-completeness, and hierarchy of complexity.

**CSC 612 Advanced Computer Graphics (3.0); 3 cr.** Topics include: mathematical techniques for curve and surfaces; color systems; fractals hidden lines and hidden shading; surface mapping and ray tracing; techniques of animation.

**CSC 613 Computer Vision and its Applications (3.0); 3 cr.** Focuses on computer techniques for understanding and interpreting visual data, physics of vision, boundary detection of objects, region growing, analysis of texture and motion, and analysis on objects in scenes.

**CSC 614 Modeling and Simulation in OOP (3.0); 3 cr.** Encapsulation, use of inheritance (including multiple inheritance), collections and iterators, run-time typing identification, exception handling. Some aspects of distributed and parallel object-oriented systems.

**CSC 615 Advanced Computer Architecture (3.0); 3 cr.** Early systems, parallelism and parallel processing, vector processors, array processors, associative processors, VLIW architecture, memory and I/O subsystems, networking. Case Study: RISC architecture.

**CSC 616 Advanced Database Systems (3.0); 3 cr.** Topics include: Data modeling using ER model; relational model; relational algebra; SQL; functional dependencies and normalization; query processing and optimization; distributed database design procedure; distributed query optimization concurrency control; recovery; integrity and security; data warehouse and data mining.

**CSC 621 Advanced Compiler Design (3.0); 3 cr.** The course will cover some of the core-topics, already studied in CSC 431 (or in some equivalent course at another university), but with more details and rigor. Some of the topics are: lexical analysis, parsing theory (LL, LR, and LALR parsing), symbol tables, type checking, common representations for arrays, runtime conventions for procedure calls, storage allocation for variables, generation of code, and code optimization.

**CSC 622 Advanced Analysis of Algorithms (3.0); 3 cr.** The course will cover some of the core-topics, already studied in CSC 325 (or in some equivalent course at another university), but with more details and rigor. In addition, we will present a selection of advanced topics, mainly the theory of NP-completeness and algorithms for parallel computers.

**CSC 623 Advanced Software Engineering (3.0); 3 cr.** Advanced Topics in software engineering are covered including: formal methods, cleanroom software engineering, component-based development, client/server software engineering, web engineering, reengineering, computer-aided software engineering.

**CSC 625 Advanced Operating Systems (3.0); 3 cr.** Special emphasis on distributed computing, and the services provided by distributed operating systems. Important topics include naming, security, remote procedure call, networks, concurrency, transactions, parallel computing, shared memory, message passing, and scale.

**CSC 626 Computer Communications and Networks (3.0); 3 cr.** Computer communications and layered network architecture; implementation and configuration of local Area Network (LANs), and Wide Area Network (WANs), TCP/IP, Internetworking and network management.

**CSC 631 Multimedia Systems (3.0); 3 cr.** This course provides the background needed for the design and development of computer-based systems that combine text, still images, sound, animation, and full motion video. The course will examine design methodologies used in planning these systems, and authoring languages used to create such systems.

**CSC 632 Artificial Intelligence (3.0); 3 cr.** Principles of problem solving and planning and machine learning systems. Introduction to current State-of-the art expert systems and expert systems tools.

**CSC 633 Digital Image Processing (3.0); 3 cr.** Image perception, sampling, quantization techniques, transforms, enhancement techniques, like noise reduction, blurring, sharpening, edge detection, and contrast enhancing, image restoration and analysis.

**CSC 636 Computer Security (3.0); 3 cr.** This is a graduate course on computer security. The emphasis is on formal model and the foundations of computer security. Topics include: access control and protection models. Security, confidentiality and integrity policies are also discussed and representative models like Bell-LaPadula, Biba and Chinese wall are chosen as examples. Information flow, auditing and vulnerability analysis are also covered.

**CSC 645 Neural Networks for Computing (3.0); 3 cr.** Introduction to neural networks algorithms, adaptive behavior, associative learning. Applications to cognitive information processing and control and signal processing.

**CSC 647 Decision Support Systems (3.0); 3cr.** Decision Support Systems (DSS) help users in solving problems and in reaching a decision based on available data, knowledge bases, and decision models. This course will expose students to theoretical DSS concepts, and to practical issues. Students will gain hands on experience by creating a real world DSS. Topics include: DSS analysis, modeling, and development; data warehousing, mining and OLAP; knowledge management (acquisition, validation, representation) and inference techniques.

**CSC 670 Selected Topics in Computer Science (3.0); 3 cr.** Topics of current interest in computer science.

**CSC 685 Readings in Computer Science (3.0); 3 cr.** Designed primarily for those students wishing to study a particular area in computer science under the supervision of a faculty member.

**CSC 690 Master Thesis in Computer Science 6 cr.** The research for the master thesis must show the student's proficiency in approved topics in computer science.

**CSC 691 Master Thesis in Computer Science I 3 cr.** The research for the master thesis must show the student's proficiency in approved topics in computer science.

**CSC 692 Master Thesis in Computer Science II 3 cr.** Continuation of CSC 691.

## DEPARTMENT OF MATHEMATICS AND STATISTICS

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**Chairperson:** *Dr. Bassem Ghalayini*

**Secretary:** Miss. Sandra El-Khoury

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### **Professor**

*Eid, George M.*, Ph.D., 1988, *Mathematics*, Polytechnic University, New York, USA

### **Associate Professors**

*Haddad, John*, Ph.D., 1992, *Statistics*, University of Waterloo, Canada

*Keirouz, Malhab*, Ph.D., 1991, *Differential Topology*, Purdue University, USA

*Saliba, Holem*, Ph.D., 1997, *Mathematical Logic, Algebra and the Theory of Numbers*, Moscow State University, Russia

### **Assistant Professors**

*Ghalayini, Bassem*, Ph.D., 1995, *Differential Equations*, University of California, Los Angeles, USA

*Jajou, Amer F.*, Ph.D., 1987, *Operations Research, Numerical Analysis*, Univerzita Karluva, Czechoslovakia

*Maalouf, Ramez*, Ph.D., 1994, *Complex Analysis, Fractal Geometry*, Imperial College London, England

*Rached, Ziad*, Ph.D., 2002, *Mathematics, Communications*, Queen's University, Canada

*Sabiini, Guitta*, Doctorate, 2009, *Complex Variables*, Université Paul Sabatier, France

### **Senior Lecturer**

*Saadé, Ban*, M.S., 1978, *Algebra*, American University of Beirut, Lebanon,

### **Lecturers**

*Freiji-Bou Nassif, Claudia*, M.S., 1991, *Applied Statistics*, Ohio State University, USA; *Financial Economics*, M.S., 1998, University of London, U.K.

*Hajjar-Muça, Theresa*, M.P.H., 1994, *Biostatistics*, American University of Beirut, Lebanon

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### **Programs of Study**

The department offers programs in mathematics, actuarial science & insurance, and applied statistics leading to the degrees of:

- BS in Mathematics (103 Credits).
- BS in Actuarial Science and Insurance (112 Credits).
- BS in Applied Statistics (90 Credits).
- MS in Mathematics (33 Credits)

The department also offers the following minors:

- Minor in Mathematical Insurance (18 credits)
- Minor in Applied Statistics (18 Credits)
- Minor in Mathematics (15 Credits)

## Our Undergraduate Program

Our undergraduate program is designed to prepare students for graduate studies in Mathematics and in mathematics related fields such as Applied Mathematics, statistics, Actuarial Science and Financial engineering. The program main potential employers are organizations concerned with risk such as Insurance companies, banks, actuarial consultancy and statistical agencies.

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### The Degree of Bachelor of Science in Actuarial Science and Insurance

**Academic Advisor:** *Mrs. Claudia Freiji Bou Nassif*

Actuarial Science is a field concerned with the applications of mathematics and statistics to long-term financial problems. These problems are frequently associated with life / casualty assurance and pension provision. An actuary has to:

- Assess risks.
- Project mortality rates.
- Take account of economic factors.
- Determine levels of premiums on long-term contracts.
- Forecast short- and long-term benefits and contributions for environments such as social security, pension funds, insurance companies, and banks.

The BS degree in Actuarial Science and Insurance prepares students for careers as:

- Assistant Actuaries in the insurance and reinsurance industries.
- Analysts of risk and uncertainty regarding potential financial losses.
- Underwriters in insurance companies and government agencies.
- Consultants in financial and investment corporations.

Students enrolled in the BS degree will be prepared to take a series of examinations in actuarial science leading to ASA / ACAS designation under the American Society of Actuaries (SOA) and Casualty Actuarial Society (CAS). They also would benefit from VEE (Validation by Educational Experience) approved credits for Economics, applied statistics and corporate finance required for the attainment of the above mentioned designation.

#### Admission Requirements

For admission requirements to the degree of BS in Actuarial Science and Insurance, refer to the section entitled “Undergraduate Admission” of this catalog.

#### Graduation Requirements

To receive the degree of BS in Actuarial Science and Insurance, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 112 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying of graduation.

**Degree Requirements  
(112 credits)**

**General Education Requirements** **27 cr.**

**A - Communication Skills in English and Arabic** 9 cr.

- Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

**B - Philosophy and Religion** 6 cr.

- One course from the subcategory *Religion (3cr.)*

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy (3cr.)*

ENS 205, PHL 211, PHL 311, POS 345

**9 credits from pools C and D, with at least 3 credits from each.**

**C- Cultural Studies and Social Sciences**

- Two courses from the category *Cultural Studies and Social Sciences (6 cr.)*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

**D- Citizenship**

- Two courses from the category *Citizenship (6 cr.)*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

**E - Science and Technology** 3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

**OR**

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207

*Students majoring in Actuarial Science and Insurance are not allowed to count ACS courses within the pool of required GER courses.*

**F) Study and Learning Skills** 0 cr.

**Core Requirements** **33 cr.**

ACO 201, ACO 202, ECN 211, ECN 212, MAT 206, MAT 213, MAT 215, MAT 224, MAT 235, MAT 336, CSC 212 or CSC 216, STA 312

**Major Requirements** **43 cr.**

ACS 300, ACS 310, ACS 314, ACS 320, ACS 324, ACS 327, ACS 330, ACS 421, ACS 424, ACS 430, ACS 450, ACS 460, MAT 325, STA 315, STA 370

**Free Electives** **6 cr.**

**Bachelor of Science in Actuarial Science and Insurance  
Suggested Program (112 Credits)**

**Fall Semester I (15 Credits)**

MAT	213	Calculus III	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
—	—	GER	3 cr.
ARB	—	GER	3 cr.

**Spring Semester I (15 Credits)**

ACO	201	Principles of Accounting I	3 cr.
ECN	212	Principles of Macroeconomics	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
MAT	224	Calculus IV	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.

**Summer Session I (9 Credits)**

REG	212 / 213	GER	3 cr.
MAT	215	Linear Algebra I	3 cr.
ACS	330	Insurance Law and Regulations	3 cr.

**Fall Semester II (15 Credits)**

ACS	310	General Insurance	3 cr.
ACO	202	Principles of Accounting II	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
MAT	325	Elements of Probability	3 cr.
MAT	206	Financial Mathematics	3 cr.

**Spring Semester II (15 Credits)**

ACS	314	Actuarial Mathematics I	3 cr.
ACS	320	Mathematics of Demography	3 cr.
ACS	327	Risk Theory	3 cr.
STA	315	Mathematical Statistics	3 cr.
—	—	GER	3 cr.

**Summer Session II (9 Credits)**

CSC	212 / 216	Computer language C++ or Visual Basic	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (16 Credits)**

ACS	324	Actuarial Mathematics II	3 cr.
STA	312	Introductory Time Series Analysis	3 cr.
ACS	450	Investment and Asset Management	3 cr.
ACS	430	Loss Models	3 cr.
ACS	300	Actuarial Problem Solving	1 cr.
MAT	336	Numerical Methods for Finance	3 cr.

**Spring Semester III (18 Credits)**

ACS	421	Credibility Theory and Loss Distributions	3 cr.
ACS	424	Pension Fund Mathematics	3 cr.
STA	370	Stochastic Processes	3 cr.
ACS	460	Multi-Life and Multi-Decrement Models	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

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## **Minor in Mathematical Insurance (18 credits)**

This minor introduces students to the mathematical foundation of risk assessments under an insurance context. It suits students majoring in Business, Computer Science, Mathematics, or Engineering interested in developing their understanding of future risk evaluation.

### **Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### **Pool of Courses**

ACS 310; ACS 314; ACS 324, MAT 205 or MAT 206; MAT 213; MAT 325 or MAT 326; STA 207 or STA 210.

### **Graduation Requirements and Suggested Schedule**

To satisfy the graduation requirements of a minor in mathematical insurance, a student must pass **six courses** from the pool of courses as follows:

Students with a deficient background in mathematics can exclude ACS 324, while students with a sufficient background in mathematics can take the 3 ACS courses and 3 other math courses from the pool.

*D* is the passing grade for each course, and the minor should be completed with a minimum GPA of 2.0.

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## Undergraduate Courses: Actuarial Science and Insurance

**ACS 300 Actuarial Problem Solving (1.0); 1 cr.** This course is designed specifically to help students prepare to sit for the Society of Actuaries Exam P/1. Problems from previous actuarial exams and other relevant sources are tackled in class focusing on techniques and shortcuts used to enhance problem solving skills under time pressure.

**ACS 310 General Insurance (3.0); 3 cr.** This is a general non mathematical introduction to the major functions of insurance companies starting from their “raison d’être” and ending with an explanation of the different coverage offered under Personal Insurance; Topics include: Types of Risk and Risk Management Methods; Objectives of Risk Management; Risk Pooling and Risk reduction through Pooling and Insurance Institutions; Cost of Risk Pooling (Insurer Insolvency, Insurer Operations and Reinsurance); Insurance Pricing (Determinants of Premium, Investment Income and Loadings); Experience Rating (Full and Partial Credibility); Estimation of outstanding claim provisions, delays in claim reporting and settlement; Chain Ladder method with and without inflation; Estimation of Incurred but not yet reported Claims (IBNR); Demand of Insurance by Individuals and by Businesses; Types of Personal Insurance (Automobile, Homeowners and life insurance and annuities) explaining for each the exposed to risk population, the pricing and underwriting cycle. *Prerequisite:* STA 210.

**ACS 314 Actuarial Mathematics I (3.0); 3 cr.** Introduces the basis of actuarial Mathematics. Topics include Risk Aversion and the different Utility functions; Survival distribution for future lifetime as well as curtate future lifetime random variable; Force of Mortality and its relation to the survival function; Life tables and their use in calculating probabilities of survival; Expectation of future lifetime (Complete and Curtate); Assumptions regarding Fractional ages; Special Laws of Mortality (Gompertz, Makeham, etc); Ultimate Life tables; Life Insurance payable at the moment of death (continuous) or at the end of year of death (discrete); Term Insurance; Deferred Insurance and Endowment Insurance; Varying Benefit Insurance (Increasing/Decreasing); Relation between expected present value of a benefit paid at the moment of death and that payable at the end of the year of death. *Prerequisite:* MAT 325.

**ACS 320 Mathematics of Demography (3.0); 3 cr.** Measures and characteristics of mortality; life tables; mortality projections; measures of morbidity. Adjusted average; difference equations and mathematical formula methods. *Prerequisite:* MAT 325.

**ACS 324 Actuarial Mathematics II (3.0); 3 cr.** This course assesses Life Annuities (paid in advance, in arrears or Continuous) for a whole life, term or deferred period. Annuities with Level or Varying payments done annually or mthly; Net Premium Determination through the equation of Equivalence for fully continuous, discrete and monthly payments; Apportionable premiums; Accumulation type Benefits; Net Premium Reserves (fully continuous, Discrete and semi-continuous) Prospective and Retrospective Reserves; Reserves at fractional durations; Differential Equations for fully continuous reserves. *Prerequisite:* ACS 314.

**ACS 327 Risk Theory (3.0); 3 cr.** Individual Risk model for the short term; Models for independent claim random variable and approximation for the distribution of the sum of multiple claims; Collective Risk Model for a Single Period; Compound Distributions and the evaluations of moments for the aggregate distribution; Collective Risk Model over an Extended Period; Surplus Process and Ruin; Claims Processes (Poisson and Compound Poisson Process); Adjustment Coefficient; Claim amount Distribution in Cases of Fire Insurance, Automobile Physical Damage Insurance, short term disability, Hospital Insurance,...etc; Stop-Loss Reinsurance Premium Determinants; Effect of Reinsurance on the Probability of Ruin. *Prerequisite:* MAT 325.

**ACS 330 Insurance Law and Regulations (3.0); 3 cr.** Elements of business law as it applies to insurance; government and social policy as it relates to general insurance; automobile insurance and assigned risk plans.

**ACS 421 Credibility Theory and Loss Distributions (3.0); 3 cr.** Estimation of future claims frequency, claim’s severity, pure premium as well as aggregate losses by associating credibility factor to previous experience; The Credibility factor is computed according to: Limited Fluctuation Credibility, Partial Credibility; Bühlmann and Bühlmann Straub Credibility. Bayesian approach to Credibility is discussed in general and through

Conjugate Prior Distributions such as Poisson-Gamma, Normal-Normal, Binomial-Beta and Exponential-Inverse Gamma mixed distributions. Non-parametric and Semi parametric Methods in computing Credibility factor in the absence of fully defined distributions. *Prerequisite:* STA 315.

**ACS 424 Pension Fund Mathematics (3.0); 3 cr.** Valuation theory for pension plans; Description of benefit, Benefit calculations; Funding. Accrued Benefit Method, Projected Cost Method, Aggregate method; Introduction to gains and losses. *Prerequisite:* ACS 314; *Corequisite:* ACS 460.

**ACS 430 Loss Models (3.0); 3 cr.** Introduces the Modeling cycle in solving business problems. Selection of the parametric models; Estimation of the associated parameters using Method of Moments, Maximum Likelihood Estimation, Percentile matching and Bayesian Estimation; Calibration and the evaluation of the suitability of the Model using Kolmogorov-Smirnov, Anderson-Darling, Chi-Square

goodness of fit and Likelihood Ratio tests. *Prerequisite:* STA 315.

**ACS 450 Investment and Asset Management (3.0); 3 cr.** Financial securities and markets Efficient portfolios and efficient frontiers, The single index model; Utility analysis, The standard capital asset pricing model; Efficient markets, Interest rate theory; Options and Futures. *Prerequisite:* MAT 325.

**ACS 460 Multi-life and Multi-Decrement Models (3.0); 3 cr.** The joint life and last-survivor status; Insurance and annuity benefits, simple contingent functions; Insurance models including expenses; Types of expenses; Net premium and reserves. Multiple decrement models; Multiple and Associate single decrement tables; Net single Premium. *Prerequisites:* ACS 324.

**ACS 480 Internship 1 cr.** Assigned work at an industrial establishment. The grade will be based on employer's evaluation, written report and oral discussions. *Prerequisite:* Senior Standing.

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## The Degree of Bachelor of Science in Applied Statistics

The degree of BS in Applied Statistics prepares students for careers as statistical analysts and consultants, biostatisticians, pollsters, general statisticians, or teachers in:

- Engineering and operations management companies.
- Hospitals, health centers, medical and applied science laboratories.
- Academic and educational institutions.
- Testing and measurement offices.
- Industrial psychology.
- Government agencies and ministries.

### Admission Requirements

For admission requirements to the degree of BS in Applied Statistics, refer to the section entitled “Undergraduate Admission” of this catalog.

### Graduation Requirements

To receive the degree of BS in Applied Statistics, a student must fulfill all requirements of his/her degree program, complete all required courses, accumulate a total of 91 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the major and core requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (90 credits)

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i> ARB211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B – Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion (3cr.)</i> REG 212, REG 213, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	6 cr.
- Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	6 cr.
- Two courses from the category <i>Citizenship (6 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	

**E - Science and Technology** 3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

**OR**

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207

*Students majoring in Applied Statistics are not allowed to count STA courses within the pool of required GER courses.*

**Core Requirements** 18 cr.

MAT 213, MAT 215, MAT 224, STA 210, ECN 211, ECN 212.

**Major Requirements** 36 cr.

MAT 315, MAT 325, MAT 330, STA 305, STA 312, STA 315, STA 325, STA 354, STA 360, STA 415, STA 450, STA 490.

**Free Electives** 6 cr.

**Bachelor of Science in Applied Statistics  
Suggested Program (90 Credits)**

**Fall Semester I (15 Credits)**

CSC	201	Computers and Their Use (GER)	3 cr.
ECN	211	Principles of Microeconomics	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
MAT	213	Calculus III	3 cr.
STA	210	Statistics for Business and Economics	3 cr.

**Spring Semester I (15 Credits)**

ECN	212	Principles of Macroeconomics	3 cr.
MAT	215	Linear Algebra I	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
MAT	224	Calculus IV	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester II (15 Credits)**

MAT	315	Linear Algebra II	3 cr.
MAT	325	Elements of Probability	3 cr.
STA	305	Sampling Theory	3 cr.
REG	212 / 213	GER	3 cr.
ARB	—	GER	3 cr.

**Spring Semester II (15 Credits)**

STA	312	Introduction to Time Series Analysis	3 cr.
STA	315	Mathematical Statistics	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

STA	325	Design of Experiments	3 cr.
STA	330	Probability Models	3 cr.
STA	354	Applied Regression Analysis	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

STA	360	Applied Multivariate Statistical Analysis	3 cr.
STA	415	Statistical Quality Control	3 cr.
STA	450	Topics in Applied Statistics	3 cr.
STA	490	Senior Project	3 cr.
—	—	GER	3 cr.

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## **Minor in Applied Statistics (18 credits)**

This minor develops the statistical tools applicable to most fields of studies such as Engineering, Business, or Computer Science. Depending on the choice of courses from the pool provided, the student can enhance his understanding of time series, stochastic processes, multiple regressions, all of which provide applied tools useful in the fields of finance, industrial quality control, optimization as well as statistical decision making.

### **Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### **Pool of Courses**

MAT 213; MAT 325 or MAT 326; STA 207 or STA 210; STA 312; STA 315; STA 370

### **Graduation Requirements and Suggested Schedule**

To satisfy the graduation requirements of a minor in applied statistics, a student must pass **six courses** from the pool of courses as follows:

- First semester (2 courses; 6 credits)  
MAT 213; STA 207 or STA 210
- Second semester (2 courses; 6 credits)  
STA 312; MAT 325 or MAT 326
- Third semester (2 courses; 6 credits)  
STA 315; STA 370

D is the passing grade for each course, and the minor should be completed with a minimum GPA of 2.0.

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## Undergraduate Courses: Statistics

**STA 201 Statistics for Social Sciences (3.0); 3 cr.** Topics include: Frequency distribution; measures of central tendency; measures of dispersion; quartiles and percentiles, laws of probability, sampling distributions, estimation, testing hypothesis and chi-square distribution. A statistical software package will be used. *Prerequisite:* Sophomore Standing.

**STA 202 Statistics for Humanities (3.0); 3 cr.** This course is designed to introduce students of the humanities to the most important basic statistical techniques used in their field of research, and to the SPSS software package. The course material covers data collection, organization and graphing; describing distributions: scores, central tendency, and variation; sampling and probability distributions; estimation and hypothesis testing; chi-square test; correlation; analysis of variance. The associated computer lab sessions allow the students to apply the methods learned to data sets and interpret findings.

**STA 203 Biostatistics (3.0); 3 cr.** Converse the fundamental principles of statistics as they apply to biological problems, including statistical inference, analysis of variance, and correlation regression. A software package will be used. *Prerequisite:* Sophomore Standing.

**STA 204 Epidemiology for Nursing (3.0); 3 cr.** Important epidemiological principles and methods. Causation and distribution of diseases. *Corequisite:* STA 203.

**STA 206 Applied Statistics for Business and Economics I (3.0); 3 cr.** Descriptive statistics; measures of central tendency and dispersion; introduction to probability; conditional probability; independence; random variables; discrete probability distributions. A statistical software package will be used. *Prerequisite:* Sophomore Standing.

**STA 207 Applied Statistics for Business and Economics II (3.0); 3 cr.** Sampling distributions; inferences about a population mean, proportion and variances; experimental design; analysis of variance and covariance; linear regression and correlation. A statistical software package will be used. *Prerequisite:* STA 206.

**STA 209 Applied Statistics (3.0); 3 cr.** Frequency distribution; measures of central tendency and dispersion; probability laws;

random variables; sampling and estimations. A statistical software package will be used. *Prerequisite:* Sophomore Standing.

**STA 210 Statistics for Business and Economics (3.0); 3 cr.** Descriptive statistics; measures of central tendency and dispersion, probability laws; random variables, sampling distributions; estimation; hypothesis testing simple linear regression; analysis of variance and chi-square. A statistical software package will be used. *Prerequisite:* Sophomore Standing.

**STA 303 Statistical Inference (3.0); 3 cr.** Logic of statistical inference; sampling distributions; point and interval estimations hypothesis testing; correlation; regression. *Prerequisite:* STA 210.

**STA 305 Sampling Theory (3.0); 3 cr.** Topics include: selection of sampling unit; determination of sample size; random and stratified sampling; purposive selection; sub-sampling and sampling chesters; sampling from finite universe. *Prerequisite:* STA 210.

**STA 312 Introductory Time Series Analysis (3.0); 3 cr.** Introduces the basic concepts of regression analysis starting with two variable models then proceeds to three variable and multi-variable regression models. Thorough discussion of: The assumptions underlying linear regression models; Diagnostic tests, and correction methods for heteroscedasticity, multicollinearity and serial correlations. The second part of the course introduces deterministic and stochastic time series models and discusses: Basic smoothing and extrapolation techniques; Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF) for the different models; Stationarity, nonstationarity and Invertibility conditions; Model specification, Parameter estimation and forecasting for the different stationary time series models AR (p), MA (q), ARMA (p, q), and the homogenous non-stationary models of order d ARIMA. *Prerequisite:* STA 210.

**STA 315 Mathematical Statistics (3.0); 3 cr.** Sampling; estimation; hypothesis testing; t-distribution; chi-square distribution; F-distribution; linear regression and correlation. Analysis of variance and covariance; multiple regression. *Prerequisite:* MAT 325.

**STA 325 Design of Experiments (3.0); 3 cr.** Single-factor experiments, randomized blocks, Latin squares, factorial and fractional experiments, surface fitting design. *Prerequisite:* STA 210.

**STA 330 Probability Models (3.0); 3cr.** Conditional probability and conditional expectation, discrete and continuous Markov chains, the Exponential distribution and Poisson process, queuing theory and reliability theory. *Prerequisite:* MAT 325.

**STA 354 Applied Regression Analysis (3.0); 3 cr.** An applied introduction to Linear and Multiple Regression Models; Testing of Hypothesis in Multiple Regression; Multiple, Partial and Multiple Partial Correlation; Confounding and Interaction in Regression; Regression Diagnostics; Dummy Variables in Regression and selection of the Best Regression Equation. The course stresses the knowledge of how to develop a regression model and how to interpret the output by statistical packages without resorting to rigorous mathematical development. *Prerequisite:* STA 315.

**STA 360 Applied Multivariate Statistical Analysis (3 cr.); 3 cr.** Multivariate analysis, matrix algebra and random vectors, random sampling; The multivariate normal distribution,

inferences about multivariate means and linear models, comparisons of several multivariate means, and multivariate linear regression. *Prerequisite:* STA 315.

**STA 370 Stochastic Processes (3 cr.); 3 cr.** This course introduces the basic probabilistic methods of stochastic processes. Topics include: Markov Chains; Exponential distribution and Poisson Process; Continuous – time Markov Chains; Renewal Theory and its application; Brownian Motion and Stationary Processes.

**STA 415 Statistical Quality Control (3 cr.); 3cr.** Methods and philosophy of statistical control; charts; for variables and for attributes, cumulative and exponentially weighted moving average control charts. Other statistical process techniques; Process capability analysis. *Prerequisite:* STA 315.

**STA 450 Topics in Applied Statistics (3.0); 3 cr.** Multivariate distributions; regression analysis; non-parametric statistics; sequential analysis; decision theory; *Prerequisite:* STA 303.

**STA 490 Senior Project 3 cr.** Assigned project supervised by a faculty member. The grade will be based on project evaluation and individual oral presentation. *Prerequisite:* Senior Standing.

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### Graduate Courses: Statistics

**STA 500 Applied Statistics for Business and Economics (3.0); 3 cr.** The course covers the following main topics: Introduction to Statistics and Probability, discrete and continuous random variables; Sampling distribution; Testing hypothesis and estimation; Analysis of variance; Simple and multiple regression; And time-series analysis. The course also applies these concepts and Techniques to actual real world business and economic situations.

**STA 614 Advanced Statistical Methods for Business Decisions (3.0); 3 cr.** This course develops an analytical approach to risk in management decisions. Topics include decision analysis; correlation and multiple regression; discriminant; judgment; canonical; cluster and factor analysis.

**STA 653 Stochastic Processes (3.0); 3 cr.** Poisson processes: waiting time distributions, non-homogeneous Poisson processes. Renewal theory: Wald's equation; Renewal reward processes. Discrete Markov chains:

classification of states; Limit theorems. Continuous-time Markov chains: limiting probabilities; Birth and death processes. Martingales: stopping times; Martingale convergence theorem; Azuma's inequality. Brownian motion: hitting times; Backward and forward diffusion equations. *Prerequisite:* MAT 325.

**STA 654 Methods of Multivariate Analysis (3.0); 3 cr.** Least Square and multiple regression analysis; Canonical correlation Principle component analysis, Hotelling's  $T^2$  procedures; Multivariate analysis of variance; Discriminant analysis; Cluster analysis. *Prerequisite:* STA 315.

**STA 663 Time Series Analysis (3.0); 3 cr.** Topics include stationary models and autocorrelation function; Estimation and elimination of trend and seasonal components; Stationary processes: properties, ARMA processes, estimation of mean and autocorrelation function; forecasting stationary

time series; Spectral analysis; Non-stationary and seasonal time series models: ARIMA models, forecasting ARIMA models, seasonal ARIMA models. Applications using real and simulated data. *Prerequisite*: STA 315 or equivalent.

**STA 664 Probability and Statistical Inference (3.0); 3 cr.** Functions of random variables and sampling distribution: normal distribution, t-distribution, chi-square distribution, F-distribution. Stochastic convergence: convergence in probability; Convergence in distribution; The central limit theorem. Point estimation: properties of estimators; Finding estimators; Rao-Blackwell theorem; Cramer-Rao inequality. Confidence interval estimation: one population and two populations. Hypothesis

testing theory: power function, Neyman-Pearson lemma, likelihood ratio test. Applications: Testing various unknown parameters of one population and several populations. Bayesian methods: prior and posterior distributions, credible intervals. *Prerequisite*: MAT 325.

**STA 670 Measure and Probability (3.0); 3 cr.** The course introduces the student to the basic of measure theory, Lebesgue integration, probability spaces, random variables, almost sure convergence, weak convergence, conditioning on a sigma-field, martingales and martingales inequalities, and limiting distributions of random variables.

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## The Degree of Bachelor of Science in Mathematics

The Department of Mathematics and Statistics offers a BS degree program in Mathematics with the following emphasis: Pure Mathematics, Computational Mathematics and Mathematics Education.

The degree of BS in Mathematics prepares students for careers in:

- Academic and educational institutions.
- Computer firms.
- Engineering industry.
- Government laboratories.
- Business and management corporations.
- Research centers.

### Admission Requirements

For admission requirements to the degree of BS in Mathematics, refer to the section entitled “Undergraduate Admission” of this catalog.

### Graduation Requirements

To receive the degree of BS in Mathematics, a student must fulfill all requirements of his/her degree program, complete all required courses, accumulate a total of 103 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying of graduation. The student can choose one out of the three possible concentrations within the B.S. in Mathematics:

### Degree Requirements (103 credits)

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English</i> (6 cr.)	
ENL 213 And	
ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic</i> (3cr.)	
ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion</i> (3cr.)	
REG 212, REG 213, REG 313, REG 314	
- One course from the subcategory <i>Philosophy</i> (3cr.)	
ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	6 cr.
- Two courses from the category <i>Cultural Studies and Social Sciences</i> (6 cr.)	
HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	6 cr.
- Two courses from the category <i>Citizenship</i> (6 cr.)	
HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science</i> (3 cr.)	
CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA	

210

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, NTR 201, PHS 207

*Students majoring in Mathematics are not allowed to count MAT courses within the pool of required GER courses.*

**Core Requirements**

**22 cr.**

Twenty two credits: CSC 212, CSC 213, MAT 211, MAT 213, MAT 215, MAT 220, MAT 224, MAT 235.

**Major Requirements (for the pure mathematics concentration)**

**42 cr.**

1. Required courses: 30 credits

MAT 325, MAT 333, MAT 339, MAT 411, MAT 412, MAT 413, MAT 421, MAT 423, MAT 430, STA 315.

2. Twelve credits to be chosen from the following set:

MAT 305, MAT 312, MAT 335, MAT 400, MAT 418, MAT 431, MAT 460, STA 370, CSC 311, CSC 313, CSC 325.

**Free Elective**

**6 cr.**

Six credits with the approval of the advisor.

**Major Requirements (for the computational mathematics concentration)**

**42 cr.**

1. Required courses: 27 credits: MAT 325, MAT 333, MAT 411, MAT 412, MAT 413, MAT 423, CSC 311, CSC 313, CSC 325.

2. Six credits to be chosen from the following set: MAT 305, MAT 312, MAT 335, MAT 339, MAT 400, MAT 418, MAT 421, MAT 430, MAT 431, MAT 460, STA 315

3. Nine credits to be chosen from the following set: CSC 222, CSC 312, CSC 415, CSC 425, CSC 426, CSC 432

**Free Elective**

**6 cr.**

**Major Requirements (for the mathematics education concentration)**

**42 cr.**

1. Required courses: 21 credits

MAT 325, MAT 333, MAT 337, MAT 411, MAT 412, MAT 413, MAT 423

2. Six credits to be chosen from the following set:

MAT 305, MAT 312, MAT 335, MAT 339, MAT 400, MAT 418, MAT 421, MAT 430, MAT 431, MAT 460, STA 315.

3. Required courses in education: 15 credits

EDU 313, EDU 343, EDU 352, EDU 432, EDU 462.

**Free Elective**

**6 cr.**

**Bachelor of Science in Mathematics**  
**Pure Mathematics Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

		GER	3 cr.
MAT	211	Discrete Mathematics	3 cr.
MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

		GER	3 cr.
CSC	212	Program Design and Data Abstraction	3 cr.
MAT	224	Calculus VI	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (7 Credits)**

		GER	3 cr.
ARB	211 /	GER	3 cr.
	231		
MAT	220	Introduction to Mathematical Software Packages	1 cr.

**Fall Semester II (15 Credits)**

		GER	3 cr.
CSC	213	Program Design and Data Abstraction II	3 cr.
MAT	325	Elements of Probability	3 cr.
MAT	339	Numerical Analysis	3 cr.
MAT	412	Topology I	3 cr.
REG	212 /	GER	3 cr.
	213		

**Spring Semester II (15 Credits)**

		GER	3 cr.
MAT	333	Complex Variables	3 cr.
MAT	430	Topology II	3 cr.
STA	315	Mathematical Statistics	3 cr.
—	—	Elective (major requirement)	3 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

		Elective (major requirement)	3 cr.
—	—	Elective (major requirement)	3 cr.

**Fall Semester III (15 Credits)**

		Elective (major requirement)	3 cr.
MAT	411	Group Theory	3 cr.
MAT	413	Advanced Calculus	3 cr.
—	—	Elective (major requirement)	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

		Elective (major requirement)	3 cr.
MAT	421	Rings and Fields	3 cr.
MAT	423	Advanced Calculus II	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Bachelor of Science in Mathematics**  
**Computational Mathematics Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

		GER	3 cr.
MAT	211	Discrete Mathematics	3 cr.
MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

		GER	3 cr.
CSC	212	Program Design and Data Abstraction	3 cr.
MAT	224	Calculus VI	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (7 Credits)**

		GER	3 cr.
ARB	211 /	GER	3 cr.
	231		
MAT	220	Introduction to Mathematical Software Packages	1 cr.

**Fall Semester II (15 Credits)**

		GER	3 cr.
CSC	213	Program Design and Data Abstraction II	3 cr.
MAT	412	Topology I	3 cr.
CSC	311	Theory of Computation	3 cr.
MAT	325	Elements of Probability	3 cr.
REG	212 /	GER	3 cr.
	213		

**Spring Semester II (15 Credits)**

		GER	3 cr.
CSC	313	Data Structures in C++	3 cr.
MAT	333	Complex Variables	3 cr.
CSC	325	Analysis of Algorithms	3 cr.
—	—	Elective(major requirement)	3 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

		Elective (major requirement)	3 cr.
—	—	Elective (major requirement)	3 cr.

**Fall Semester III (15 Credits)**

		Elective (major requirement)	3 cr.
MAT	411	Group Theory	3 cr.
MAT	413	Introduction to Real Analysis I	3 cr.
—	—	Elective (major requirement)	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

		Elective (major requirement)	3 cr.
MAT	423	Introduction to Real Analysis II	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Bachelor of Science in Mathematics**  
**Mathematics Education Emphasis - Suggested Program (103 Credits)**

**Fall Semester I (15 Credits)**

—	—	GER	3 cr.
MAT	211	Discrete Mathematics	3 cr.
MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (15 Credits)**

CSC	212	Program Design and Data Abstraction	3 cr.
MAT	224	Calculus VI	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
EDU	313	Psychology of Education: Learning	3 cr.
—	—	GER	3 cr.

**Summer Session I (7 Credits)**

—	—	GER	3 cr.
ARB	211 /	GER	3 cr.
	231		
MAT	220	Introduction to Mathematical Software Packages	1 cr.

**Fall Semester II (15 Credits)**

CSC	213	Program Design and Data Abstraction II	3 cr.
MAT	412	Topology I	3 cr.
EDU	343	Classroom Management	3 cr.
MAT	325	Elements of Probability	3 cr.
REG	212 /	GER	3 cr.
	213		

**Spring Semester II (15 Credits)**

MAT	337	Foundations of Geometry	3 cr.
MAT	333	Complex Variables	3 cr.
EDU	352	Methods of Teaching Mathematics	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

EDU	432	Tests, Measurement and Evaluation in Mathematics	3 cr.
—	—	Elective (major requirement)	3 cr.

**Fall Semester III (15 Credits)**

MAT	411	Group Theory	3 cr.
MAT	413	Introduction to Real Analysis I	3 cr.
EDU	462	Mathematics Teaching Practicum I	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

—	—	Elective (major requirement)	3 cr.
MAT	423	Advanced Calculus II	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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## **Minor in Mathematics (15 credits)**

This minor is intended primarily for students in fields of study that require strong mathematical skills such as Engineering, Computer Science and Physics. Dependent on the choice of courses, the student can, for instance, enhance his understanding in the areas of real and complex analysis, algebra, and/or numerical analysis.

### **Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### **Pool of Courses**

MAT 215; MAT 224; MAT 235; MAT 305; MAT 324; MAT 326 or MAT 325; MAT 333; MAT 335; MAT 339; MAT 411; MAT 412; MAT 418

### **Graduation Requirements and Suggested Schedule**

To satisfy the requirements of a minor in mathematics, a student must pass **five courses** from the pool of courses as follows:

- First semester (2 courses; 6 credits)  
MAT 224; MAT 215 or MAT 235
- Second semester (2 courses; 6 credits)  
Choose two courses from the pool: MAT 325 or MAT 326; MAT 305; MAT 324 or MAT 333; MAT 335; MAT 339
- Third semester (1 course; 3 credits)  
Choose one course from the pool: MAT 411; MAT 412; MAT 418

D is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

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## Undergraduate Courses: Mathematics

**MAT 101 Pre-Calculus (3.0); 3 cr.** Integer exponents, scientific notation, measurements, polynomials equations, factoring, rational equations; complex numbers; quadratic equations and inequalities, roots and radicals, rational exponents; radical equations. *Prerequisite:* Placement or Freshman Standing.

**MAT 105 Principles of Calculus (3.0); 3 cr.** Coordinate systems; lines in the plane, functions and graphs. Limits and continuity. Differentiation. Variation and concavity, maxima and minima, graphing. Exponential and logarithmic functions. Antiderivatives. Definite and indefinite integrals. *Prerequisite:* Placement or Freshman Standing.

**MAT 111 Calculus and Analytic Geometry I (3.0); 3 cr.** Functions and graphs, Rate of change, graphing, limit and continuity. Derivatives; differentiation rules. Applications of derivatives; maximum, minimum, the mean value theorem, L'Hôpital's rule. *Prerequisite:* Placement or Freshman Standing.

**MAT 112 Calculus and Analytic Geometry II (3.0); 3 cr.** Integration; applications of definite integrals; areas, volumes, length, moments. Transcendental functions; Inverse functions and their derivatives, hyperbolic functions and their derivatives, Techniques of integration. *Prerequisite:* MAT 111 or Placement.

**MAT 113 Intensive Calculus (3.0); 3 cr.** The course covers rapidly and thoroughly the main concepts in single variable calculus. It covers the concepts of limits and continuity; differentiation: differentiation rules, chain rule, implicit differentiation, related rates, extreme values of functions, Mean-Value Theorem, curve sketching, L'Hopital's rule; Integration: definite integral, Fundamental Theorem of Calculus, area between curves, volumes of rotation; transcendental functions; techniques of integration: integration by parts, trigonometric integrals and substitutions, integration of rational functions. *Prerequisite:* Placement or Freshman Standing.

**MAT 201 Fundamentals of Mathematics (3.0); 3 cr.** Sets; the real number system; absolute value and its properties; exponents and radicals; polynomials, applied linear equations and inequalities; Cartesian product; coordinate axes; graphs, and functions. *Prerequisite:* Sophomore Standing or Placement.

**MAT 202 Mathematics for Arts (3.0); 3 cr.** Principles of coordinate geometry; symmetry of motion; rigid motions; reflections; rotations; translation; glide reflections; classifying patterns; symmetry of scale and fractals. *Prerequisite:* Sophomore Standing.

**MAT 204 Mathematics for Business and Economics I (3.0); 3 cr.** This course is designed to introduce topics in calculus and matrix analysis with applications to business, management, economics and social science. *Prerequisite:* Sophomore Standing.

**MAT 205 Mathematics for Business and Economics II (3.0); 3 cr.** Sequences; arithmetic and geometric progression. Simple interest; compound interest. Continuous compounding; annuities; amortization and sinking funds. Bonds and stocks. Capital budgeting and depreciation. *Prerequisite:* Sophomore Standing. Accumulation and discounting, simple and compound interest, effective and nominal interest, discount rates, forces of interest and discount, varying interest. Equations of value. Annuities immediate and due. Perpetuities. Amortization schedules and sinking funds. Introduction to bonds. *Prerequisite:* Sophomore Standing.

**MAT 206 Financial Mathematics (3.0); 3 cr.** This course describes the fundamental concepts of financial mathematics and how these values are applied in calculating the present and accumulated values of various streams of cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Also the course introduces financial instruments such as derivatives and the concept of no-arbitrage. *Prerequisite:* Sophomore Standing.

**MAT 211 Discrete Mathematics (3.0); 3 cr.** Arithmetic in different bases; set theory; relations and functions; mathematical reasoning and induction; counting techniques; permutations and combinations; logic; Boolean algebra; and lattice theory. *Prerequisite:* Sophomore Standing.

**MAT 213 Calculus III (3.0); 3 cr.** Improper integrals. Infinite sequences and series, power series. Taylor and Maclaurin series. Polar coordinates: graphing, integration and areas in polar coordinates. Vectors and vector-valued

functions and motion in space. *Prerequisite:* MAT 112 or MAT 113 or Placement.

**MAT 214 Applied Linear Algebra (3.0); 3 cr.** An introduction to basic ideas and techniques of Linear Algebra for sophomore students. The course covers Linear systems Matrices, Determinants, Eigen values and Eigen vectors. Each of these topics is followed by one or more applications. *Prerequisite:* Sophomore Standing.

**MAT 215 Linear Algebra I (3.0); 3 cr.** Linear systems and matrices and their applications; determinants; vector spaces; subspaces, basis and dimension, rank and nullity. Eigenvalues and eigenvectors; linear transformations and their algebraic properties. *Prerequisite:* Sophomore Standing.

**MAT 220 Introduction to Mathematical Software Packages (1.0); 1 cr.** The course introduces commercial software packages, such as Matlab, Maple, Mathematica and Derive, for numerical computations and symbolic manipulations. *Prerequisite:* Sophomore standing.

**MAT 224 Calculus IV (3.0); 3 cr.** Cylinders and quadric surfaces. Functions of several variables: limits, continuity, partial derivatives, Chain Rule, directional derivatives, gradients, tangent planes, differentials, extreme values, and Lagrange multipliers. Multiple integrals: areas and volumes, triple integrals in rectangular, cylindrical and spherical coordinates. Integration in vector fields, Green's Theorem in the plane, Stoke's Theorem, the Divergence Theorem. *Prerequisite:* MAT 213

**MAT 225 Vector Calculus (3.0); 3 cr.** This course introduces vectors in Cartesian and curvilinear coordinate systems, the graphs and gradient of a real valued function, paths are length and vector fields, geometry of maps, double and triple integrals, line and surface integrals, and projective geometry, *Prerequisite:* MAT 213.

**MAT 235 Ordinary Differential Equations (3.0); 3 cr.** First-order ordinary differential equations. Higher-order linear differential equations. Power series solution: ordinary and singular points. Laplace transform, convolution. Systems of linear differential equations. *Prerequisite:* MAT 213.

**MAT 303 Mathematical Logic and Set Theory (3.0); 3 cr.** Axiomatic theory of sets; the axiom of choice; propositional logic;

quantification theory; formal construction of the sets  $\mathbb{N}$ ;  $\mathbb{Z}$ ;  $\mathbb{Q}$ ;  $\mathbb{R}$ ; and  $\mathbb{C}$ . Cardinal numbers and their arithmetic; ordinal numbers and transfinite induction. *Prerequisite:* MAT 211.

**MAT 305 Number Theory (3.0); 3 cr.** Foundations of arithmetic; properties of integers and prime numbers; unique factorization; congruence; Diophantine equations; theorems of Fermat; Euler; and Wilson; quadratic reciprocity. *Prerequisite:* MAT 211.

**MAT 312 Graph Theory 3 cr.** Basic concepts of graph theory, the use of paths and cycles in some applied algorithms such as the traveling salesman problem, the use of trees in computing and computer networks, planarity of graph and its use in coloring problem, the directed graph with applications on the marriage problem, the Latin squares and network flows. *Prerequisite:* MAT 211.

**MAT 315 Linear Algebra II (3.0); 3 cr.** Inner product spaces, orthonormal spaces, orthogonal matrices, change of basis. Eigenvalues, orthogonal diagonalization. Applications. General linear transformations. Inverse of and matrix of a linear transformation, similarity. *Prerequisite:* MAT 215.

**MAT 323 Vector and Tensor Analysis (3.0); 3 cr.** Cartesian and curvilinear coordinate systems. Line integrals; Green's theorem; the divergence theorem; and Stock's theorem. Curl and divergence. Introduction to tensor analysis and its applications. *Prerequisite:* MAT 224.

**MAT 324 Mathematics for Engineering (3.0); 3 cr.** Functions of a complex variable, Cauchy-Riemann equations; integration in the complex plane; series and residues, evaluation of real integrals. *Prerequisite:* MAT 224.

**MAT 325 Elements of Probability (3.0); 3 cr.** Probability of events; axioms of probability; conditioning and independence; random variable and expectations; discrete and continuous distributions; moment generating functions; the Central Limit Theorem. *Corequisite:* MAT 224.

**MAT 326 Probability & Statistics For Engineers (3.0); 3 cr.** Concepts of probability, random variables, mathematical expectation, variance, confidence intervals. Estimation, testing of statistical hypotheses, regression and correlation, analysis of variance. *Corequisite:* MAT 224.

**MAT 333 Complex Variables (3.0); 3 cr.** Analytic functions; derivatives; Cauchy-Reimann equations; complex integration; Cauchy integral theorem; power series; Laurent series; residue theorem; conformal mapping; Cauchy-Christoffel transformation. *Prerequisite:* MAT 224.

**MAT 335 Partial Differential Equations (3.0); 3 cr.** Second order linear partial differential equations – heat, wave and Laplace’s equations; Fourier series; separation of variables; Fourier Integral; Fourier and Laplace transforms; Dirichlet and Neumann problems for different domains; first order equations; characteristic method; systems of equations. *Prerequisite:* MAT 224, MAT 235.

**MAT 336 Numerical Methods for Finance (3.0); 3 cr.** Basics of financial theory; basics of numerical analysis; numerical integration, deterministic and Monte-Carlo methods; finite difference methods for partial differential equations.

**MAT 337 Foundations of Geometry (3.0); 3 cr.** Introduces the axiomatic method, Euclidean and non-Euclidean geometries; historical developments in geometry. This course is primarily designed for students interested in mathematics education. *Prerequisite:* MAT 215, MAT 224.

**MAT 339 Numerical Analysis (3.0); 3 cr.** Error analysis; roots for non-linear equations; polynomial interpolation; approximation of functions by polynomials; numerical differentiation and integration. *Prerequisite:* MAT 224 and a Computer Programming Language.

**MAT 340 Game Theory (3.0); 3 cr.** Introduction to zero-sum games - normal and extensive forms; Minimax theorem; Solution by Graphical and linear programming techniques, dominance; infinite continuous and discrete games; convex-concave games; introduction to non-zero sum games. *Prerequisite:* MAT 211.

**MAT 400 Elementary Differential Geometry (3.0); 3 cr.** The main purpose of this course is the study of curves and surfaces in three-dimensional Euclidean space: Tangent space, vector fields, Gauss map, geodesics, curvature, minimal surfaces, the Gauss-Bonnet Theorem, and an introduction to smooth manifolds. *Prerequisite:* MAT 224.

**MAT 411 Group Theory (3.0); 3 cr.** Groups; permutation groups; finite abelian groups; the Sylow theorems and their applications. *Prerequisite:* Senior standing.

**MAT 412 Topology I (3.0); 3 cr.** This course covers review of set theory and logic, metric spaces, topological spaces, connectedness and compactness. *Prerequisite:* MAT 211 and Senior Standing.

**MAT 413 Introduction to Real Analysis I (3.0); 3 cr.** The topological properties of the real number system; uniform continuity; Weierstrass approximation theorem; Riemann-Stieltjes integral; uniform convergence; improper integrals with a parameter; the Beta and Gamma functions. *Corequisite:* MAT 412 and Senior Standing.

**MAT 418 Numerical Linear Algebra (3.0); 3 cr.** The course presents mathematical algorithms and analysis to solve linear systems of equations and matrix eigenvalue problems. Matrix norms and analysis. Direct and iterative methods: including factorization methods, singular value decomposition, Jacobi and Gauss-Seidel iteration, power methods, QR algorithm. Operation counts, condition numbers and error analysis. *Prerequisite:* MAT 215, MAT 224, and a Programming language.

**MAT 421 Rings and Fields (3.0); 3 cr.** Rings; ideals; quotient rings; Euclidean rings; polynomial rings; field extensions; automorphism of fields; separable and normal extensions; finite fields; Galois theory.. *Prerequisite:* MAT 411 and senior standing.

**MAT 423 Introduction to Real Analysis II (3.0); 3 cr.** Jacobian’s of transformations; functional dependence; transformations of multiple integrals; extremal problems of functions of several variables; integrals over curves and surfaces; differential forms; independence of path; exact differential forms. *Prerequisite:* MAT 413.

**MAT 430 Topology II (3.0); 3 cr.** This course is a continuation of Topology I, it introduces countability and separation axioms, completely regular spaces, Complete metric spaces, the fundamental groups and covering spaces. *Prerequisite:* MAT 412.

**MAT 431 Vector Spaces and Modules (3.0); 3 cr.** Vector spaces and modules; homomorphisms; groups, rings, and modules of matrices; exact sequences; direct sum

decompositions; dual spaces; canonical forms; multilinear algebra. *Prerequisite:* MAT 411.

**MAT 450 Introduction to General Topology (3.0); 3 cr.** Topological spaces; metric spaces; compactness and connectedness; continuity; product and quotient spaces; function spaces; separation and countability axioms; normal and

completely regular spaces. *Prerequisite:* Senior Standing.

**MAT 460 Selected Topics in Mathematics (3.0); 3 cr.** Students study selected contemporary topics in Mathematics. *Prerequisite:* Specified when Offered.

## **Our Graduate Program**

The department of mathematics and statistics offers a Master of Science degree in Mathematics with courses both pure mathematics and applied mathematics. The purpose of the MS program is to prepare students for continued advanced study of mathematics, college teaching, or certain jobs requiring an in- depth understanding of mathematics. The program offers the student a choice to pursue either a course work option or a thesis option.

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### **The Degree of Master of Science in Mathematics**

#### **Admission Requirements**

In addition to the university graduate admission requirements, candidates are expected to have a sufficient background in mathematics. Those who do not meet these requirements may be given provisional admission pending satisfactory completion of a set of undergraduate courses. The credits earned for these courses will not be counted towards the 33 credits required for the degree of Master of Science in Mathematics.

#### **Graduation Requirements**

To satisfy the requirements for the degree of Master of Science in Mathematics, the student must complete a total of 33 credits with an overall average of at least 3.0/4.0.

### **Degree Requirements**

**(33 credits)**

#### **Core courses**

##### **Course work and Thesis option**

MAT 621, MAT 623, MAT 625, MAT 634, MAT 641, MAT 664

**18 cr.**

#### **Elective Courses**

**Course work option: 15 credits to be chosen from the following pool**

**Thesis option: 9 credits to be chosen from the following pool in addition to the two thesis courses MAT 691 and MAT 692.**

MAT 632, MAT 635, MAT 636, MAT 642, MAT 645, MAT 655, MAT 657, MAT 659, MAT 667, MAT 668, MAT 671, MAT 673, MAT 683

#### **Comprehensive written examination for course-work option**

**Pass three Comprehensive Written Examinations (CWE1, CWE2 and CWE3) after having completed at least 18 credits with an overall GPA of 3.0/4.0**

CWE1 is an exam in MAT 621.

CWE2 is an exam in MAT 623.

CWE3 is an exam either in a one-year-sequence of two graduate courses (the sequence is to be freely chosen by the student), or in the complementary courses of MAT 621 and MAT 623, which are MAT 632 and MAT 634. Those who fail any CWE are allowed to retake it, but no later than the end of the following academic year.

#### **Thesis courses for thesis option**

**Two “thesis courses” MAT 691 and MAT 692**

**6 cr.**

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## **Regulations concerning the “thesis courses” of the Master of Science in Mathematics**

### **Master Thesis**

Students may register for the thesis courses MAT 691 & MAT 692 upon the completion of at least 18 credits with an overall average of at least 3.3/4.0 and after receiving the approval of both the department chairperson and the thesis advisor.

### **Duration of Work**

The work for the thesis is expected to be completed within a period of two semesters.

### **Jury for the Oral Defense**

After receiving a written note of completion along with five bound copies of the master thesis from the master thesis advisor, the department chairperson shall appoint the jury for the oral defense and its chairperson, and shall distribute to each member one copy of the master thesis. The jury shall consist of the master thesis advisor and three full-time faculty members one of whom is from outside the department.

### **Schedule for the Oral Defense**

The oral defense for the master thesis shall be scheduled by the jury chairperson one month from the date of the appointment of the jury at the latest.

### **Evaluation and Grade**

Bound master thesis copies are required for the evaluation. The jury shall evaluate the work for the master thesis and assign the appropriate grade by a majority vote. In case of a tie, the committee chairperson shall have the casting vote.

### **Final Copy of the Master Thesis**

The student shall submit seven bound copies of the approved final copy of the master thesis to the jury chairperson who, in turn, shall distribute them to the Library, Faculty, Department, and to each member of the jury.

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## Graduate Courses: Mathematics

**MAT 600 Graph Theory (3.0); 3 cr.** Graphs; subgraphs; connectivity; trees; Hamilton graphs; matchings; coverings; coloring; Ramsey graph theory; connectedness in digraphs. Euler and Hamilton graphs; networks. *Prerequisite:* Graduate Standing.

**MAT 601 Optimization Theory (3.0); 3 cr.** The course deals with the mathematical theory and algorithms for optimization. Convex functions and sets; Unconstrained optimization: steepest descent, Newton, gradient methods, search methods, least squares; Constrained optimization theory: Kuhn-Tucker conditions; linear programming, quadratic programming, nonlinear programming, penalty methods. Some applications are also considered. *Prerequisite:* Graduate Standing.

**MAT 621 Algebra I (3.0); 3 cr.** Free Abelian groups; finitely generated Abelian groups; the action of a group on a set; the Sylow theorems; nilpotent and solvable groups. Rings and localization; polynomial rings and factorization. *Prerequisite:* Graduate Standing.

**MAT 623 Real Analysis I (3.0); 3 cr.** Measure spaces; Borel and Lebesgue measure; abstract integration and differentiation; integration on product spaces; functions of bounded variations;  $L$  spaces. *Prerequisite:* Graduate Standing.

**MAT 625 General Topology (3.0); 3 cr.** Topological spaces; the metric topology; connected spaces; compact spaces; Homotopy of paths; the Fundamental groups; Cospaces; essential and inessential maps. *Prerequisite:* Graduate Standing.

**MAT 632 Algebra II (3.0); 3 cr.** Basic properties of rings. Ideals and quotient rings. Ring Homeomorphisms. Polynomial rings. Left and right modules. Free modules. Direct sums of modules. Finitely generated modules over a p.i.d. Artinian and Noetherian modules. Completely reducible modules. Tensor product of modules. Bimodules. Algebras and coalgebras. Projective and injective modules. Primitive and semi-primitive rings. The radical of a ring. *Prerequisite:* MAT 621.

**MAT 634 Complex Analysis (3.0); 3 cr.** Power series representation; conformal mappings; zeros of holomorphic functions; analytic continuation; normal families; HP spaces. *Prerequisite:* MAT 623.

**MAT 635 Harmonic Analysis & Potential Theory (3.0); 3 cr.** Harmonic and subharmonic functions. Convexity. Elements of potential Theory. Thinness. Harmonic measure. Green's Functions. Capacity. Applications to spaces and Banach algebras. *Prerequisite:* MAT 623.

**MAT 636 Algebraic Topology (3.0); 3 cr.** Singular homology theory; attaching spaces with maps; the Eilenberg - Steenrod axioms; products; manifolds and Poincaré duality; fixed point theory. *Prerequisite:* MAT 625.

**MAT 641 Theory of Ordinary Differential Equations (3.0); 3 cr.** Existence and Uniqueness Theorems. Linear systems with constant coefficients. Matrix analysis and Matrix Exponential. Stability. Periodic coefficients. Two-Dimensional Autonomous linear and nonlinear systems. Phase plane analysis. Liapunov stability. Limit cycles and the Poincaré-Bendixson Theorem. Stability of Linear non-autonomous systems. *Prerequisite:* Graduate Standing.

**MAT 642 Theory of Partial Differential Equations (3.0); 3 cr.** The single First-Order equation. The Cauchy problem. Systems of First-Order equations. Characteristics. The Cauchy-Kowalevski Existence and Uniqueness Theorem. Elliptic equations. The Laplace equation. The Lagrange-Green identity. The Maximum principle. Harmonic and subharmonic functions. Green's function and the Poisson formula. Hyperbolic equations in higher dimensions. The wave equation. The method of Spherical means. Hadamard's method of descent. Hyperbolic equations with constant coefficients. Solution by the  $n$ -dimensional Fourier Transform. Parabolic equations. The Heat equation. *Prerequisite:* Graduate Standing.

**MAT 645 Theory of Integral Equations (3.0); 3 cr.** The course covers an introduction to the theory of linear and nonlinear integral equations. Solutions of Volterra and the Fredholm equations of the first and second kind. Fredholm's alternative theorem. Orthonormal eigensystems of a symmetric Fredholm operator. The Hilbert-Schmidt expansion theorem and its applications to Sturm-Liouville problems. *Prerequisite:* MAT 641.

**MAT 655 Field Theory (3.0); 3 cr.** Basics on fields. Splitting fields. Extension fields. The Galois group. Galois criterion for solvability by

radicals. Finite fields. Ordered fields. Algebraic closure of fields. Separability and normality of extension fields. Kummer extension fields. Algebras over a field. Derivations of subalgebras. *Prerequisites:* MAT 621, MAT 632

**MAT 657 Commutative Algebra (3.0); 3 cr.** Commutative Rings and their ideals. Modules over commutative rings. Localization of rings and modules. Integral extensions. Valuations and valuation rings. Completion. Dimension theory. Basic elements of algebraic geometry. *Prerequisites:* MAT 621, MAT 632, MAT 655.

**MAT 659 Category Theory & Homological Algebra (3.0); 3 cr.** General categories. Functors. Functorial morphisms. Equivalence of categories. Products and coproducts. The Hom functors. Universal objects. Inductive and projective objects. Additive and Abelian categories. Complexes and homology. Resolutions and derived functors. Ext and Tor functors. Cohomology of algebras. Homological dimension. *Prerequisite:* MAT 632.

**MAT 661 Computational Mathematics I (3.0); 3 cr.** Matrix norm; residual vector; condition number; perturbation analysis; operations count; sparse matrices; LU-decomposition diagonally dominant matrices; iterative techniques for linear systems; and eigenvalues and eigenvectors. *Prerequisite:* Graduate Standing.

**MAT 662 Computational Mathematics II (3.0); 3 cr.** QR-decomposition; over determined linear systems; least-square solutions; the generalized inverse  $A^+$ ; positive-definite matrices; Cholesky's decomposition; the singular value decomposition; Given's and Householder's algorithms. *Prerequisite:* MAT 661.

**MAT 663 Information Theory (3.0); 3 cr.** Measures of information: entropy, relative entropy and mutual information. Basic inequalities: Jensen, log-sum, Fano, data processing theorem. Typicality and the asymptotic equipartition property. Entropy rate of stationary sources. Data compression of discrete memoryless sources: Kraft inequality, Huffman code, Shannon-Fano-Elias code. Discrete memoryless channels: definition of capacity and its computation. Communication over discrete channels: the channel coding theorem and the physical significance of capacity. The joint source-channel coding theorem. Measures of information for sources

with continuous range. Discrete-time Gaussian channels and their capacity. *Prerequisite:* Graduate Standing.

**MAT 664 Functional Analysis (3.0); 3 cr.** Spaces and operators: Metric spaces, normed and Banach spaces, linear operators, inner product, Hilbert spaces. Fundamental theorems: Hahn-Banach theorem, uniform boundedness theorem, open mapping theorem, closed graph theorem. Spectral theory: basic concepts, operators on normed spaces, compact operators, self-adjoint operators. *Prerequisite:* MAT 623.

**MAT 667 Numerical Analysis I (3.0); 3 cr.** Linear Systems. LR and QR Decomposition. Basic Functional Analysis. Matrix Norms. Completeness. The Banach Fixed Point Theorem. Iterative Methods for Linear Systems. Ill-conditioned Linear Systems. *Prerequisite:* Graduate Standing.

**MAT 668 Numerical Analysis II (3.0); 3 cr.** Iterative Methods for Nonlinear Systems. Least Squares Problems. Matrix Eigenvalue Problems. The QR-Algorithm. Interpolation. Numerical Integration. Convergence of Quadrature Formulas. *Prerequisite:* MAT 667.

**MAT 669 Numerical Analysis III (3.0); 3 cr.** Initial Value Problems. Picard-Lindelöf Theorem. Single and Multi-Step Methods. Boundary Value Problems. Finite Difference Methods. The Finite-Element Method. Integral Equations. Stability. *Prerequisites:* MAT 668.

**MAT 671 Differential Geometry (3.0); 3 cr.** Smooth manifolds, smooth maps, the inverse function theorem, vector fields on manifold, vector bundles, cotangent bundle, submersions, submanifolds, Lie groups, tensor fields on manifold, differential forms, and integration on manifolds. *Prerequisite:* Graduate Standing.

**MAT 673 Differential Topology (3.0); 3 cr.** Manifolds and maps, manifolds with boundary, transversality, vectors bundles and tubular neighborhoods, degrees of maps, intersection numbers and the Euler characteristics, Lefschetz fixed-point theorem, Borsuk-Ulam theorem, and Morse theory. *Prerequisites:* MAT 625, MAT 671.

**MAT 681 Master Project (3.0); 3 cr.** A substantial project in a topic in mathematics under the supervision and the approval of a faculty member.

**MAT 683 Directed Reading (3.0); 3 cr.** A topic in mathematics of interest will be studied under the supervision of a faculty member – evaluated as a tutorial course.

**MAT 691 Master Thesis in Mathematics I; 3 cr.** The research for the master thesis must show

the student's proficiency in approved topics in mathematics. *Prerequisite:* Advisor Consent.

**MAT 692 Master Thesis in Mathematics II; 3 cr.** Continuation of MAT 691. *Prerequisites:* MAT 691 and Advisor Consent.

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### Graduate Courses: Financial Mathematics

**FMA 640 Advanced Financial Mathematics (3.0); 3 cr.** One-period models, multi period models, risk-neutral pricing of derivative securities, Brownian motion, Ito's formula and SDE's, asset models, arbitrage and hedging, interest rate models, actuarial applications. *Prerequisite:* STA 670.

**FMA 645 Computational Financial Mathematics (3.0); 3 cr.** Symbolic and numerical solutions of ODE's, solving Black-Scholes PDE symbolically, generalized Black-Scholes formulas, implied volatility, obstacle problems, steady state obstacle problems, fast numerical solutions of obstacle problems for Dupire PDE, Optimal portfolio rules, optimal portfolio hedging under general asset price dynamics. *Prerequisite:* FMA 640.

**FMA 650 Stochastic Calculus (3.0); 3 cr.** Review of probability and random variables, conditional expectation, martingales in discrete time, stopping times, Optional stopping time theorem, stochastic processes in continuous time, Brownian motion, Ito stochastic integral, stochastic differential and Ito formula, stochastic differential equations (SDE's). *Prerequisite:* STA 670.

**FMA 665 Risk Theory (3.0); 3 cr.** Convolutions, risk models, martingales, point processes, fixed-time ruin probability, finite- and infinite-time ruin probabilities, discrete risk models. *Prerequisite:* STA 670.

**FMA 670 Optimization Methods (3.0); 3 cr.** General optimization problems, compactness, convexity, convex hulls, probability distribution spaces, moment spaces, linear programs, integral optimization, moment problems by dual method, loaded premium problems, ruin problems. *Prerequisite:* STA 670

**FMA 675 Discrete-Time Financial Modelling (3.0); 3 cr.** This course introduces the most

common financial contracts that are traded on exchanges between the financial institutions and their clients. It discusses Arbitrage pricing within the framework on one period model; Valuation and hedging of European and American options; The Cox-Ross-Rubinstein Model; Arbitrage free discrete time models of spot and futures markets; Fundamental Theorems of Asset Pricing for a finite model of security market. *Prerequisite:* STA 670, FMA 640.

**FMA 677 Continuous-Time Financial Modelling (3.0); 3 cr.** This course discusses the continuous time modelling under deterministic interest rates. Black-Scholes model and its variants; Continuously rebalanced portfolio and the existence and uniqueness of a martingale probability measure; Study of volatility: historical, implied, risk-neutral marginal distributions and local volatility models; Call and put options; rational exercise time; early exercise premium and optimal exercise boundaries; Cross currency derivatives; currency forward contracts and options and options on a foreign stock. *Prerequisite:* STA 670, FMA 640.

**FMA 683 Directed Reading (3.0); 3 cr.** A topic of interest in financial mathematics will be studied under the supervision of a faculty member – Evaluated as tutorial.

**FMA 685 Selected Topics in Financial Mathematics (3.0); 3 cr.** The content of this course is to be arranged by the faculty member in charge of giving it. *Prerequisite:* FMA 640.

**FMA 691 Master Thesis I (3.0); 3 cr.:** The research for the master thesis must demonstrate the student's proficiency in financial mathematics. *Prerequisite:* Advisor consent.

**FMA 692 Master Thesis II (3.0); 3 cr.** A continuation of FMA 691. *Prerequisite:* MAT 691.

## **DEPARTMENT OF PHYSICS & ASTRONOMY**

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**Chairperson:** *Dr. Bassem Sabra*

**Secretary:** *Mrs. Yolla Chalhoub-Abboud*

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### **Associate Professors**

*El-Hage, Youssef Kamal*, Ph.D., 1990, *Physics*, Technische Universität München, Germany; M.A., 1985, *Philosophy*, Lebanese University, Lebanon

*Hajjar, Roger*, Ph.D., 1997, *Physics and Astronomy*, Université de Montréal, Canada

### **Assistant Professors**

*Gebzan, Marwan*, Doctorate, 2007, *Astrophysics*, Université de Montpellier, France

*Sabra, Bassem*, Ph.D., 2000, *Physics*, Ohio University, USA

### **Academic Assistants**

*Zoghbi, Catherine*, DEA, 2003, *Physics*, Lebanese University, Lebanon

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## **Programs of Study**

The Department of Physics & Astronomy offers the following degree programs:

- BS in Physics (95 Credits)
- MS in Astrophysics (36 Credits)

The Department offers the following minor for the first time:

- Minor in Physics (16 Credits)

The Department of Physics & Astronomy also offers a variety of undergraduate service courses in astronomy and physics. These courses are meant to serve academic programs offered by other Faculties of the University.

## **Our Undergraduate Program**

### **The Degree of Bachelor of Science in Physics**

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Physics is the discovery of the inner fundamental unity of the natural world, from the whole universe to the insides of the smallest nucleus. It is the science that studies the basic laws of nature that produce the wealth of phenomena observed in everyday life.

Holders of a BS in physics can pursue a career in teaching or follow graduate studies. Other options include, among others, working in hospitals as medical physicists or in industry for running quality control labs or devising numerical simulations.

### **Admission Requirements**

For admission requirements to the degree of BS in physics, refer to the section entitled “Undergraduate Admission” of this catalog.

### **Graduation Requirements**

To receive the degree of BS in physics, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 95 credits with an overall

grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying of graduation.

## Degree Requirements (95 credits)

### General Education Requirements 30 cr.

#### A - Communication Skills in English and Arabic 9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B – Philosophy and Religion 6 cr.

- One course from the subcategory *Religion* (3cr.)

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences 6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP

215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship 6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and Technology 3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science* (3 cr.)

CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

#### OR

- One course from the subcategory *Natural Sciences* (3 cr.)

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GEO 203,

HEA 201, NTR 201, PHS 207

*Students majoring in Physics are not allowed to count PHS courses within the pool of required GER courses.*

### Core Requirements 26 cr.

MAT 213, MAT 215, MAT 224, MAT 235, PHS 206, PHS 212, PHS 213, PHS 275, PHS 276, EEN 205.

### Major Requirements 33 cr.

PHS301, PHS 303, PHS 351 (or MAT 335), PHS 373, PHS 374, PHS 415, PHS 417, PHS 435, PHS 497, AST 210

Two courses of the following (headings are suggestions):

*Astrophysics courses:* AST 320, 321, 370 (Students opting for two of these courses are encouraged to take the third as a free elective)

*Hydrodynamics courses:* MEN 320, MEN 321 (Students opting for these two course are encouraged to take MEN 550 (Computational Methods in Thermal and

Fluid Mechanics) as a free elective).

*Semiconductors courses:* EEN 206, PHS 405 (Students opting for these two courses will be encouraged to take EEN 416 (Semiconductor devices) as a free elective)

*Nuclear & Particle Physics courses:* PHS 315, PHS 403

*Other:* PHS 460

**Free Electives**

**6 cr.**

**Bachelor of Science in Physics  
Suggested Program (95 Credits)**

**Fall Semester I (16 Credits)**

MAT	213	Calculus III	3 cr.
MAT	215	Linear Algebra I	3 cr.
PHS	206	Heat, Vibrations and Waves	3 cr.
PHS	275	Experimental Physics I	1 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (16 Credits)**

PHS	212	Electricity and Magnetism	3 cr.
PHS	213	Modern Physics	3 cr.
PHS	276	Experimental Physics II	1 cr.
MAT	224	Calculus IV	3 cr.
MAT	235	Ordinary Differential Equations	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.

**Fall Semester II (16 Credits)**

PHS	303	Analytical Mechanics	3 cr.
PHS	373	Experimental Physics III	1 cr.
PHS	351	Mathematical Methods for Physics I (or MAT 335)	3 cr.
AST	210	Introduction to Astronomy & Astrophysics	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester II (17 Credits)**

EEN	205	Electric Circuits	3 cr.
PHS	374	Experimental Physics IV	1 cr.
PHS	435	Quantum Mechanics	4 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

PHS	301	Optics	3 cr.
PHS	415	Thermal and Statistical Physics	3 cr.
PHS	—	Physics Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

PHS	417	Electromagnetic Theory	3 cr.
PHS	497	Senior Project	3 cr.
PHS	—	Physics Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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## Minor in Physics (16 credits)

The Minor in Physics aims at giving students who are literate in mathematics a basic background enabling them to approach any applied or advanced topic in physics. It makes them eligible for graduate work in physics without the need for remedial courses or a disadvantage vis-à-vis physics majors. More specifically, the Minor in Physics will:

- Prepare students to work on advanced topics in Physics.
- Give a math major an edge when pursuing a teaching career in sciences and mathematics.
- Give the engineer more problem-solving techniques, crucial for his/her career .

The Minor proposed is aimed at scientifically minded students who already possess the necessary mathematical skills to tackle advanced physics courses. It will be most attractive for engineering and math students.

### Admission Requirements

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### Pool of Courses

PHS 213; PHS 303; PHS 415; PHS 417\*; PHS 435 (4 cr.)

### Graduation Requirements and Suggested Schedule

To satisfy the graduation requirements of a minor in Physics, a student must pass **all five courses** from the pool of courses above. Students are not exempted from the prerequisites of these courses. The level of mathematics required in PHS 303 and above is MAT 335. A suggested schedule is as follows:

- First semester (1 course; 3 credits)  
PHS 213♦
- Second semester (2 courses; 6 credits )  
PHS 303; PHS 417
- Third semester (2 courses; 7 credits)  
PHS 415; PHS 435 (4 cr.)

D is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

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\* EEN 330 taken at the departments of Electrical Engineering and Computer & Communication Engineering is equivalent to PHS 417. Students from these majors may ask to replace PHS 417 with EEN 330.

♦ This course is part of the undergraduate majors in Electrical Engineering, Computer and Communication Engineering, and Mathematics.

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## Undergraduate Courses: Physics

**PHS 101 General Physics I (3.0); 3 cr.** A basic course covering: vectors, Newton's laws of motion, particle kinematics and dynamics, work, energy, linear and angular momentum, rotational motion, rigid body, equilibrium and Statistics. *Prerequisite:* Freshman Standing.

**PHS 102 General Physics II (3.0); 3 cr.** A basic course covering electric fields and electrical potential; DC-circuits; magnetic fields; capacitance and inductance; AC-circuits and electromagnetic waves. *Prerequisite:* Freshman Standing.

**PHS 171 General Physics I Laboratory (0.3); 1 cr.** Laboratory course illustrating the principles and experiments taught in General Physics I. *Corequisite:* PHS 101.

**PHS 172 General Physics II Laboratory (0.3); 1 cr.** Laboratory course illustrating the principles and experiments taught in General Physics II. *Corequisite:* PHS 102.

**PHS 203 General Physics III (3.0); 3 cr.** A course covering waves and corpuscles, sound, acoustics, reflection and refraction of light; interference and diffraction; polarization, spectrometry, and laser optics. *Prerequisite:* Sophomore Standing.

**PHS 204 Applied Mechanics (4.0); 4 cr.** Newton's laws and applications. Conservation of energy and linear momentum, collision. Rotational kinematics and dynamics, angular momentum and its conservation. Equilibrium. Oscillations. Universal gravitation. *Prerequisite:* Sophomore Standing.

**PHS 205 Thermodynamics and Waves (4.0); 4 cr.** An introduction to thermodynamics and the physics of waves: it covers concepts of temperature and heat, the laws of thermodynamics, heat engine and refrigerators, entropy; the kinetic theory of gases. Added to these, it covers the basic concepts of waves: harmonic waves, energy, superposition principle, reflection of waves, standing waves, with applications to mechanical waves (sound, surface waves...) and light. *Prerequisite:* Sophomore standing.

**PHS 206 Heat, Vibration and Waves (3.0); 3cr.** Introduction to thermodynamics: Kinetic Theory, Zeroth, First and Second Law of

Thermodynamics. Vibrations: Simple Harmonic Motion, Damped and Forced Oscillators, Coupled Oscillators and Normal modes, Damped and Forces Coupled Oscillators. Waves: Mechanical waves as a chain of coupled oscillators, harmonic waves, Fourier combination of waves. *Prerequisite:* Sophomore standing.

**PHS 207 Development of Science and Technology (3.0); 3 cr.** The principal periods in the development of the scientific thought. The contribution of individuals like Aristotle, Ptolemy, Copernicus, Galileo, Newton, Darwin, Mendel, and Einstein. *Prerequisite:* Sophomore Standing.

**PHS 208 Physics for Life Sciences I (3.0); 3 cr.** This course covers mechanics, relativity, hydrostatics, hydrodynamics, thermodynamics, and the physics of waves, with special emphasis on biological applications, *Prerequisite:* Sophomore Standing.

**PHS 209 Physics for Life Sciences II (3.0); 3 cr.** This course covers electricity and magnetism, modern physics: early quantum theory with emphasis on atomic and molecular applications, spectroscopy, nuclear physics, statistical mechanics, with special emphasis on biological and medical applications. *Prerequisite:* Sophomore Standing.

**PHS 212 Electricity and Magnetism (3.0); 3 cr.** Electrostatics: field, potential and dielectric. DC circuits and laws. Magnetic field, Ampere's and Faraday's laws, induction. AC circuits. Qualitative discussion of Maxwell's equations. *Corequisite:* MAT 224.

**PHS 213 Modern Physics (3.0); 3 cr.** Special Relativity. Quantization of electricity, charge, and light, blackbody radiation. particle-wave duality. Bohr model of Hydrogen. Schrodinger wave equation and application to one dimensional problems. Three-dimensional solution of the Hydrogen atom. Angular momentum and spin. *Corequisite:* MAT 235.

**PHS 271 Electricity and Magnetism Laboratory (0.2); 1 cr.** Selected experiments in electricity and magnetism. Emphasis is placed on statistical treatment of data and error estimation. *Corequisite:* PHS 212.

**PHS 272 Modern Physics Laboratory (0.2); 1cr.** Selected experiments in modern physics.

Emphasis is placed on statistical treatment of data and error estimation. *Corequisite*: PHS 213.

**PHS 275 Experimental Physics I (0.3); 1 cr.**

The first of a sequence of two sophomore physics labs. It includes selected experiments in classical mechanics, electricity and magnetism, and modern physics such as collisions, vibrations and waves, electric and magnetic field measurements, emission line spectroscopy, etc. Students learn about error analysis, software packages for data visualization and data analysis such as Excel, Matlab, and lab report writing. *Corequisite*: PHS 206.

**PHS 276 Experimental Physics II (0.3); 1 cr.**

A continuation of PHS 275 with additional experiments and topics. *Prerequisite*: PHS 275

**PHS 278 Physics for Life Sciences I Lab (0.2); 1 cr.**

Lab to accompany PHS 208. Experiments are performed in Mechanics, Hydrodynamics, Heat transfer and Waves. *Corequisite*: PHS 208.

**PHY 279 Physics for Life Sciences II Lab (0.2) 1 cr.**

Lab to accompany PHS 209. Experiments in Electricity and Magnetism: Hall Effect, Circuits, Helmholtz Coil, and Modern Physics: Blackbody Radiation, Spectroscopy... *Corequisite*: PHS 209.

**PHS 301 Optics (3.0); 3 cr.** Topics covered: wave optics and properties of light including interference, Fraunhofer and Fresnel diffraction, polarization and double refraction. Introduction to lasers and holography. *Prerequisite*: PHS 206, PHS 212.

**PHS 303 Analytical Mechanics (3.0); 3 cr.**

Particle kinematics and dynamics, central force problem, motion in non-inertial frames of reference, kinematics and dynamics of rigid bodies, Lagrangian mechanics, small oscillations, and relativistic momentum and energy. *Corequisite*: PHS 351 or MAT 335.

**PHS 315 Nuclear Physics (3.0); 3 cr.**

General nuclear properties, radioactivity, nucleon-nucleon interaction, scattering, nuclear models, and nuclear reactions. *Prerequisite*: PHS 213.

**PHS 346 Mathematical Methods for Physics I (3.1); 3 cr.**

The first of two courses covering mathematical tools relevant to the solution of physical problems. Topics include diagonalization of matrices, transformation of coordinates, Jacobian, functions of complex variables, gradient, curl, divergence, and elements of vector analysis. Both courses

include a weekly lab session on a mathematical software package. *Prerequisites*: MAT 215, MAT 224.

**PHS 350 Mathematical Methods for Physics II (3.1); 3 cr.**

Second of the series of two courses in mathematical tools of physics. Topics include partial differential equations, Fourier series and transforms, special functions, orthogonal functions, Greene's functions, integral equations. *Prerequisites*: MAT 215, MAT 224, MAT 235, PHS 346.

**PHS 351 Mathematical Methods for Physics (3.0); 3 cr.**

Topics include partial differential equations, Fourier series and transforms, wavelets, special functions, orthogonal functions, Greene's function, integral equations. *Prerequisites*: MAT 215, MAT 224, MAT 235.

**PHS 373 Experimental Physics III (0.3); 1 cr.**

The first of a sequence of two junior physics labs with more advanced experiments that may include forced oscillations and resonance, the Hall effect, diffraction, Zeeman effect, etc. Emphasis will continue on data and error analysis and report writing. *Prerequisite*: Junior Standing

**PHS 374 Experimental Physics IV (0.3); 1 cr.**

The second of a sequence of two junior physics labs with more advanced experiments that will include long experiments on measurements of fundamental constants and other advanced topics. This lab will serve as a preparation for the Senior Project. *Prerequisite*: PHS 373.

**PHS 375 Experimental Physics (0.6); 3 cr.**

Experiments in atomic and molecular physics, optics, and mechanical vibrations. Students have to perform open-ended experiments, and use computers for data analysis. *Prerequisites*: PHS 271 and PHS 272.

**PHS 403 Elementary Particle Physics (3.0); 3 cr.**

Survey of elementary particles: leptons, hadrons, and quarks. Invariance principles and conservation laws. Detectors and accelerators. Phenomenological study of interactions. *Prerequisites*: PHS 435.

**PHS 405 Solid State Physics (3.0); 3 cr.**

Topics include crystal structure, the band theory, the free-electron and Fermi-Dirac theory, and the physical properties of semiconductors and metals. *Prerequisites*: PHS 415

**PHS 415 Thermal and Statistical Physics (3.0); 3 cr.**

Topics include: entropy and

probability, energy and temperature, the three laws of thermodynamics, Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics, equation of state for simple systems, and elementary theory of phase transitions. *Prerequisites:* Senior Standing.

**PHS 417 Electromagnetic Theory (3.0); 3 cr.** Maxwell equations with applications to physical problems. Topics include: electrostatics, magnetostatics, Laplace and Poisson equations, dielectric and magnetic materials, electromagnetic waves and radiation, and special theory of relativity. *Prerequisites:* PHS 212, PHS 351 or MAT 335.

**PHS 435 Quantum Mechanics (4.0) 4 cr.** “Modern” quantum Mechanics. Hilbert space, operators, eigenvalues and eigenfunctions.

Matrix formulation of quantum mechanics. Time-independent and time dependent perturbation theories. Scattering theory and interaction of radiation with matter. *Prerequisites:* PHS 213, PHS 303.

**PHS 460 Selected Topics in Physics (3.0); 3 cr.** Advanced topics selected from the different disciplines of physics. *Prerequisite:* Senior Standing.

**PHS 497 Senior Project. 3 cr.** A selected project in one of the different fields of physics. The project is expected to be an introduction to research through the involvement in an actual project carried by faculty members. *Prerequisites:* Senior standing and consent of the instructor.

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## Undergraduate Courses Astronomy

**AST 101 – Introduction to the Solar System and Exoplanets (3.0); 3cr.** The course gives an up-to-date description of the solar system: the eight planets, Kuiper Belt Objects, asteroids and comets. The latest discoveries in planetary science will be seamlessly woven into the course. The course also covers the search for exoplanets and what they tell us about planetary systems in the Universe. It also discusses the topic of life in the Universe.

**AST 201 Discovering Astronomy (3.0); 3 cr.** A non-calculus based introduction to astronomy. It explores the wonders of the universe using observations from space and from the ground. It covers the solar system, stars and their evolution (black holes, white dwarfs...), galaxies and cosmology (the Big-Bang...). The course will include an observing night to discover the night sky, readings, and some elementary observations. Not open to physics students

**AST 210 Introduction to Astronomy and Astrophysics (3.0); 3 cr.** This introductory astrophysics course is designed for students majoring in physics. The course will include an introduction to the night sky and coordinate systems, magnitudes, and telescope types. The course will also introduce students to stellar

astrophysics, the solar system, and galaxies.  
*Corequisite:* PHS 213

**AST 320 Astrophysics I: Stars (3.0); 3 cr.** This course will specifically concentrate on stellar astrophysics. The course will discuss stellar structure and nuclear astrophysics, stellar atmospheres and radiative transfer, star formation processes, and evolution of stars beyond the main sequence (pulsations, AGBs, white dwarfs, neutron stars, supernovae).  
*Prerequisite:* AST 210

**AST 321 Astrophysics II: Galaxies (3.0); 3 cr.** This course deals with the nature and properties of galaxies and provides an introduction to cosmology. The course will cover the Milky Way, and properties of spiral, elliptical, and irregular galaxies. The course will also cover the basic elements of cosmology and the birth and evolution of the Universe as a whole.  
*Prerequisite:* AST 210.

**AST 370 Observational Astronomy (0.9); 3 cr.** An introduction to the major observational techniques used in astrophysics and their corresponding instrumentation, based on practical observational projects. This course will also include a discussion of telescope optics.  
*Prerequisite:* AST 210.

## Our Graduate Program

Our graduate program in Astrophysics is managed jointly with Universite Saint-Joseph de Beyrouth (USJ). The program follows only the Thesis Option and is designed to prepare students for doctoral studies in Astrophysics, allow students to acquire, through research, the competencies requested by the job market, and to graduate competent physicists who are capable of integrating astronomy and astrophysics within the physics curricula in schools.

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### The Degree of Master of Science in Astrophysics

#### Admission Requirements

Admission rests on the study of the candidate's file followed by an interview with a joint committee from both Faculties of Sciences composed of the two Deans, the two concerned department chairs, the Masters Program supervisors, and instructors delegated by the two Faculties. To be eligible for admission, students shall satisfy the following criteria:

1. They shall have a minimum GPA of 2.7/4.0 according to the American grading system applied at NDU, or a minimum weighted mean point average of 60/100 according to the system applied at USJ.
2. They shall be able to follow lectures in both English and French.

#### Graduation Requirements

To satisfy the requirements for the degree of MS in Astrophysics, the student must complete a total of 36 credits with an overall average of at least 3.0/4.0, with a minimum grade of 79/100 on his/her Master thesis (9 credits). The thesis is based on original research conducted by the student.

#### Degree Requirements (Thesis Option) (36 Credits)

- |  |               |
|--|---------------|
| <b>1- Complete the following nine required courses</b>                           | <b>21 cr.</b> |
| AST 601, AST 602, AST 603, AST 612, AST 613, AST 614, AST 620, AST 631, AST 670. |               |
| <b>2- Complete the following courses</b>   | <b>9 cr.</b>  |
| AST 621, AST 622, AST 623, AST 635   |               |
| <b>3- Complete the MS thesis requirements</b>                                    | <b>6 cr.</b>  |
| AST 691  |               |

#### Master of Science in Astrophysics (Thesis Option) Suggested Program (36 Credits)

##### Fall Semester I (8 Credits)

AST	601	Stellar Astrophysics	3 cr.
AST	602	Radiative Processes	3 cr.
AST	614	Site Evaluation & Atmospheric Optics	2 cr.

##### Spring Semester I(10 credits)

AST	603	Astrophysics of Galaxies	3 cr.
AST	612	Interstellar Medium	2 cr.
AST	613	Active Galaxies	2 cr.
AST	617	Observation Astrophysics	3 cr.

#### Fall Semester II (9 Credits)

AST	620	Variable Phenomena in Astrophysics	2 cr.
AST	6xx	Elective	2 cr.
AST	6xx	Elective	2 cr.
AST	6xx	Elective	2 cr.
AST	631	Seminar	1 cr.

#### Spring Semester II (9 Credits)

AST	635	Selected Topics in Astrophysics	3 cr.
AST	691	Thesis	6 cr.

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### Graduate Courses: Astrophysics

**AST 601 Stellar Astrophysics (3.0); 3 cr.** Stellar parameters and classification; Structure and evolution; Energy production and transport in stellar interiors; compact objects; binary systems.

**AST 602 Radiative Processes (3.0); 3 cr.** Photoionization; line formation and broadening; LTE and non-LTE radiation transfer; Polarization processes; Non-thermal processes (synchrotron, Compton...); Application to different regions and regimes (HII, AGNs, Atmospheres, CS shells...).

**AST 603 Astrophysics of Galaxies (3.0); 3 cr.** Anatomy of the Milky Way: disk, bulge, globular clusters, ISM, rotation curve, spiral structure; Hubble tuning fork, spirals, ellipticals, irregulars; Formation and evolution; Active galaxies. *Prerequisite:* AST 601

**AST 612 Interstellar Medium (2.0); 2 cr.** Interstellar Medium (ISM) in the Milky Way ; HII regions ; photoionisation equilibrium in the ISM ; Interstellar Dust ; ISM distribution and phases ; Absorption and emission in the ISM... *Prerequisite:* AST 602

**AST 613 Active Galaxies (2.0); 2 cr.** Historical overview of the discovery of active galaxies and the enigma of the power source and its nature; The black hole paradigm; accretion physics; AGN types; Emission processes in AGNs; Unification models. *Prerequisite:* AST 602; *Corequisite:* AST 603

**AST 614 Site Evaluation & Atmospheric Optics (2.0); 2 cr.** Effects of the atmosphere on

astronomical observations; Seeing; Opacity; Turbulence; Measurement techniques of the different parameters of interest to astronomy.

**AST 620 Variable Phenomena in Astrophysics (2.0); 2 cr.** Photometric and Spectroscopic variability of individual stars ; Binaries and variable phenomena ; Long term variability of AGNs, Blazars, and BL Lac; Other variable and transient phenomena such as supernovae. *Prerequisite:* AST 601, AST 603, AST 613

**AST 621 Nuclear Astrophysics (2.0); 2 cr.** Elements in the universe; Stellar and primordial nucleosynthesis; Hydrogen burning sequences; r and s processes; Post hydrogen-burning reactions; neutron stars. *Prerequisite:* AST 601

**AST 622 Circumstellar Environments (2.0); 2 cr.** Study of the material surrounding stars at their different phases of evolution; Disks and outflows in pre-main sequence; main sequence and post-main sequence phases; Composition, dynamics and geometries of circumstellar matter; Relation to mass loss; Formation of planets. *Prerequisite:* AST 601, AST 602, AST 612

**AST 623 Cosmology (2.0); 2 cr.** Newtonian Cosmology; Introduction to General Relativity; Big Bang; Inflation; Primordial nucleosynthesis; CMB; Large-Scale structure; Dark matter and dark Energy. *Prerequisite:* AST 603

**AST 631 Seminar (1,0); 1 cr.** Reading, presentation, and discussion of papers in various fields of astrophysics.

**AST 635 Selected Topics in Astrophysics (3,0); 3 cr.** Topics of interest in contemporary astrophysics.

**AST 670 Observational Astrophysics (1.6); 3 cr.** Magnitudes & photometric systems;

Coordinates and time; Telescope optics; CCD observation & reduction techniques; Spectroscopy; Polarimetry.

**AST 691 THESIS; 6 CR. RESEARCH PROJECT AND THESIS.**

## DEPARTMENT OF SCIENCES

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**Chairperson:** *Dr. Colette Kabrita Bou-Serhal*

**Secretary:** *Mrs. Yolla Chalhoub-Abboud*

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### Associate Professors

*Hage, Tanos G.*, Ph.D., 1995, *Plant Biochemistry and Molecular Biology*, Pennsylvania State University, USA

*Khalaf-Keirouz, Layla*, Ph.D., 1995, *Environmental Geology*, Westfälische Wilhelms-Universität, Germany

### Assistant Professors

*Aad, Pauline*, Ph.D., 2008, *Animal Breeding and Reproduction*, Oklahoma State University, USA

*Dib, Robert*, Doctorate, 1998, *Biochemistry*, Université de Nantes, France

*Fayad, Amer*, Ph.D., 2003, *Plant Pathology, Physiology, and Weed Science*, Virginia Polytechnic Institute and State University, USA (SC)

*Kabrita-Bou Serhal, Colette*, Ph.D., 1998, *Circadian Biology*, Northeastern University, Boston, USA

*Moufarij, Mazin*, Ph.D., 2004, *Pharmacology Genetics*, La Trobe University, Australia (NLC)

*Rahmé, Kamil*, Doctorate, 2008, *Macromolecular and Supramolecular Chemistry*, Université de Toulouse, France

*Sattout, Elsa*, Ph.D., 2005, *Agricultural Botany*, University of Reading, UK

*Tannous, Marie*, Ph.D., 1998, *Clinical Chemistry*, University of Windsor, Canada (NLC)

<sup>1</sup>*Trarat, Christophe*, Ph.D., 1999, *Organic Chemistry*, Université de Paris V, France

### Academic Assistants

*El-Ghossein-Maalouf, Nada*, M.S., 1996, *Microbiology*, American University of Beirut, Lebanon

*El-Hage-El-Amm, Rita*, M.P.H., 1988, *Public Health*, American University of Beirut, Lebanon

*Zoghbi, Catherine*, DEA, 2003, *Physics*, Lebanese University, Lebanon

### Laboratory Assistant

*Saliba-Tabet, Elizabeth*, B.S., 1999, *Biology*, Lebanese University, Lebanon

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<sup>1</sup> On leave of absence for the academic year 2010-2011

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## Programs of Study

The Department of Sciences offers a Freshman Science program and an undergraduate program leading to the degrees of:

- BS in Biology (102 Credits)
- BS in Environmental Science
- BS in Chemistry (98 Credits) (4 tracks)

The Department of Sciences also offers a variety of undergraduate service courses in biology, chemistry and geology. These courses are meant to serve academic programs offered by other Faculties of the University.

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### Our Freshman Science Program

**Academic Advisor:** *Dr. Elsa Sattout*

The **Freshman Science** program consists of a minimum of 30 credits. This program is equivalent to the official Lebanese Baccalaureate Part II (Scientific Strands). It normally requires a minimum period of 2 semesters. The Freshman Science Program includes courses from the following areas:

<b>Humanities and Social Sciences</b> (a minimum of 3crs. in each area)	<b>9cr.</b>
<b>Mathematics</b> (MAT 111 & MAT 112)	<b>6cr.</b>
<b>Natural Sciences*</b>	<b>9 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>

*\*Suggestions: Students planning to go into computer science, engineering, mathematics, or physics may choose to take PHS 101, 102, and CHM 101. Students planning to go into Biology, Chemistry, Environmental Sciences, Medical Lab Technology, Nutrition, or Nursing may choose to take BIO 101, CHM 101, and CHM 102.*

For more details on this program, refer to the subsection “*Freshman Program*” within the section “*GER, Freshman Program and Degrees*”.

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### Our Undergraduate Program

#### The Degree of Bachelor of Science in Biology

The biology program is designed to prepare students for a wide range of employment opportunities, including access to professional schools in medicine, veterinary science, dentistry, agriculture and education. It also provides solid background for those interested in careers related to environmental protection, wildlife management, biotechnology and genetic engineering. A BS degree in biology can also lead to post-graduate studies & research careers in universities, research institutes, hospitals & industrial or governmental laboratories.

## Admission Requirements

For admission requirements to the degree of BS in biology, refer to the section entitled "Undergraduate Admission" of this catalog.

## Graduation Requirements

To receive the degree of BS in Biology, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 102 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (102 credits)

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B – Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion (3cr.)</i> REG 212, REG 213, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	6 cr.
- Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	6 cr.
- Two courses from the category <i>Citizenship (6 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, CHM 211, ENS 201, ENS 202, ENS 206, GEO 203, GIS 211, HEA 201, NTR 201, PHS 207	

**Core Requirements** **34 cr.**  
BIO 211, BIO 212, BIO 220, BIO 227, CHM 215, CHM 221, CHM 222, CHM 272, PHS 208, PHS 209, PHS 278, PHS 279.

**Major Requirements** **29 cr.**  
BIO 324, BIO 335, BIO 485  
Choose two biology courses 4 credits each.  
Choose four biology courses 3 credits each, excluding BIO 202 and BIO 203.

**Free Electives** **6 cr.**  
It is advisable that students take STA 203.

**Bachelor of Science in Biology  
Suggested Program (102 Credits)**

**Fall Semester I (16 Credits)**

BIO	211	General Biology I	4 cr.
CHM	211	Principles of Chemistry (GER)	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
ARB	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (16 Credits)**

BIO	212	General Biology II	4 cr.
CHM	221	Organic Chemistry I	3 cr.
ENL	223/ 230	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

BIO	220	Genetics	3 cr.
CHM	222	Organic Chemistry II	3 cr.
CHM	272	Organic Chemistry Laboratory	2 cr.
PHS	208	Physics for Life Sciences I	3 cr.
PHS	278	Physics for Life Sciences I Lab	1 cr.
—	—	GER	3 cr.

**Spring Semester II (14 Credits)**

BIO	227	Introductory Biochemistry	3 cr.
CHM	215	Quantitative Analysis	4 cr.
PHS	209	Physics for Life Sciences II	3 cr.
PHS	279	Physics for Life Sciences II Lab	1 cr.
BIO	—		3 cr.

**Summer Session II (6 Credits)**

—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (14 Credits)**

BIO	335	Cell Biology	4 cr.
BIO	—		3 cr.
BIO	—		4 cr.
BIO	—		3 cr.

**Spring Semester III (15 Credits)**

BIO	324	Plant Physiology	4 cr.
BIO	485	Seminar	1 cr.
BIO	—		4 cr.
BIO	—		3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate Courses: Biology

**BIO 101 Introduction to Biology (3.0); 3 cr.** An introduction to the fundamental principles of biology. Covers chemical basis of life, structure and function of cells and tissues, basic genetic concepts, as well as structure and function of human body systems. *Prerequisite:* Freshman Standing.

**BIO 171 Introduction to Biology Laboratory (0.3); 1 cr.** Laboratory course illustrating the concepts and theory taught in Introduction to Biology.

**BIO 202 Mystery of life (3.0); 3 cr.** “Big picture” of cosmic evolution: Formation of chemical elements, stars and planets, prebiotic evolution, origin and evolution of life on Earth. The way humans are affecting the course of evolution by altering the genetic makeup of organisms, as well as other aspects of applied biology. Not open for Biology students.

**BIO 203 Discover Biology (3.0); 3 cr.** A general introductory course that covers the basic principles and concepts of Biology with current applications. Not open for Biology students.

**BIO 207 Biochemistry for Nursing (3.0); 3 cr.** This course is a general overview of the basic concepts in biochemistry. It reviews the essentials of general and organic chemistry, discusses the main biochemical pathways in the cell and emphasizes the relevance of the concepts to clinical disorders.

**BIO 211 General Biology I (3.2); 4 cr.** This course introduces major concepts of biology including the organization of life on all levels; metabolism and energy transactions involved in life processes; the transfer of information and the diversity and classification of organisms. *Prerequisite:* Sophomore Standing.

**BIO 212 General Biology II (3.2); 4 cr.** It covers the study of structure and life processes in plants and animals. *Prerequisite:* BIO 211.

**BIO 214 Human Anatomy (3.0); 3 cr.** General human anatomy, emphasizing human scales, proportions, articulation, and factors influencing movements. *Prerequisite:* BIO 211.

**BIO 215 Human Physiology (3.0); 3 cr.** A study of the fundamental principles and mechanisms that govern body functions in humans. *Prerequisite:* BIO 211.

**BIO 216 Microbiology and Immunology for Nursing (3.0); 3 cr.** A study of the essentials of basic and clinical microbiology and immunology that includes immunology, bacteriology, virology, physiology and mycology. *Prerequisite:* BIO 207.

**BIO 217 Pathophysiology (3.2); 4 cr.** The content of this course refers to three major areas based on the health-illness continuum: control of normal body function, alteration in body function, and failure in any system or part of body function. *Prerequisite:* BIO 215.

**BIO 218 Histology (2.2); 3 cr.** An introduction to the microscopic structure of tissues and organs, with particular emphasis on the interrelation between structure and function. *Prerequisite:* BIO 211.

**BIO 219 Pathophysiology for Nursing (2.0); 2 cr.** This course offers an integrated approach to biological alterations that affect human equilibrium. The content of this course refers to three major areas based on the health – illness continuum: control of normal body function, alteration in body function, and failure in any system or part of body function. *Prerequisite:* BIO 215.

**BIO 220 Genetics (3.0); 3 cr.** Mendelian genetics & extensions of Mendelian analysis; population & quantitative genetics; molecular genetics: DNA structure and replication, organization of DNA in chromosomes, gene & chromosomal mutations, gene expression and its regulation, recombinant DNA technology. *Prerequisite:* BIO 211.

**BIO 222 Immunology (3.0); 3 cr.** Detailed description of the components of the immune system: their development, differentiation & functioning during an immune response; immune response to pathogens, tumors & grafts; immunopathologies; basic immunological techniques. *Prerequisite:* BIO 211.

**BIO 226 Evolution (3.0); 3 cr.** Study of processes that bring about evolutionary changes in organisms, evolutionary trends, patterns of adaptations, and principal factors that influence the patterns of speciation. *Prerequisite:* BIO 220.

**BIO 227 Introductory Biochemistry (3.0); 3 cr.** An introduction to the structure-function relationships of biomolecules, enzymes,

metabolic reactions & biochemical energetic of living cells. Prerequisites: BIO 211, CHM 221 or CHM 213.

**BIO 228 Parasitology (3.2); 3 cr.** Provides a general overview on the classification, morphology, development & physiology of human and animal parasites. *Prerequisite:* BIO 212.

**BIO 314 Ecology (3.0); 3cr.** Principles of ecosystems; the interaction of organisms & their environment. Food web, energy flow & nutrient cycling in ecosystems. Factors which affect the distribution & abundance of species: Wildlife resources & extinction. *Prerequisite:* BIO 212, also listed as ENS 303

**BIO 316 Economic Botany (3.0); 3cr.** The course provides an introduction to the study of botany and the economic uses of plants in industry, production of food and medicine. *Prerequisite:* BIO 212.

**BIO 320 Microbiology (3.2); 4 cr.** Covers structures, isolation, classification and metabolic diversity of microorganisms. *Prerequisite:* BIO 220 or BIO 227.

**BIO 322 Virology (3.0); 3 cr.** Provides a general overview on the classification, biophysical & biochemical characteristics of bacterial, plant and animal viruses. *Prerequisite:* BIO 212.

**BIO 324 Plant Physiology (3.2); 4 cr.** Basic principles of plant physiology; the physiological processes of green plants and the effect of the environment on these processes. *Prerequisites:* BIO 212, BIO 227.

**BIO 325 Marine Biology (3.2); 4 cr.** Covers biology of marine life, with emphasis on the roles that marine plants and animals assume in their environmental situations, & the structural and physiological adaptations necessary to fulfill those roles. *Prerequisite:* BIO 212.

**BIO 332 Developmental Biology (3.2); 4 cr.** The course sheds light on the major events and processes that accompany animal development—from the fusion of two cells to the creation of a more complex multicellular organism. The molecular mechanisms underlying such developmental processes are considered. The impacts of special environmental and pharmacological agents on animal development are also emphasized. *Prerequisite:* BIO 212.

**BIO 334 Molecular Biology; (3.0) 3cr.** Provides an understanding of the molecular basis of biological phenomena with emphasis on the fundamental processes common to all organisms: enzyme catalysis, DNA, RNA and protein synthesis, and mechanism of gene expression. Includes a description of common molecular biology techniques for gene study and manipulation. *Prerequisites:* BIO 220, BIO 227.

**BIO 335 Cell Biology (3.2); 4 cr.** Provides students with a basic understanding of the structure and function of the eukaryotic cell. *Prerequisite:* BIO 227.

**BIO 336 Basic Biotechnology (3.0); 3 cr.** Covers broadly the development of the field of biotechnology: methods and applications. Covers topics such as principles of recombinant DNA technology and its applications to studies of animals, plants, medicine, forensics and human genome project. *Prerequisite:* BIO 227.

**BIO 337 Biochemical Methods; (3.0) 3 cr.** Introduction to basic methods used in studies of enzymes, proteins, nucleic acids and their interactions. Different methods of extraction, purification, analysis and production of biomolecules are discussed in general but also by means of some precise examples. *Prerequisite:* BIO 227.

**BIO 340 Metabolic Endocrinology (3.0) 3 cr.** A comprehensive study of the general principles of endocrinology with emphasis on intermediate metabolism and heritable endocrine disorders. *Prerequisite:* BIO 215.

**BIO 400 Bioinformatics (3.2); 4 cr.** An introduction to computer analysis of macromolecular structure information. This course describes how to access, process and interpret structural information regarding biological macromolecules as a guide to experiments in Biology. *Prerequisites:* BIO 220, BIO 227, senior standing.

**BIO 411 Plant Taxonomy (3.2); 4 cr.** An introductory study of identification, naming and classification as well as the history of systematics and the role of evolution in systematics. Laboratory emphasis is on knowledge of the major families of vascular plants and on the collection and identification of local vascular plants. Of particular importance is gaining an understanding of the philosophical bases in taxonomy and the relevance of this field to other areas of biology. *Prerequisite:* BIO 212.

**BIO 412 Plant Propagation (3.2); 4 cr.** Principles, practices and techniques in sexual and asexual propagation of horticultural plants, in which seed technology, and seed propagation, rooting and propagation by cutting, grafting and budding systems, layering and propagation by specialized plant structures, biotechnology and tissue culture systems for micropropagation are discussed. *Prerequisites:* BIO 212.

**BIO 413 Plant Tissue Culture and Biotechnology (3.2); 4 cr.** Principles and techniques for the in vitro culture, propagation, and genetic manipulation of plant cells. *Prerequisites:* BIO 212.

**BIO 414 Ornamental Plant Materials (3.0); 3 cr.** Identification and description of ornamental plants suitable for Lebanon; discussion of cultural and aesthetic aspects of plants of value in ornamental plantings.

**BIO 420 Neurobiology and Behavior (3.0); 3 cr.** The course aims at highlighting the basic neural mechanisms which underlie all animal behavior, including the high cognitive processes such as learning and memory. The different types of neural circuits and nerve cell cross-talks in both invertebrates and vertebrates are considered. *Prerequisite:* BIO 212.

**BIO 424 Conservation Biology (3.0); 3 cr.** The application of biological principles to issues in the conservation biology will be examined within a context that integrates biology, land management, protection and development. *Prerequisite:* BIO 314. Also listed as ENS 424.

**BIO 451 Environmental Biotechnology (3.0); 3 cr.** The use of biotechnology as it relates to various environmental technologies: biodegradation, remediation, biodegradable materials, energy saving process and chemical production from renewable resources. *Prerequisites:* BIO 211, BIO 212. Also listed as ENS 451.

**BIO 460 Selected Topics in Biology (3.0); 3 cr.** Students study recent and current biological issues and topics. *Prerequisites:* Specified when offered.

**BIO 485 Seminar; 1 cr.** Students work on selected papers from recent biological journals. Under the supervision of an advisor. *Prerequisite:* Senior Standing.

**BIO 495 Research in Biology; 1, 2 or 3 cr.** An independent research project in an area of biology under the direction of a faculty mentor. *Prerequisite:* Senior standing and consent of the instructor.

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## The Degree of Bachelor of Science in Chemistry

The chemistry program is designed to provide students with a broad and up-to-date education in rapidly growing areas. The program seeks to prepare students for excellence in graduate school and employments in research institutes, industry, government and teaching. The B.Sc. degree in chemistry stresses a solid foundation in the traditional areas of chemistry namely physical, inorganic, organic and analytical chemistry. The program has been designed to provide maximum flexibility to students and offer elective subjects in three specialized areas: Pharmaceutical, Industrial and Environmental. In addition, a strong emphasis is placed on laboratory and undergraduate research experience which will assist graduates throughout their career.

### Admission Requirements

For admission requirements to the degree of BS in Chemistry, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in Chemistry, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 98 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (98 credits)

#### General Chemistry

#### General Education Requirements

30 cr.

#### A - Communication Skills in English and Arabic

9 cr.

Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B – Philosophy and Religion

6 cr.

- One course from the subcategory *Religion (3cr.)* REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy (3cr.)*

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

6 cr.

- Two courses from the category *Cultural Studies and Social Sciences (6 cr.)*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

6 cr.

- Two courses from the category *Citizenship (6 cr.)*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and Technology

3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

#### OR

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, ENS 201, ENS 202, ENS 206, GEO 203, GIS 211,

HEA 201, NTR 201, PHS 207

*Students majoring in Chemistry are not allowed to count CHM courses within the pool of required GER courses.*

**Core Requirements**

**25 cr.**

CHM 211, CHM 215, CHM 221, CHM 222, CHM 272, MAT 213, MAT 224, PHS 212, PHS 271

**Major Requirements**

**37 cr.**

CHM 321, CHM 322, CHM 326, CHM 327, CHM 331, CHM 335, CHM 372, CHM 440, CHM 490

Choose three Chemistry courses, 3 credits each. These courses should be at the 300 level and above.

**Free Electives**

**6 cr.**

**Bachelor of Science in Chemistry  
Suggested Program (98 Credits)**

**Fall Semester I (15 Credits)**

CHM	211	Principles of Chemistry	3 cr.
MAT	213	Calculus III	3 cr.
CSC	201	Computers and Their User (GER)	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester I (17 Credits)**

CHM	215	Quantitative Analysis	4 cr.
CHM	221	Organic Chemistry I	3 cr.
MAT	224	Calculus IV	3 cr.
PHS	212	Electricity & Magnetism	3 cr.
PHS	271	Electricity & Magnetism Lab	1 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (17 Credits)**

CHM	222	Organic Chemistry II	3 cr.
CHM	321	Physical Chemistry I	3 cr.
CHM	272	Organic Chemistry II Laboratory	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester II (14 Credits)**

CHM	322	Physical Chemistry II	4 cr.
CHM	326	Inorganic Chemistry I	4 cr.
CHM	331	Organic Identification and Structure	3 cr.
CHM	335	Biological Chemistry	3 cr.

**Fall Semester III (15 Credits)**

CHM	327	Inorganic Chemistry II	3 cr.
CHM	372	Advanced Synthesis Laboratory	2 cr.
CHM	440	Instrumental Analysis	4 cr.
CHM	—	CHM Elective	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (14 Credits)**

CHM	490	Chemistry Project	2 cr.
CHM	—	CHM Elective	3 cr.
CHM	—	CHM Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

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## Undergraduate Courses: Chemistry

**CHM 101 General Chemistry I (3.0), 3 cr.** An introductory course about the atomic theory, chemical bonding and periodicity, stoichiometry; the state of matter, gases and solutions.

**CHM 102 General Chemistry II (3.0); 3 cr.** Cover chemical equilibrium, acids and bases, electrochemistry, an overview of the groups in the periodic table, and an introduction to organic chemistry and nuclear chemistry. *Prerequisite:* CHM 101.

**CHM 103 Introductory Chemistry (3.0); 3 cr.** Improves the students knowledge of the fundamental concepts in chemistry. The course brings about sharpening judgements on chemical questions and enhancing problem solving skills. The materials covered deal with stoichiometry, atomic structure, chemical periodicity and bonding, gases, thermochemistry, solutions, and chemical equilibria.

**CHM 171 General Chemistry I Laboratory (0.3); 1 cr.** Selected experiments in general chemistry I. *Corequisite:* CHM 101.

**CHM 172 General Chemistry II Laboratory (0.3); 1 cr.** Selected experiments in general chemistry II. *Corequisite:* CHM 102.

**CHM 211 Principles of Chemistry (3.0); 3 cr.** Deals with stoichiometry, gases, atomic structure, bonding, liquids, gaseous and solution equilibria, thermochemistry, thermodynamics, properties of solution. The course is designed for sciences and engineering students.

**CHM 213 Basic Organic Chemistry (3.0) 3 cr.** This course provides a brief overview to basic principles in Organic Chemistry including the nomenclature, structure, synthesis and reaction of the main function groups of organic compounds. *Corequisite:* CHM 211.

**CHM 215 Quantitative Analysis (3.3); 4 cr.** This course deals with the theoretical and practical aspects of chemical analysis. It covers the principles of chemical equilibrium and its application on gravimetric and titrimetric methods of analysis in addition to the fundamental principles of spectroscopy. Statistical evaluation of the accuracy and precision of experimental data is discussed. *Prerequisite:* CHM 211.

**CHM 221 Organic Chemistry I (3.0); 3 cr.** Introduction to the basic principles and concepts of organic chemistry with an emphasis on the relation between structure and properties, chemistry of hydrocarbons and stereochemistry. *Corequisite:* CHM 211.

**CHM 222 Organic Chemistry II (3.0); 3 cr.** A study of substitution and elimination reactions and of the chemistry of aromatic compounds, alcohols, ethers, epoxides, aldehydes and ketones, carboxylic acids and derivatives, amines and carbohydrates. *Prerequisite:* CHM 221.

**CHM 271 Principles of Chemistry Laboratory (0.2); 1 cr.** Introduction to laboratory techniques, selected experiments in chemical analysis. *Corequisite:* CHM 211.

**CHM 272 Organic Chemistry Laboratory (1.2); 2 cr.** The aim of this course is to familiarize students with the main techniques encountered in organic chemistry lab such as extraction, recrystallization, simple and fractional distillation, thin layer and column chromatography, identification of functional groups, conduct chemical reactions. Emphasis is placed on the theory of these techniques. *Corequisite:* CHM 222.

**CHM 273 Organic Chemistry Laboratory (0.2); 1 cr.** This course is designed for nutrition students and introduces the methods of separation and purification including extraction, recrystallization, simple and fractional distillation and thin layer chromatography. Identification of functional groups and chemical reactions will be also included. *Corequisite:* CHM 213.

**CHM 321 Physical Chemistry I (3.0); 3 cr.** This course covers fundamental principles of chemical dynamics and chemical thermodynamics. A theoretical study of the macroscopic behavior and microscopic structure of matter using mathematical models; kinetic theory of gases, rate laws, mechanism, collision theory, activated complex theory; the three laws of thermodynamics and their application to chemical systems; thermodynamics of chemical reactions, thermodynamics of solutions, thermodynamics of phase transformation, chemical equilibrium. *Prerequisite:* CHM 211.

**CHM 322 Physical chemistry II (3.3); 4 cr.** This course deals with Quantum Chemistry and

Spectroscopy. Topics covered are Quantum theory, postulates, Schrodinger equation, harmonic oscillator model, hydrogen atom, hydrogenic wave function, Pauli principle, rotational motion, atomic structure, molecular electronic structure, Huckel approximation, hybridization, symmetry, rotational and vibration spectroscopy, electronic spectroscopy of molecules. *Prerequisite:* CHM 321.

**CHM 325 Inorganic Chemistry (3.3); 4 cr.** Covers electronic structure and properties of atoms; structure and bonding of inorganic substances, the unit cell, VSEPR theory, bond energies; periodicity and correlation with the electronic structure, properties of the main-group elements and the d-transition metals; organometallic complexes and their applications in synthesis and catalysis. *Prerequisite:* CHM 211.

**CHM 326 Inorganic Chemistry I (3.3); 4 cr.** Covers atomic structure, chemical bonding (MOT), molecular geometry (VSEPR model), solid state (metals, ionic, covalent molecules), crystal field theory, symmetry and point group, acid-base concepts, e.m.f. diagram and its uses, chemistry of selected main group and transition elements with emphasis on physical properties and their applications in industrial chemistry. *Prerequisite:* CHM 211.

**CHM 327 Inorganic Chemistry II (3.0); 3cr.** Includes structures, stereochemistry, reaction mechanisms and physical properties with emphasis on transition metal coordination and sigma and pi bonded organometallic compounds and their role in catalysis. Metals in biological system will be covered. *Prerequisite:* CHM 326.

**CHM 331 Organic Identification and Structure (1.4); 3cr.** This course studies the theoretical and practical aspects of the separation, purification and identification of organic compounds. The identification of pure compounds and of components of mixtures of organic compounds is accomplished by chemical and spectral methods and/or synthesis of derivatives. It covers the theory of NMR (including two-dimensional proton), infrared and mass spectrometry with emphasis on spectral interpretation skills needed for the elucidation of structure. *Prerequisite:* CHM 222, CHM 272.

**CHM 335 Biological Chemistry (3.0); 3cr.** Topics covered include structures and functions of important biomolecules, methods of structure determination, kinetics of enzyme-catalyzed

reactions and enzyme mechanisms. *Prerequisite:* CHM 222

**CHM 372 Advanced Synthesis Laboratory (0.4); 2cr.** Advanced laboratory methods for the preparation of organic and inorganic molecules; synthetic techniques, purification techniques and multi-step syntheses with the characterization of intermediates and products by IR, NMR and MS. *Prerequisite:* CHM 325, CHM 331

**CHM 410 Physical Chemistry III (3.0); 3cr.** A course that deals with a variety of areas in advanced dynamics, thermodynamics, technical physical analysis, transport properties: diffusion, viscosity, ion transport, thermal conductivity, rates of reactions, statistical mechanics, catalysis, thermodynamics of mixtures, equilibrium thermochemistry, electrochemical potential, complex reaction mechanism, fundamental spectroscopic techniques: NMR, laser spectroscopy, EPR, surface analysis, and imaging techniques, X-ray crystallography. *Prerequisite:* CHM 322.

**CHM 415 Environmental Chemistry I (3.0); 3cr.** Covers the natural chemical processes on Earth and the anthropogenic effects on the environment. The chemical processes occurring in the lithosphere, hydrosphere, and atmosphere are analyzed. The effects of primary and secondary pollutants, their interactions between each other and natural substances, and their propagation in the environment are covered. *Prerequisite:* Senior Standing.

**CHM 416 Environmental Chemistry II (3.0); 3cr.** Covers special chemistry topics relevant to environmental protection and environmental systems such as water, air, and soil. Selected topics include: polluted sites decontamination, wastewater and oil spill treatment, hazardous waste management, chemical sources of renewable energy, and an overview of Green Chemistry. *Prerequisite:* Senior Standing

**CHM 420 Industrial Chemistry I: Unit Operations (3.0); 3cr.** This course covers the study of unit operations: distillation, liquid-liquid extraction, gas-liquid extraction, gas absorption, filtration, evaporation, centrifugation, drying and leaching operations. The fundamentals of material balances will be introduced. *Prerequisite:* Senior Standing

**CHM 421 Industrial Chemistry II: Chemical Processes (3.0); 3cr.** This course provides a broad overview of technologies and processes involved in chemical industry. Topics covered:

industrial production of organic and inorganic chemicals, fermentation processes, Petroleum refining, Polymer processing, industrial catalysis, product development from bench to pilot plant to full-scale manufacturing, process economics and environmental considerations. *Prerequisite:* CHM 222, CHM 326

**CHM 425 Modern Methods of Organic Synthesis (3.0); 3cr.** The course presents the most important reaction types as tools for research scientist to use in synthesis. Topics include formation of carbon-carbon bonds, molecular rearrangement, cycloaddition and pericyclic reactions, photochemical and free radical reactions, oxidation and reduction reactions with emphasis on chemo-, regio- and stereoselectivity. General principles of retrosynthetic analysis will be used to design simple synthetic schemes for synthesis of target molecules, including important natural products. *Prerequisite:* CHM 222

**CHM 427 Pharmaceutical Chemistry (3.0); 3cr.** It explores in depth the synthesis of pharmaceutically important molecules such as antibiotics, cardiovascular, anti-inflammatory, chemotherapeutic agents and more. Special attention is placed on the strategy and tactics in synthesis and reaction mechanisms. Real case studies of process development of drug substances in pharmaceutical industry will be illustrated to show the problems which may be encountered in scaling up chemical synthesis and the ways these problems may be overcome. *Prerequisite:* CHM 425.

**CHM 428 Drug Design and Action (3.0); 3cr.** This course will give an overview of how drugs are designed and function to help synthetic chemists improve their understanding of drug chemistry. It covers stages of drug discovery process, drug-target interactions, pharmacological properties in drug design, elucidation of mechanism of action of drugs, description of routes for the delivery of drugs in the human body, chemical aspects of drug metabolism and the concept of pro-drugs. *Prerequisite:* CHM 222 and CHM 335 or BIO 227.

**CHM 430 Polymer Chemistry (3.0); 3cr.** Covers structure, characterization, synthesis and classification of polymers; mechanical properties; stability; and applications in packaging, insulators and fibers etc. *Prerequisites:* CHM 222, CHM 322.

**CHM 431 Atmospheric Chemistry & Pollution (3.0); 3 cr.** Covers the chemical composition of the earth's atmosphere and the major factors that control its chemical composition. Emphasizes the effects of the biosphere and the changes induced by human activities. Topics such as climate change, ozone depletion, urban air pollution and acid rain will be developed. *Prerequisite:* CHM 322.

**CHM 432 Chemistry & Processing of Food (3.0); 3 cr.** Provides an overview of the chemical and physical properties of food components and additives. Covers the processing operations of important food classes (beverages, fruits and vegetables, dairy products); major chemical changes taking place during processing and storage of foods; and principal methods of analysis used in the food industry. *Prerequisite:* CHM 222.

**CHM 433 Soil Chemistry & Pollution (3.3); 4 cr.** Covers chemistry of inorganic and organic soil components with emphasis on environmental significance of soil solution-solid phase equilibrium, sorption phenomena, ion exchange processes, reaction kinetics, redox reactions, and acidity and salinity processes. Also covers soil pollution: sources, dispersion, and remediation methods. *Prerequisites:* CHM 215, CHM 222, BIO 211.

**CHM 434 Materials Chemistry (3.0); 3 cr.** This course gives an introduction to materials chemistry and solid state chemistry together with an overview of common synthesis and characterization of materials with emphasis on molecular understanding of their chemical, electrical, optical, mechanical, thermal and magnetic properties. Topics covered include inorganic solids, polymers, nanoscale materials and biological materials with their potential technological applications. *Prerequisite:* CHM 222, CHM 322, CHM 325

**CHM 435 Aquatic Chemistry & Pollution (3.3); 4 cr.** Covers chemical, biological and toxicological properties of water and their effects on the biosphere. Substances that alter the natural water. Sources, reactions, transports and fates of organic, inorganic, and pathogenic pollutants in water. Analytical testing methods used to assess the toxicity impact of pollutants, and pollution remediation techniques. *Prerequisites:* CHM 215, CHM 222, BIO 211.

**CHM 440 Instrumental Analysis (3.3); 4 cr.** Covers theory, practice and applications of

modern analytical instrumentation: different aspects of instrumental analysis in areas of separation sciences and spectroscopy. Introduces instrumental methods of analysis, including gas and liquid chromatography; atomic, ultraviolet/visible, infrared, and fluorescence spectroscopy; nuclear techniques; and electrochemical methods. The use and the interpretation of data from these instruments will

be practiced in the laboratory. *Prerequisite:* CHM 215.

**CHM 490 Chemistry Project; 1, 2 or 3 cr.** Upon the consent of an advisor the student carries out a research project, gaining deeper skills in problem-solving, performing a literature review, experimental techniques, designing experiments, analyzing data and preparing a final report. *Prerequisite:* Senior standing.

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## The Degree of Bachelor of Science in Environmental Science

The recent environmental challenges on the local, regional and global levels are making environmental issues a major concern in our professional and social lives. Exponential population growth, industrialization and the tapping of energy resources are polluting our environments and depleting our resources. Environmental Science provides an understanding of ecological systems, of environmental components like air, water and soil, and of pollution sources and environmental degradation. Environmental scientists are equally prepared for problem solving, pollution prevention, environmental protection and conservation of natural resources.

Holders of a BS degree in environmental science will be ideally suited for careers in:

- *Public agencies:* Ministries of environment, water resources, electricity, oil and urban planning.
- *Industry:* Emission and waste monitoring, pollution clean-up.
- *Engineering:* Environmental impact assessment, remediation techniques.
- *Environmental and health agencies:* Performing laboratory analysis.
- *Teaching and research.*

### Admission Requirements

For admission requirements to the degree of BS in environmental science, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in environmental science, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 104 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (104 Credits)

#### General Education Requirements

33 cr.

#### A - Communication Skills in English and Arabic

9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B – Philosophy and Religion

6 cr.

- One course from the subcategory *Religion* (3cr.)

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

**E - Science and Technology** 6 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207

*Students majoring in Environmental Science are not allowed to count ENS courses within the pool of required GER courses.*

**Core Requirements** 41 cr.

BIO 211, BIO 212, CSC 318, CHM 215, CHM 221, CHM 222, CHM 272, ENS 303, ENS 321, GEO 201, GEO 311, PHS 208, STA 203.

**Major Requirements** 24 cr.

ENS 201, ENS 322, ENS 323, ENS 430, ENS 450, ENS 471, ENS 490  
and also one freely chosen 3 credits Environmental Science course.

**Free Electives** 6 cr.

**Bachelor of Science in Environmental Science  
Suggested Program (104 Credits)**

**Fall Semester I (16 Credits)**

ENS	201	Introduction to Environmental Science	3 cr.
CHM	211	Principles of Chemistry (GER)	3 cr.
BIO	211	General Biology I	4 cr.
ARB	—	GER	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.

**Spring Semester I (16 Credits)**

GEO	201	Physical Geology	3 cr.
CHM	221	Organic Chemistry I	3 cr.
CSC	201	Computers and Their Use (GER)	3 cr.
BIO	212	General Biology II	4 cr.
ENL	223/230	(GER)	3 cr.

**Summer Session I (6 Credits)**

REG	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester II (14 Credits)**

ENS	303	Ecology	3 cr.
ENS	321	Soil Pollution	3 cr.
CHM	222	Organic Chemistry II	3 cr.
CHM	272	Organic Chemistry Laboratory	2 cr.
PHS	208	Physics for Life Sciences I	3 cr.

**Spring Semester II (16 Credits)**

ENS	322	Water Pollution	3 cr.
GEO	311	Hydrogeology	3 cr.
CHM	215	Quantitative Analysis	4 cr.
STA	203	Biostatistics	3 cr.
—	—	GER	3 cr.

**Summer Session II (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

CSC	318	Geographical Information Systems	3 cr.
ENS	323	Air Pollution	3 cr.
ENS	430	Solid Waste Management	3 cr.
—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

ENS	450	Environmental Impact Assessments	3 cr.
ENS	471	Field and Laboratory Work	3 cr.
ENS	490	Seminar or Senior Project	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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## Undergraduate Courses: Environmental Science

**ENS 201 Introduction to Environmental Science (3.0); 3 cr.** Introduction to the basic environmental global problems facing the Earth with emphasis on pollution and the use of energy resources. *Prerequisite:* Sophomore Standing.

**ENS 202 The Environment and Sustainable Development (3.0); 3 cr.** Introduction to sustainable development: concepts, goals, ecological, economic and social aspects. Fundamental environmental issues in sustainable development: natural resources management, population, food production, energy. International organizations and efforts. Standards and policies. Emerging technological applications and their impact. Resolution of environmental conflicts.

**ENS 205 Environment, Society and Ethics (3.0); 3 cr.** Population dynamics and community organization. World's economic unbalance and consequent impacts on human health and quality of life. International Politics and the environment. Environmental Law. Ethics and sustainability.

**ENS 206 Ecotourism (3.0); 3 cr.** Principles, characteristics and organization. Sustainability based on environmental protection, conservation and beneficial community and social interests. International experience, domestic ecotourism: description and geography. Field trips to the major nature reserves and sites of natural beauty in Lebanon.

**ENS 303 Ecology (3.0); 3 cr.** Principles of ecosystems; the interaction of organisms & their environment. Food web, energy flow & nutrient cycling in ecosystems. Factors which affect the distribution & abundance of species: Wildlife resources & extinction. *Prerequisite:* BIO 212. Also listed as BIO 314.

**ENS 312 Environmental Health (3.0); 3 cr.** Provides general understanding of how environmental factors are involved in the transmission of communicable diseases. Health hazards resulting from exposure to chemical and physical factors in the environment are emphasized as well.

**ENS 321 Soil Pollution (3.0); 3 cr.** Soil formation, soil chemistry. Soil erosion, weathering, salinity, soil rehabilitation. Soil contamination from environmental contaminants: Their fixation/ mobility.

Dispersion in the environment. Soil remediation methods.

**ENS 322 Water Pollution (3.0); 3 cr.** Natural water quality. Contaminant Hydrogeology: Chemical and physical contaminants. Marine Pollution. Problems arising from water treatment and resource use.

**ENS 323 Air Pollution (3.0); 3 cr.** Composition of the atmosphere. Climate and weather. Global atmospheric changes. Indoor and outdoor air pollution. Air pollution control processes, air pollutants dispersion modeling. *Prerequisite:* ENS 201.

**ENS 332 Plants and Pollution (3.0); 3 cr.** Biomes on Earth. Loss of biodiversity and desertification. Preventive measures. Forest resources and conservation. Interaction between plants and pollution, plant pollutant uptake and physiological responses. *Prerequisite:* BIO 212.

**ENS 420 Energy Resources (3.0); 3 cr.** Fossil fuels energy resources. Mineral resources. Alternative energy resources. Technological hazards and environmental impacts including political, economic and social consequences of their exploitation.

**ENS 422 Pollution of Marine Environment, (3.0); 3 cr.** Introduction to the marine ecosystems, sources and types of pollutants, environmental degradation and its impact. Marine pollution management. International legislation for the conservation of marine environment.

**ENS 423 Water and Wastewater Quality and Treatment (3.0); 3 cr.** Water and wastewater treatment processes. Consequent health impacts. Water and wastewater control techniques. Water protection.

**ENS 424 Conservation Biology (3.0); 3 cr.** The application of biological principles to issues in the conservation biology will be examined within a context that integrates biology, land management, protection and development. *Prerequisites:* ENS 203. Also listed as BIO 424.

**ENS 425 Forest Resource Conservation (3.0); 3 cr.** Ecological, social and economic principles applied in the management of forest and wildland resources, forests, range, water, fish and game. Evaluation of alternate management plans: introduction to integrative planning: The interactions of water, wood, wildlife, range

fisheries, and recreation resources. *Prerequisite:* BIO 212.

**ENS 430 Solid Waste Management (3.0); 3 cr.** Solid waste management and disposal. Treatment processes: Recycling, composting, landfilling. Introduction to hazardous/toxic waste.

**ENS 431 Industrial Waste Management (3.0); 3 cr.** Industrial waste: sources, types, quality, quantity and impact assessment. Treatment processes and detoxification. Disposal.

**ENS 440 Environmental Natural Hazards (3.0); 3 cr.** Seismic hazards; volcanoes; Atmospheric hazards; floods and Hydrologic hazards; landslides and rockfalls; design with nature; human interaction with the environment; risk maps; case studies.

**ENS 441 Mitigation Measures and Policies (3.0); 3 cr.** Rehabilitation concepts; mitigation procedures, design, and methodology; application to quarries, landfills, coastal erosion, landslides, floods.

**ENS 445 Environmental Law & Regulations (2.0); 2 cr.** Provides an overview of national and international environmental law and regulations, enforcement, and liability. Emphasizes practical working knowledge about the workings of environmental law, regulations, and the regulatory agencies. *Prerequisite:* Senior standing.

**ENS 450 Environmental Impact Assessments (3.0); 3 cr.** The assessment of a project environmental limitations, precautions,

mitigation, legal measures and the various methodologies of technical investigation, monitoring and assessment.

**ENS 451 Environmental Biotechnology (3.0); 3 cr.** The use of biotechnology as it relates to various environmental technologies: biodegradation, remediation, biodegradable materials, energy saving process and chemical production from renewable resources. *Prerequisites:* BIO 211, BIO 212. Also listed as BIO 451.

**ENS 471 Field and Laboratory Work (1.2); 3 cr.** Investigation of polluted sites and risk assessments. Environmental field work. Sampling methods. Laboratory analysis.

**ENS 475 Selected Topics in Environmental Science (3.0); 3 cr.** Students study recent and current environmental issues and topics. *Prerequisite:* Specified when offered.

**ENS 485 Seminar; 2 cr.** Students work on selected papers from recent biological, earth and environmental science journals. Under the supervision of an advisor. *Prerequisite:* Senior Standing.

**ENS 490 Senior Project; 3 cr.** After consultation with the Department, students run an environmental research project (case study) that will be presented as a seminar.

**ENS 495 Research in Environmental Science; 1, 2 or 3 cr.** An independent research project in an area of environmental science under the direction of a faculty mentor. *Prerequisite:* Senior standing and consent of the instructor.

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## Undergraduate Courses: Geology

**GEO 101 Environmental Geology (3.0); 3 cr.** An introductory course of the study of the earth covering: how the earth works, the major geologic processes as earthquakes and volcanoes, how they influence human activities and the geologic aspect of environmental pollution . *Prerequisite:* Freshman Standing.

**GEO 201 Physical Geology (3.0); 3 cr.** Basic principles of structural and depositional geologic processes. Structure of the Earth. Minerals, rocks and soils. Minerals and Rocks identification. Geological maps interpretation. *Prerequisite:* Sophomore Standing.

**GEO 202 Geology for Architects (2.0) 2 cr.** Minerals and Rocks, Earthquakes, Interpreting and Reading Topographical and Geological Maps, Geology of Lebanon, Laboratory Application and Field Trips.

**GEO 203 Planet Earth (3.0); 3 cr.** Basic principles of the Earth's composition: Structure

and age, the Earth's processes: Earthquakes and volcanoes, the Earth's materials: Minerals, rocks, soils and groundwater. Applications from the major geological aspects in Lebanon . *Prerequisite:* Sophomore Standing.

**GEO 311 Hydrogeology (3.0); 3 cr.** Hydrologic cycle; meteorology; groundwater resources and uses; groundwater movement, natural and artificial discharge. Groundwater erosion and deposition. Lebanon's water resources.

**GEO 312 Engineering Geology: 3 cr.** Weather and soil-forming Processes: Application of engineering geology in foundations design; properties of rock substance and rock mass; Tunnels; Mass-Wasting Process; Ground Water in Engineering Geology; Fluvial Processes; Dams; Land subsidence; coastal engineering geology; Earthquakes; Case Studies. *Prerequisite:* GEO 201.



**FACULTY OF  
NURSING  
AND HEALTH SCIENCES (FNHS)**

Dr. Antoine G. Farhat, *Dean*

Dr. Doris Jaalouk, *Department Chairperson*

## FACULTY DIRECTORY

### **Office of the Acting Dean**

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Tel: 09-218950/51/52 (Extension 2093)

e-mail: [afarhat@ndu.edu.lb](mailto:afarhat@ndu.edu.lb)

# FACULTY OF NURSING AND HEALTH SCIENCES

## LIST OF FULL-TIME FACULTY MEMBERS

### **Associate Professor**

*Farhat, Antoine*, Ph.D., 1999, Nutrition, McGill University, Canada

### **Assistant Professors**

*Doumit, Jaqueline*, Doctorate, 1996, *Biomedical Engineering*, Université de Saint-Etienne, France

*Jaalouk, Doris*, MPH, 2009, *Health Education and Behavior*, American University of Beirut, Lebanon, Ph.D., 1997, *Cell Biology*, Université de Sherbrooke, Canada

### **Co-Academic**

*Abou-Jaoude, Maya*, MS, 1999, *Food Technology*, American University of Beirut, Lebanon

### **Staff Member**

*Fahed-Mozaya, Nathalie*, B.A. Advertising and Marketing, 2001, Notre Dame University, Lebanon, Dean's Administrative Assistant, Faculty of Nursing and Health Sciences

# FACULTY OF NURSING AND HEALTH SCIENCES (FNHS)

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**Dean:** *Dr. Antoine Farhat*

**Administrative Assistant:** *Mrs. Nathalie Fahed-Mozaya*

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## HISTORICAL OVERVIEW

NDU requested from the ministry of Education, the establishment of a Faculty of Nursing along with a Health Sciences component during the academic year 2006–2007.

Specific requirements, such as the installation and the equipment of clinical Nursing labs on campus, contract agreements with nearby accredited hospitals, qualified administrators and faculty members in Nursing, were met during the Fall 2007–2008 and, accordingly the Faculty of Nursing and Health Sciences was recognized by the ministry of Education in March 2008 and officially licensed on September 5, 2008. Within the newly established Faculty of Nursing and Health Sciences, three programs of studies are now being offered:

- BS in Nursing
- BS in Nutrition and Dietetics
- BS in Medical Lab Technology

## MISSION, VISION AND VALUES

### Mission

The Faculty of Nursing and Health Sciences prepares young men and women to become effective professional capable of providing scientific, efficient and appropriate quality care to clients in various settings within the health care system.

The program offers students comprehensive knowledge and clinical experience that enable them to assess, plan, implement and evaluate an adequate treatment for clients in different settings throughout the life cycle.

FNHS students will be prepared to become leading practitioners in their professions and agents of change in the health care system.

### Vision

The faculty of Nursing and Health Sciences aims at establishing a professional leading programs in Lebanon by offering well developed curricula with biological, social, behavioral, and professional components, fostering a life-long learning process and developing leaders in the health care system.

The Medical Lab Technology, Nursing and Nutrition / Dietetics are unique professions involving competence as well as caring and compassion. They are increasingly emerging as a result of research and evidence-based practice.

Professional care givers are prepared to function independently, interdependently, and collaboratively in a variety of settings.

### Values

The followings are the values that inspire the work of the FNHS faculty, students and staff:

- Academic integrity
- Academic excellence
- Ethical behavior and conduct
- Belief in the welfare of the caretaker
- Confidentiality

- Lifelong learning
- Service to the community
- Teamwork
- Cross-cultural understanding

## **FACULTY PROFILE**

### **Undergraduate Program**

Each undergraduate program offered at the FNHS is composed of three components:

- General Education Requirements (GER)
- Core and Major Requirements
- Free Elective Requirements

The Faculty of Nursing and Health Sciences offers undergraduate programs leading to the degree of:

- BS in Medical Laboratory Technology (103 credits)
- BS in Nursing (105 credits)
- BS in Nutrition and Dietetics (95 credits)

## DEPARTMENT OF NURSING AND HEALTH SCIENCES

Chairperson: *Dr. Doris Jaalouk*

### The Degree of Bachelor of Science in Medical Laboratory Technology

Medical Laboratory Technology (MLT) is a clinically-oriented curriculum that combines academic and professional training. It is designed specifically to meet modern requirements for the profession of medical laboratory technology. MLT is an important contributor to the medical team involved in the diagnosis and treatment of diseases. Physicians rely heavily upon laboratory test results before making decisions. Thus, students will be trained to develop their ability to interpret generated laboratory results in order to provide reliable data for disease diagnosis. An MLT graduate may be employed as laboratory technician, researcher, assistant to a physician, or any other technical position in scientific, medical or pharmaceutical laboratories of hospitals and universities.

#### Admission Requirements

For admission requirements to the degree of BS in Medical Laboratory Technology, refer to the section entitled "Undergraduate Admission" of this catalog.

#### Graduation Requirements

To receive the degree of BS in Medical Laboratory Technology, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 103 credits (including clinical training), with an overall grade point average (GPA) of at least 2.0/4.0, and a minimum GPA of 2.3/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (103 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English</i> (6 cr.) ENL 213 and ENL 223 or ENL 230 - One course from the subcategory <i>Arabic</i> (3 cr.) ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>b) Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion</i> (3 cr.) REG 212, REG 213, REG 313, REG 314 - One course from the subcategory <i>Philosophy</i> (3 cr.) ENS 205, PHL 211, PHL 311, POS 345	
<b>c) Cultural Studies and Social Sciences</b>	<b>6 cr.</b>
Two courses from the category <i>Cultural Studies and Social Sciences</i> (6 cr.) HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>d) Citizenship</b>	<b>3 cr.</b>
One course from the category <i>Citizenship</i> (3 cr.) HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	

**e) Science and Technology** **3 cr.**

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210

**OR**

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 202, BIO 203, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

*Students majoring in Medical Lab Technology are not allowed to count MLT courses within the pool of required GER courses.*

**Core Requirements** **24 cr.**

BIO 211, BIO 215, BIO 227, CHM 211, CHM 213, CHM 215, CHM 273, STA 203

**Major Requirements** **49 cr.**

BIO 222, MLT 311, MLT 314, MLT 318, MLT 320, MLT 321, MLT 322, MLT 325, MLT 327, MLT 329, MLT 330, MLT 339, MLT 340, MLT 400, MLT 410, MLT 420, MLT 430, MLT 440, MLT 450, MLT 460, MLT 470

**Free Electives** **3 cr.**

Students are encouraged to take STA 203

**Bachelor of Science in Medical Laboratory Technology  
Suggested Program (103 Credits)**

**Fall Semester I (16 Credits)**

BIO	211	General Biology I	4 cr.
CHM	211	Principles of Chemistry	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
—	—	(GER)	3 cr.
—	—	(GER)	3 cr.

**Spring Semester I (16 Credits)**

BIO	215	Introductory Human physiology	3 cr.
BIO	222	Immunology	3 cr.
CHM	215	Quantitative Analysis	4 cr.
CHM	213	Basic Organic Chemistry	3 cr.
STA	203	Biostatistics	3 cr.

**Summer Session I (6 Credits)**

ARB		(GER)	3 cr.
ENL	223/ 230	(GER)	3 cr.

**Fall Semester II ( 16 Credits)**

BIO	227	Introductory Biochemistry	3 cr.
CHM	273	Organic Chemistry Laboratory	1 cr.
MLT	311	Clinical Chemistry I	2 cr.
MLT	314	General Microbiology	4 cr.
MLT	318	Hematophysiology	3 cr.
—	—	GER	3 cr.

**Spring Semester II (14 Credits)**

MLT	320	Clinical Parasitology	3 cr.
MLT	322	Clinical Chemistry II	2 cr.
MLT	321	Clinical Mycology	1 cr.
MLT	325	Clinical Bacteriology	2 cr.
MLT	327	Clinical Virology	1 cr.
MLT	339	Blood Banking and Transfusion Medicine	1 cr.
MLT	329	Hematopathology	2 cr.
MLT	330	Clinical Histopathology and Cytology Techniques	2 cr.

**Summer Session II (6 Credits)**

REG	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 Credits)**

MLT	340	Serology	2 cr.
MLT	400	Selected Topics in Laboratory Medicine	1 cr.
MLT	410	Training in Clinical Chemistry	4 cr.
MLT	420	Training in Clinical Hematology	4 cr.
MLT	430	Training in Clinical Bacteriology	4 cr.

**Spring Semester III (14 Credits)**

MLT	440	Training in Clinical Parasitology & Urinalysis	2 cr.
MLT	450	Training in Serology	2 cr.
MLT	460	Training in Blood Banking	2 cr.
MLT	470	Training in Phlebotomy, Cytogenetics & Histological Techniques	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

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## Undergraduate Courses: Medical Laboratory Technology

- MLT 311 Clinical Chemistry I (2.0); 2 cr.** Concepts of clinical chemistry, mechanisms of diseases and the correlation of laboratory data with those diseases. Clinical interpretation of normal and abnormal values. *Prerequisite:* CHM 211.
- MLT 312 Clinical Chemistry I (3.0); 3 cr.** Concepts of clinical chemistry, mechanisms of diseases and the correlation of laboratory data with those diseases. Clinical interpretation of normal and abnormal values. *Prerequisite:* CHM 211.
- MLT 313 Clinical Bacteriology I (3.0); 3 cr.** Fundamental aspects of basic and clinical bacteriology. The course consists of lectures and demonstrations in general bacteriology. *Prerequisite:* BIO 211.
- MLT 314 General Microbiology (3.2); 4 cr.** Covers structure, morphology, nutritional requirements, metabolism, and growth of microorganisms, culture techniques, microbial diseases, assays, and introduction to microbial genetics. *Prerequisite:* BIO 211. Also listed as BIO 320.
- MLT 315 Clinical Parasitology I (2.0); 2 cr.** An introductory course on the theory and laboratory techniques used in the diagnosis of parasitic infections of humans. *Prerequisite:* BIO 211.
- MLT 317 Clinical Pathology I (3.0); 3 cr.** The course consists of lectures and demonstrations in hematology, serology and blood banking.
- MLT 318 Hematophysiology (3.0); 3 cr.** Covers general hematology, including development and functions of red blood cells, white blood cells, and platelets, coagulation, manual techniques and modern automation. *Prerequisite:* BIO 211.
- MLT 320 Clinical Parasitology (3.0); 3 cr.** Covers parasitic infections of humans of clinical importance, and their diagnostic laboratory techniques. *Prerequisite:* BIO 211.
- MLT 321 Clinical Mycology (1.0); 1 cr.** Covers fungal infections of humans of clinical importance, mode of infection, methods of identification, and susceptibility testing of fungi. *Prerequisite:* BIO 211.
- MLT 322 Clinical Chemistry II (2.0); 2 cr.** Continuation of MLT 311. *Prerequisite:* MLT 311.
- MLT 323 Clinical Chemistry II (3.0); 3 cr.** Continuation of MLT 312. *Prerequisite:* MLT 312.
- MLT 324 Clinical Bacteriology II (2.2); 3 cr.** Deals with practical experiments in clinical bacteriology which include preparation of smears and culture media, identification tests, for different types of bacteria encountered in clinical microbiology. *Prerequisite:* MLT 313.
- MLT 325 Clinical Bacteriology (2.0); 2 cr.** Covers bacterial infections of humans of clinical importance, mode of infection, identification methods, and antibiotic susceptibility testing. *Prerequisite:* MLT 314.
- MLT 326 Clinical Parasitology II (1.2); 2 cr.** Continuation of MLT 315, deals with basic clinical parasitology. Lectures and demonstrations in laboratory techniques that are used in the diagnosis of parasitic infections of humans. *Prerequisite:* MLT 315.
- MLT 327 Clinical Virology (1.0); 1 cr.** Covers viral infections of humans of clinical importance, mode of infection, methods of identification, and their diagnostic laboratory techniques. *Prerequisite:* BIO 211.
- MLT 328 Clinical Pathology II (3.0); 3 cr.** Continuation of MLT 317.
- MLT 329 Hematopathology (2.0); 2 cr.** Covers blood cells (erythrocytes, leukocytes, and platelets) disorders, and coagulation disorders. *Prerequisite:* MLT 318.
- MLT 330 Clinical Histopathology and Cytology Techniques (2.0); 2 cr.** Series of lectures in cell biology and normal histology of various human tissues. Lectures on techniques of tissue handling, preparation and staining of specimens and smear of cytological material.
- MLT 339 Blood Banking and Transfusion Medicine (1.0); 1 cr.** Covers basic principles in blood banking and transfusion medicine. *Prerequisite:* BIO 222, and MLT 318.
- MLT 340 Serology (2.0); 2 cr.** Basic aspects of clinical serology which involves the study of mechanisms, different formats, interfering

factors, application and interpretation of commonly used serological tests.

**MLT 400 Selected Topics in Laboratory Medicine (1.0); 1 cr.** Covers recent advances or special topics in the various disciplines of laboratory medicine. *Prerequisite:* Senior standing.

**MLT 401 Selected Topics in Laboratory Medicine I ; 1 cr.** Lectures on recent advances or special topics in the various disciplines of laboratory medicine.

**MLT 402 Selected Topics in Laboratory Medicine II; 1 cr.** Continuation of MLT 401.

**MLT 410 Practical Training in Clinical Chemistry; 4 cr.** 5-weeks practical training in clinical chemistry.

**MLT 420 Practical Training in Clinical Hematology; 4 cr.** 5-weeks practical training in clinical hematology.

**MLT 430 Practical Training in Clinical Bacteriology; 4 cr.** 5-weeks practical training in clinical bacteriology.

**MLT 440 Practical Training in Clinical Parasitology and Urinalysis; 2 cr.** 4-weeks practical training in clinical parasitology and urinalysis.

**MLT 450 Practical Training in Serology; 2 cr.** 4-weeks practical training in serology.

**MLT 460 Practical training in Blood Banking; 2 cr.** 4-weeks practical training in blood banking.

**MLT 470 Practical Trainig in Phlebotomy, Cytogenetics & Histological Techniques; 2 cr.** 4-weeks practical training in phlebotomy, cytogenetics & histological techniques.

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## The Degree of Bachelor of Science in Nursing (BSN)

The BSN prepares young men and women to become effective professional nurses capable of providing scientific, efficient and appropriate quality nursing care to clients in various settings within the health care system.

The program offers nursing students comprehensive knowledge and clinical experience that enable them to assess, plan, implement and evaluate an adequate treatment plan for clients in different settings throughout the life cycle.

Nursing students will be prepared to become leading practitioners in their profession and agents of change in the health care system.

The BSN aims at establishing a professional leading program in Lebanon by offering a well developed curriculum with biological, social, behavioral, and professional components, fostering a life-long learning process and developing leaders in the health care system.

Nursing is a unique profession involving competence as well as caring and compassion. It is increasingly emerging as a result of research and evidence-based practice.

Professional nurses are prepared to function independently, interdependently, and collaboratively in a variety of settings.

### Admission Requirements

For admission requirements to the degree of BS in Nursing, refer to the section entitled "Undergraduate Admission" of this catalog.

### Graduation Requirements

To receive the degree of BS in Nursing, a student must fulfill all requirements of his/her degree program, complete all required courses, accumulate a total of 105 credits with a minimum overall grade point average (GPA) of at least 2.0/4.0, and a minimum GPA of 2.3/4.0 in core and major courses.

### Degree Requirements (105 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	9 cr.
ENL 213, ENL 230 ARB 211 or ARB 231	
<b>b) Philosophy and Religion</b>	6 cr.
REG 212 or REG 213 or REG 313, NUR 203	
<b>c) Cultural Studies</b>	6 cr.
EDU 213, PSL 201	
<b>d) Citizenship</b>	3 cr.
POS 240 or POS 319	
<b>e) Science and Technology</b>	3 cr.
NTR 210 or NTR 215	
<b>Major Requirements</b>	<b>72 cr.</b>
BIO 207, BIO 214, BIO 215, BIO 216, BIO 219, NUR 202, NUR 204, NUR 205, NUR 301, NUR 302, NUR 303, NUR 304, NUR 305, NUR 306, NUR 307, NUR 308, NUR 309, NUR 310, NUR 402, NUR 403, NUR 404, NUR 405, NUR 406, NUR 407, NUR 408, NUR 409, NUR 410	
<b>Free Electives</b>	<b>6 cr.</b>

**Bachelor of Science in Nursing  
Suggested Program (105 Credits)**

**Fall Semester I (18 Credits)**

PSL	201	Introduction to Psychology (GER)	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
NTR	—	GER	3 cr.
BIO	207	Biochemistry for Nursing	3 cr.
REG	—	GER	3 cr.
ARB	—	GER	3 cr.

**Spring Semester I (16 Credits)**

ENL	230	English in the Workplace (GER)	3 cr.
EDU	213	Human Growth and Development (GER)	3 cr.
BIO	214	Human Anatomy	3 cr.
BIO	215	Human Physiology	3 cr.
NUR	202	Nursing Concepts: Theory and Practice	1 cr.
—	—	Free Elective	3 cr.

**Summer Session I (6 Credits)**

BIO	216	Microbiology and Immunology for Nursing	3 cr.
NUR	203	Introduction to Bioethics (GER)	3 cr.

**Fall Semester II (15 Credits)**

BIO	219	Pathophysiology	2 cr.
NUR	204	Health Assessment across the Life Span	2 cr.
NUR	205	Nurse-Patient Relationship	2 cr.
NUR	301	Adult Health Nursing I - Theory	3 cr.
NUR	302	Adult Health Nursing I - Clinical	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester II (14 Credits)**

NUR	303	Adult Health Nursing II - Theory	3 cr.
NUR	304	Adult Health Nursing II - Clinical	3 cr.
NUR	305	Geriatric Nursing - Theory	3 cr.
NUR	306	Geriatric Nursing - Clinical	3 cr.
NUR	307	Pharmacology for Nursing	2 cr.

**Summer Session II (6 Credits)**

NUR	308	Community Health Nursing - Theory	2 cr.
NUR	309	Community Health Nursing - Clinical	2 cr.
NUR	310	Legislation in Nursing	2 cr.

**Fall Semester III (15 Credits)**

POS	—	GER	3 cr.
NUR	402	Obstetric Nursing - Theory	3 cr.
NUR	403	Obstetric Nursing - Clinical	3 cr.
NUR	404	Pediatric Nursing - Theory	3 cr.
NUR	405	Pediatric Nursing - Clinical	3 cr.

**Spring Semester III (15 Credits)**

NUR	406	Psychiatric & Mental Health Nursing - Theory	3 cr.
NUR	407	Psychiatric & Mental Health Nursing - Clinical	3 cr.
NUR	408	Leadership and Management in Nursing - Theory	3 cr.
NUR	409	Leadership and Management in Nursing - Clinical	3 cr.
NUR	410	Nursing Research	3 cr.

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## Undergraduate Courses: Nursing

**NUR 202 Nursing Concepts: Theory and Practice (1.0); 1 cr.** The course offers an introduction to Nursing theory and practice emphasizing the principles of clinical procedures, the use of medical instruments and the various ways of handling patient care throughout the nursing care delivery.

**NUR 203 Introduction to Bioethics (3.0); 3 cr.** The course presents the basic principles and guidelines of bioethical issues. Moral problems arising in the delivery of health care are addressed within the ethical context.

**NUR 204 Health Assessment across the Life Span (2.0); 2 cr.** This course provides the student with the knowledge and skills needed to assess the physical, psychosocial and cultural health status of individuals from infancy to old age in order to identify normal and abnormal findings.

**NUR 205 Nurse – Patient Relationship (2.0); 2 cr.** This course explores aspects of therapeutic communication skills in the nurse – patient relationship. The goal is to achieve a therapeutic professional outcome in the process of health care delivery. Moreover, the course brings insight and behavioral change in the exchange process.

**NUR 301 Adult Health Nursing I – Theory (3.0); 3 cr.** This course develops the knowledge and application of scientific principles in the care of adults presenting medical – surgical problems. It builds on the holistic approach to nursing care of the client through the application of the nursing process.

**NUR 302 Adult Health Nursing I – Clinical (0.6); 3 cr.** Using the nursing process, this course gives the student the opportunity to apply in a clinical setting the concepts and principles stated in NUR301. *Corequisite:* NUR 301.

**NUR 303 Adult Health Nursing II – Theory (3.0); 3 cr.** This course is a continuation of NUR 301 with an emphasis on dysfunctions related, among others, to metabolic, endocrine, neurologic, rheumatic and chronic conditions.

**NUR 304 Adult Health Nursing II – Clinical (0.6); 3 cr.** Using the nursing process, this course gives the student the opportunity to implement the concepts stated in NUR 303 in a variety of settings. *Corequisite:* NUR 303.

**NUR 305 Geriatric Nursing – Theory (3.0); 3 cr.** The course will focus on theories and concepts of the aging process, health problems and needs of the elderly, and health promotion and maintenance of the elderly in the community.

**NUR 306 Geriatric Nursing – Clinical (0.6); 3 cr.** The course will help in assessing and evaluating the impact of the aging process on the individual, the family and the society, as well as in planning and implementing appropriate nursing care for the elderly person. *Corequisite:* NUR 305.

**NUR 307 Pharmacology for Nursing (2.0); 2 cr.** This course focuses on the study of basic concepts in pharmacology and introduces the student to the different groups of therapeutic drugs used in professional nursing. It also introduces the role and responsibilities of the professional nurse in the administration of medication.

**NUR 308 Community Health Nursing – Theory (2.0); 2 cr.** The course presents the theories and concepts of health care in the community, the different nursing roles in community health, and the various legal, social and environmental issues affecting community health.

**NUR 309 Community Health Nursing – Clinical (0.4); 2 cr.** The course focuses on individual, family and community responses to actual or potential health problems. Health promotion, disease prevention, and care of clients with long-term illness are addressed. The clinical nursing process is used to determine the appropriate intervention in cooperation with team workers. *Corequisite:* NUR 308.

**NUR 310 Legislation for Nursing (2.0); 2 cr.** This course provides an understanding of the legal issues related to the nursing profession, and gives the student awareness and discernment in the process of performance within the health system, especially in Lebanon.

**NUR 402 Obstetric Nursing – Theory (3.0); 3 cr.** This course will focus on the nursing care of the woman during the maternity cycle and the care of the newborn, taking into consideration the physical, psychological and emotional needs of the woman during the pregnancy and post partum periods.

**NUR 403 Obstetric Nursing – Clinical (0.6); 3 cr.** The course emphasizes the implementation of the nursing concepts and process in maternal and neonatal care units. *Corequisite:* NUR 402.

**NUR 404 Pediatric Nursing – Theory (3.0); 3 cr.** This course presents theories and concepts associated with the response of children to acute and chronic illness. The emphasis is on the child's growth and development in relation to illness. The impact of developmental variables from infancy to adolescence is integrated throughout the course.

**NUR 405 Pediatric Nursing – Clinical (0.6); 3 cr.** This course focuses on the application of the theory of pediatric nursing in the clinical process for a variety of settings, using the nursing interventions in the care of the children and their families to help them in coping with acute and chronic health problems. *Corequisite:* NUR 404.

**NUR 406 Psychiatric and Mental Health Nursing – Theory (3.0); 3 cr.** This course introduces the student to principles and concepts associated with psychiatric and mental health nursing, and to the care of individuals and families with acute and chronic mental health problems.

**NUR 407 Psychiatric and Mental Health Nursing – Clinical (0.6); 3 cr.** This course focuses on the application of the nursing process

regarding the interventions in the clinical setting on patients suffering from acute and long-term mental health problems. Special emphasis is placed on assessing, planning, and establishing a nurse – patient therapeutic relationship in collaboration with the multi-disciplinary health team. *Corequisite:* NUR 406.

**NUR 408 Leadership and Management in Nursing – Theory (3.0); 3 cr.** The course will focus on the theories, concepts and modalities of leadership and management in nursing. It will assist the student in understanding the professional role of the nurse as a potential leader in various areas of health care.

**NUR 409 Leadership and Management in Nursing – Clinical (0.6); 3 cr.** The course will allow the student to make the transition from a dependent role as a student to a relatively independent role as a nurse-leader by observing, assisting and practicing the different modalities and skills of leadership and management in a variety of health care settings. *Corequisite:* NUR 408.

**NUR 410 Nursing Research (3.0); 3 cr.** The course introduces the student to the research scientific process and its application to nursing. Emphasis is placed on the basic research steps towards the assessment and evaluation of the data and the potential use of the findings.

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## **The Degree of Bachelor of Science in Nutrition and Dietetics**

Nutrition and Dietetics is an interdisciplinary field that focuses on the principles of human nutrition and foods. Nutrition is the study of food intake influence on health and well-being. It covers specific nutrients' requirements in the diet, their physiological functions in the body and the consequences of nutrients deficiency. It requires an understanding of the composition of food and factors that determine food choice and availability. The study of nutrition also explores the role of diet in the causation of diseases of multi-factorial origin, such as heart disease, diabetes and cancer. The importance of nutrition in preventing diseases has now become well recognized in both developing and developed countries. Dietetics is becoming increasingly important in health promotion and wellness of people throughout the life cycle, from infancy to old age, and in the care of people who are ill. Rapid advances in medicine increase the dietitian's role as a member of the health care team.

Various career opportunities are available to the nutritionist and registered dietitian. Clinical nutritionists and dietitians work closely with other health professionals in hospitals, nursing homes, out-patient clinics, public health agencies and food service/or food processing industries. Administrative dietitians direct the planning, purchasing, production and service of meals in medical centers, restaurants and schools. Holders of graduate degrees in nutrition and dietetics may teach in universities or do research in the field. Experienced registered dietitians may become consultants and go into private practice.

### **Admission Requirements**

For Admission requirements to the degree of BS in Nutrition and Dietetics, refer to the section entitled "Undergraduate Admission" of this catalog.

### **Graduation requirements**

To receive the degree of BS in Nutrition and Dietetics a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 95 credits with an overall grade point average (GPA) of at least 2.0/4.0 and a minimum GPA of 2.3/4.0 in both the core and major requirements, and clear all accounts with the university. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### **Dietetics Internship Program Certificate**

The Dietetics Internship Program (DIP) is open to holders of BS in Nutrition and Dietetics interested in pursuing post- graduate hospital training primarily for the purpose of fulfilling eligibility criteria to sit for the National Colloquium Examination. The latter is a must for graduates in Nutrition and Dietetics to obtain the license to practice the profession of dietetics in Lebanon. The DIP gives the opportunity to accepted candidates to follow a supervised training for a period of 6 months at an affiliated hospital. Upon successful completion of training, applicants would be issued a certificate.

## Degree Requirements (95 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 and ENL 223 or ENL 230	
- One course from the subcategory <i>Arabic (3 cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>b) Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3 cr.)</i> REG 212, REG 213, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3 cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>c) Cultural Studies and Social Sciences</b>	<b>6 cr.</b>
Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>d) Citizenship</b>	<b>3 cr.</b>
One course from the category <i>Citizenship (3 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>e) Science and Technology</b>	<b>3 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
<b>OR</b>	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, BIO 202, BIO 203, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211	
<i>Students majoring in Nutrition and Dietetics are not allowed to count HEA and NTR courses within the pool of required GER courses.</i>	
<b>Core Requirements</b>	<b>21 cr.</b>
BIO 211, BIO 215, CHM 211, CHM 213, CHM 215, CHM 273, STA 203	
<b>Major Requirements</b>	<b>44 cr.</b>
NTR 210, NTR 227, NTR 313, NTR 320, NTR 321, NTR 325, NTR 330, NTR 425, NTR 430, NTR 435, NTR 440, NTR 441, NTR 450, NTR 460, NTR 495	
<b>Free Electives</b>	<b>3 cr.</b>
Students are encouraged to take NUR 307	

**Bachelor of Science in Nutrition and Dietetics**  
**Suggested Program (94 Credits)**

**Fall Semester I (16 Credits)**

BIO	211	General Biology I	4 cr.
CHM	211	Principles of Chemistry	3 cr.
CHM	213	Basic Organic chemistry	3 cr.
ENL	213	Sophomore English Rhetoric (GER)	3 cr.
NTR	210	Human Nutrition	3 cr.

**Spring Semester I (17 Credits)**

BIO	215	Introductory Human physiology	3 cr.
CHM	215	Quantitative Analysis	4 cr.
CHM	273	Organic Chemistry lab.	1 cr.
ENL	223/ 230	English in the Work Place (GER)	3 cr.
NTR	330	Community Nutrition	3 cr.
PSL	201	Introduction to psychology (GER-Social Sciences)	3 cr.

**Fall Semester II ( 16 Credits)**

STA	203	Biostatistics	3 cr.
NTR	227	Nutritional Biochemistry	3 cr.
NTR	320	Food chemistry	2 cr.
NTR	325	Food Analysis	2 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Spring Semester II (16 Credits)**

NTR	321	Food Microbiology	4 cr.
NTR	430	Advanced Human Nutrition	3 cr.
NTR	425	Food Processing	3 cr.
—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

NTR	313	Foodservice Management	3 cr.
NTR	450	Dietetics: Counseling and Communication	4 cr.
NTR	435	Nutrition in the Life Cycle	3 cr.
NTR	495	Project in Nutrition	3 cr.
—	—	GER	3 cr.

**Spring Semester III (15 Credits)**

NTR	440	Therapeutic Nutrition	4 cr.
NTR	441	Special Topics in Therapeutic Nutrition	2 cr.
NTR	460	Therapeutic Nutrition Practicum	2 cr.
---	---	GER	3 cr.
---	---	Free Elective	3 cr.

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## Undergraduate Courses: Nutrition and Dietetics

**NTR 201 (3.0); 3 cr.** An introduction to the study of carbohydrates, fats, proteins, vitamins and minerals and their effects on health. An overview of the processes of digestion, absorption and their metabolism. *Prerequisite:* Sophomore Standing and ENL 105.

**NTR 210 Human Nutrition (3.0); 3 cr.** Study of macro- and micro-nutrients and their roles in the body, as well as the nutritional needs of an individual throughout the lifespan. *Passing grade: C*

**NTR 212 Food Sanitation and Safety (3.0); 3 cr.** Food microbiology and food hygiene; causes of food poisoning and food-borne infections; prevention and safety. *Prerequisite:* NTR 201 or NTR 210.

**NTR 215 Foods and Nutrition of World Cultures (3.0); 3 cr.** The focus of the course is to enhance the student's basic understanding of the cultural factors, which influence food intake and nutritional status. Food and diet patterns of various culture groups will be explored through lecture, food preparation, food sampling, and guest speakers.

**NTR 227 Nutritional Biochemistry (3.0); 3 cr.** General biochemistry, with emphasis on the biochemical functions of nutrients and their metabolism. *Prerequisite:* BIO 211, and NTR 210, *Corequisite:* CHM 213.

**NTR 313 Foodservice Management (3.0); 3 cr.** The course focuses on planning and service of safe, nutritionally balanced meals within budgetary margins as well as technical operations in a foodservice system. It includes regulations and standards, and the basics of total quality management in health care and other institutions. *Prerequisite:* NTR 201 or NTR 210. *Passing grade: C*

**NTR 320 Food Chemistry (2.0); 2 cr.** Covers chemical composition, physical and sensory properties of foods. Focuses on the structural considerations of food components (water in foods, lipids, carbohydrates and proteins), chemicals in foods, browning reactions and flavor of foods. *Prerequisite:* CHM 213.

**NTR 321 Food Microbiology (3.2); 4 cr.** A study of microorganisms with emphasis on food spoilage, food poisoning, and the control of pathogenic microorganisms in food. *Prerequisite:* BIO 211.

**NTR 325 Food Analysis (1.2); 2 cr.** Introduces the laboratory methods for chemical analysis of nutrients and chemicals in food products. *Prerequisite:* CHM 215. *Corequisite:* NTR 320.

**NTR 330 Community Nutrition (3.0); 3 cr.** Focuses on community nutrition education programs in schools, health centers, government institutions, and mass media. Emphasis on current research in assessing community nutrition program needs as well as program implementation. *Prerequisite:* NTR 210. *Passing grade: C*

**NTR 335 Sports Nutrition (3.0); 3 cr.** In-depth coverage of both nutrition and exercise physiology while delivering practical, applied information useful to provide dietary and training guidelines for different kinds of sports. *Prerequisite:* NTR 201 or NTR 210.

**NTR 425 Food Processing (2.2); 3 cr.** Covers the changes in basic constituents of foods (carbohydrates, lipids, proteins, vitamins, minerals, food enzymes, and water) resulting from processing and preparation. Focuses on the principles of food spoilage and food preservation, and the different laboratory methods of food processing. *Prerequisite:* NTR 320.

**NTR 430 Advanced Human Nutrition (3.0); 3 cr.** Covers human physiological needs for energy requirements; body needs from food groups such as carbohydrates, proteins and fats; control of nutrient metabolism; and methods of the nutritional assessment. *Prerequisite:* NTR 227 and BIO 215. *Passing grade: C*

**NTR 435 Nutrition in the Life Cycle (3.0); 3 cr.** Covers the basic nutritional needs of people throughout their life cycle (infancy, childhood, adolescence, adulthood and elderly people) and the special nutritional requirements during pregnancy and lactation. *Prerequisite:* NTR 430. *Passing grade: C*

**NTR 440 Therapeutic Nutrition (3.2); 4 cr.** Covers the nutritional needs of individuals throughout their life cycle and in various diseases. Provides the students with an understanding of how nutritional status is assessed in relation to health and disease at the individual and community levels by covering case studies reports and study modules. *Prerequisite:* NTR 430. *Passing grade: C*

**NTR 441 Special Topics in Therapeutic Nutrition (2.0); 2 cr.** Outlines medical nutrition therapy of selected metabolic, respiratory and neurological diseases, cancers, and food allergies. Also outlines nutritional care during pregnancy and lactation. *Passing grade: C*

**NTR 445 Introduction to Dietetics Profession (2.0); 2 cr.** Reviews basic skills needed by the dietician including nutritional care, ethics, role and responsibilities in various employment settings. *Prerequisite: Senior Standing.*

**NTR 450 Dietetics Counseling and Communication (3.2); 4 cr.** Application of the principles of dietetics in a hospital setting. Focuses on the techniques in collection and interpretation of dietary intake. Emphasis on the team concept of patient care and strategies for promoting change in nutritional education. *Prerequisite: Senior Standing. Passing grade: C*

**NTR 451 Advanced Nutrition I (3.0); 3 cr.** Covers carbohydrates, proteins, lipids, fiber and other nutrients, and examines their body metabolism. *Prerequisite: Senior standing and NTR 430.*

**NTR 452 Advanced Nutrition II (3.0); 3 cr.** Covers the nutritional, biochemical and physiological aspects of vitamins and minerals in human body. *Prerequisite: NTR 451 and NTR 430.*

**NTR 455 Diet Therapy in Inborn Errors of Metabolism (3.0); 3 cr.** The course deals with congenital defects that require special diet manipulations and possible nutrition support. *Prerequisite: NTR 440.*

**NTR 460 Therapeutic Nutrition Practicum (1.3); 2 cr.** Case study evaluation of selected topics in advanced therapeutic nutrition and related current pertinent research. *Corequisite: NTR 440. Passing grade: C*

**NTR 485 Seminar in Nutrition; 1 cr.** Students work on selected recent topics in nutrition under the supervision of an advisor. *Prerequisite: Senior standing.*

**NTR 495 Project in Nutrition; 3 cr.** Emphasizes current research in nutrition and dietetics. *Prerequisite: Senior standing and consent of instructor.*

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### Undergraduate Courses: Health

**HEA 201 Health Awareness (3.0); 3 cr.** Comprehensive prevention-oriented approach to personal health topics: stress management, mental health, physical fitness, nutrition and weight control, human sexuality, communicable and chronic diseases, addictive substances and personal safety.

**HEA 203 Health Assessment (2.0); 2 cr.** Lectures in the assessment of health throughout the life span, where students learn to identify normal and abnormal situation.



**FACULTY OF  
POLITICAL SCIENCE,  
PUBLIC ADMINISTRATION,  
AND DIPLOMACY (FPSPAD)**

Dr. Chahine Ghais, *Dean*  
Dr. Eugene Sensenig-Dabbous, *Chairperson*

## **FACULTY DIRECTORY**

### **Office of the Dean**

Green Building, 1st Floor, Room B265  
Tel: 09–218–950/51/52 Extension 2431  
e-mail: [cghaith@ndu.edu.lb](mailto:cghaith@ndu.edu.lb)

### **Department of International Affairs and Diplomacy**

### **Department of Public Administration**

### **Department of Political Science**

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# FACULTY OF POLITICAL SCIENCE, PUBLIC ADMINISTRATION AND DIPLOMACY

## LIST OF FULL-TIME FACULTY MEMBERS

### Professors

*Ghais, Chahine*, Ph.D., 1998, *Political Science*, University of Missouri-St. Louis, USA

<sup>1</sup>*Nehme, Michel*, Ph.D., 1983, *Political Science*, Rutgers University, New Jersey, USA

### Associate Professors

*Labaki, George*, Doctorate, 1984, *Law*, Université de Paris-I, Pantheon, Sorbonne, France.

*Salem, Naim*, Ph.D., 1992, *International Studies*, University of South Carolina, USA

*Sensenig-Dabbous, Eugene*, Doktor der Philosophie, 1985, *Political Science and German Literature*, Paris-Lodron-Universität, Salzburg, Austria

### Assistant Professors

*El-Hindy, Elie*, Ph.D., 2009, *Governmental and Intl. Relations*, University of Sydney, Australia

*Sabat, Rita*, Ph.D., 2010, *International Relations*, Florida International University, USA

### Staff Member

*Basbous, Nayla Bassil*, M.A., 2008, *International Affairs and Diplomacy*, Notre Dame University-Louaize, Lebanon

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<sup>1</sup> Tenure appointment

# FACULTY OF POLITICAL SCIENCE, PUBLIC ADMINISTRATION AND DIPLOMACY

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**Dean:** Dr. Chahine Ghais

**Administrative Assistant:** *Mrs. Nayla Basbous*

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## HISTORICAL OVERVIEW

The Faculty of Political Science, Public Administration and Diplomacy was founded and licensed in 2000. It emerged from the Faculty of Humanities around the core degree programs of International Affairs and Diplomacy.

The rapid evolution of the new Faculty was the outcome of a dedicated collaborative effort of the expert faculty members and administrators who launched a persistent campaign of courses development and programs design. The incorporated new programs include, in addition to the International Affairs and Diplomacy, MA level concentrations in International Law and Comparative Law; Bachelor and Masters level degrees in Political Science, with undergraduate concentrations in American Studies and Euro-Mediterranean Studies; and Public Administration.

In 2006, the Faculty of Political Science, Public Administration and Diplomacy introduced new BA and MA level concentrations in NGOs, under the major of Political Science. This was an integral part of our continuous efforts to implement further curricular innovations towards the accomplishment of the proposed objective of a comprehensive structural transformation into a Faculty of Law and Politics. To that effect, we are currently developing BA and MA degrees in Public Law and Corporate Law, and a PhD in Political Science.

## Deans of the Faculty of Political Science, Public Administration & Diplomacy

Dr. Talal Tarabay 2000-2001

Dr. Michel Nehme 2001-2006

Dr. Chahine A. Ghais 2006-Present

## MISSION, VISION AND VALUES

### Mission

The mission of the Faculty of Political Science, Public Administration and Diplomacy is to provide quality education that helps build in our students the characteristics of high intellect, moral integrity, responsible leadership, enlightened citizenship, and human solidarity. We serve our community by enhancing the awareness about human rights, the common good, and other basic precepts of democratic governance, and by connecting it to the rest of the world through educational networks of cooperation.

### Vision

The Faculty of PSPAD envisions itself as a leading national and regional platform of intellectual and scholarly discourse on issues of government, politics, international relations, and human organization. We consistently strive to provide our students and community with the most evolved education by introducing new courses and programs that cover new and expanding disciplines. The aim is to enrich the minds of our students with the most developed analytical and critical thinking approaches that transform them into leaders in the service of the community and essential interlocutors in the cultural/civilizational dialogue.

### Values

True to the Maronite Catholic traditions of NDU, the Faculty of PSPAD is dedicated to serve as a beacon of enlightenment in the continuous search for truth and better life. In this pursuit, we are guided by a value system founded on:

- Academic excellence
- Individual initiative
- Dedication in work
- Intellectual freedom
- Enlightened citizenship
- Human solidarity
- Responsible leadership
- Participation in solving public problems
- Wealth in diversity
- Inter-cultural dialogue and cooperation

## **FACULTY PROFILE**

The Faculty of Political Science, Public Administration and Diplomacy consists of three Departments:

Department of International Affairs and Diplomacy  
Department of Political Science  
Department of Public Administration

The Faculty of Political Science, Public Administration and Diplomacy offers programs leading to the degrees of:

Bachelor of Arts in International Affairs and Diplomacy  
Master of Arts in International Affairs and Diplomacy  
Master of Arts in International Affairs and Diplomacy - International Law Emphasis

Bachelor of Arts in Political Science  
Bachelor of Arts in Political Science – American Studies  
Bachelor of Arts in Political Science – Euro-Mediterranean Studies  
Bachelor of Arts in Political Science – NGOs Emphasis  
Master of Arts in Political Science – NGOs Emphasis  
Master of Arts in Political Science  
Master of Arts in Political Science - Comparative Law Emphasis

Bachelor of Arts in Public Administration  
Bachelor of Arts in Public Administration - Criminal Justice Emphasis  
Master of Arts in Public Administration

### **Bachelor of Arts Degrees**

#### **Admission Requirements:**

Compliance with the general rules and regulations applied by NDU in the general Catalogue.

#### **Graduation Requirements:**

Students seeking the degree of Bachelor of Arts in the Faculty of PSPAD must complete a total of 105 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the major requirements.

### **Master's Degrees**

#### **Program Guidelines**

The M.A. degrees in the Faculty of Political Science, Public Administration and Diplomacy, require each 36 credit hours, including a thesis. Courses are offered primarily in the late afternoon to allow students to pursue part-time employment or internship, if they so choose. The graduate programs require usually a minimum of four semesters of study depending on the full-time or part-time status of the student.

### **Objectives**

The main objectives are to train students for government and public service as well as for employment in business and non-profit sectors that employ graduates to lead their organizations and international operations.

The programs are intended to prepare and train in theory and practice students for careers in research, national and foreign diplomatic service, contemporary political and economic issues, public service, international and regional organizations, multi-national corporations, financial institutions, media enterprises, and the like.

### **Admission Requirements**

In addition to the University graduate admission requirements, applicants should have a B.A. in Political Science, or Public Administration, or International Affairs and Diplomacy, International Law, or other related fields.

Successful passing of the EET Entrance Exam with a minimum score of 600 is required (p. 66 general catalogue), students' undergraduate GPA of 3.0 minimum, work experience, letters of recommendation, motivation for a career and leadership are all taken into consideration. The Faculty may require the GRE exam for non-NDU students, and the following prerequisite courses may be required of non-major applicants.

For M.A. in Political Science:

IAF 211, POS 201, POS 210 or equivalent by petition.

For M.A. in Public Administration:

PAD 201, POS 201, POS 210 or equivalent by petition.

For M.A. in International Affairs and Diplomacy :

IAF 211, IAF 321, POS 201 or equivalent by petition.

For M.A. in International Affairs and Diplomacy - International Law Emphasis:

IAF 211, IAF 401, POS 442

### **Graduation Requirements:**

Students seeking the degree of M.A. in the Faculty of PSPAD must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

36 credits of course work in addition to a comprehensive written and oral examination; or

2. successful completion of 30 credits course work and six credits thesis.

## **DEPARTMENT OF INTERNATIONAL AFFAIRS AND DIPLOMACY**

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**Chairperson: Dr. Eugene Sensenig-Dabbous**

The Department of International Affairs and Diplomacy offers three programs leading to the degrees of Bachelor of Arts and Master of Arts in International Affairs and Diplomacy and International Law.

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### **The Degree of Bachelor of Arts in International Affairs and Diplomacy**

The program of International Affairs and Diplomacy is designed to provide students with broad knowledge in the field. Graduates are prepared to work in several career areas. These include the Lebanese Government, notably the Ministry of Foreign Affairs; international and regional organizations such as the United Nations and its various agencies, multinational corporations, banking institutions, educational institutions, and, among others, media enterprises and the like.

#### **Degree Requirements (105 credits)**

**General Education Requirements** **33 cr.**

**A. Communication Skills in English and Arabic (6 cr. ENL + 3 cr. ARB)**

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317.

**B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)**

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

**C. Cultural Studies and Social Sciences (6 cr.)**

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301,

**D. Citizenship (6 cr.)**

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

**E. Science and Technology (6 cr.)**

**3 cr. From:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. From:** AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

**Major Requirements** **45 cr.**

IAF 211, IAF 231, IAF 301, IAF 321, IAF 322, IAF 401, IAF 402, IAF 407, IAF 409, IAF 490, PAD 201, POS 210, POS 350, POS 353, POS 382

**Electives in PSPAD (21 crs.)** **21 cr.**

**Free Electives** **6 cr.**

**Minor in IAF** **18 crs.**

Required: IAF 211, IAF 231, IAF 321

9 credits Electives from IAF courses

**Bachelor of Arts in International Affairs and Diplomacy  
Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

IAF	211	Intro. To International Relations	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
POS	201	Intro. to Pol. Science	3 cr.
CSC	201	Computer & Its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PAD	201	Intro. To Public Admin.	3 cr.
ENL	230	English in the Workplace	3 cr.
IAF	231	World Political Geography	3 cr.
ECN	212	Macro – economics	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
POS	240	Law and Society	3 cr.

**Fall Semester II (15 Credits)**

IAF	301	Modern Political Ideologies	3 cr.
PAD	241	Administrative Law	3 cr.
POS	210	Government and Politics. of Lebanon	3 cr.
IAF	321	Diplomacy: Theory and Practice	3 cr.
POS	350	Comp. Gov. & Politics	3 cr.

**Spring Semester II (15 Credits)**

POS	442	Lebanese Const. Law	3 cr.
POS	353	Governments of the Middle East	3 cr.
IAF	322	Lebanese Diplomacy	3 cr.
—	—	Major Elective	3 cr.
—	—	GER	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 Credits)**

POS	382	Research Methods	3 cr.
IAF	401	Public International Law	3 cr.
IAF	407	International & Regional Organizations	3 cr.
IAF	402	Human Rights in Intl. Pol.	3 cr.
POS	345	Ethics & Leadership	3 cr.

**Spring Semester III (15 Credits)**

IAF	409	Foreign Pol. Making of the M. P.	3 cr.
IAF	403	Arab Israeli-Conflict	3 cr.
IAF	471	Modern Europe	3 cr.
POS	479	Govt. & Politics of the US	3 cr.
IAF	490	Special Topics in International Affairs	3 cr.

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## Undergraduate Courses: International Affairs and Diplomacy

### **F 209 Elements of Globalization (3.0); 3cr.**

This course analyzes the multitude of factors that have increasingly been leading to the phenomenon of globalization in the international system: political, economic, technological, communication, cultural, organizational, financial, legal, and structural/political among others. The course focuses on case studies in the various dimensions of globalization worldwide, and on directed individual and group research.

**IAF 211 Introduction to International Relations (3.0); 3 cr.** An examination of the nature and evolution of the major concepts that shape international relations: the balance of power, the role of states in the international system, international law, and the elements of foreign policy. *Prerequisite:* ENL 107

**IAF 231 World Political Geography (3.0); 3 cr.** A general survey of states in the world that focuses on politically relevant geographic information: location, size, population, principal cities, major resources.

**IAF 301 Modern Political Ideologies (3.0); 3 cr.** An introduction to the most influential political ideas in the modern world since the mid-nineteenth century. The focus is on the ideologies that have been influential and effective in the international system. *Prerequisite:* ENL 107

**IAF 321 Diplomacy: Theory and Practice (3.0); 3 cr.** An examination of the principles and practice of diplomacy, international relations, and an analysis of the structures, functions, and procedures of diplomatic and consular services, including diplomatic privileges, immunities, and recruitment of diplomatic and consular personnel. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 322 Lebanese Diplomacy (3.0); 3 cr.** Covers the legal and practical evolution of the Lebanese diplomatic corps and focuses on the framework within which Lebanese diplomacy operates, the direction(s) which it generally takes regionally and internationally, and the approaches and strategies followed. (Arabic/English).

**IAF 331 Geopolitics (3.0); 3 cr.** The course provides an analysis of the reciprocal effects of geography and political organization on the geopolitical positions of states, in the

international system, including size and location demography, national resources, spatial strategies and maritime power. Other topics include: theories of geopolitics, the impact of nationalism on geopolitics, political geography, and the interrelations among geopolitics and international relations. *Prerequisite:* IAF 231 or consent of instructor.

**IAF 332 Introduction to strategic Studies (3.0); 3 cr.** This course introduces students to the field of strategy; the basic concepts and issues of strategy, deterrence, defense, and arms control, an overview of defense policies, programs, and problems. Students will learn how to relate International Relations and Political Science theory to Strategy. Furthermore, students will be able to understand how political military leaders develop policies during times of war and peace. Strategy is a byproduct of geopolitics. Currently, International Relations, as well as Political Science are both directly related to the field of Strategy.

**IAF 333 Terrorism (3.0); 3 cr.** This course studies terrorism in modern times, its definition, its history, its roots and its geographical spread. Other topics include: The political, religious, social, cultural, economic, and ideological causes of terrorism as well as international cooperation in the fight against terrorism. The course is supplemented by a number of case studies including the September 11 terrorist attack and other examples selected from various countries.

**IAF 401 Public International Law (3.0); 3 cr.** A study of the sources of Public International Law and its application in interstate relations.

**IAF 402 Human Rights in International Politics (3.0); 3 cr.** This course covers the conceptual bases of the fundamental rights of the human being. It focuses on international principles, conventions, and treaties signed by governments on the question of human rights at the international, regional and national levels, and the ways and means through which violations of human rights may be documented and countered.

**IAF 404 Laws of Disruption (3.0); 3 cr.** Examination of the various natural, economic, scientific and technological factors which trouble the status-quo of states thus pushing them to develop different political strategies to

meet the changes in the world order. Topics include global warming, advancement of technology and cyber space, nuclear development and natural disasters.

**IAF 407 International and Regional Organizations (3.0); 3 cr.** An examination of the structures, functions, and agencies of the United Nations and other regional international organizations, and their role in the international system. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 409 Foreign Policy Making of the Major Powers (3.0); 3 cr.** An analysis of the making and objectives of the foreign policy of the major states in the international system in the context of globalization, the new world order, European integration, and other regional factors. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 411 Conflict Management and Resolution (3.0); 3 cr.** This course examines the causes of conflict, its management and neutral resolution. It prepares the student to define the nature of conflict, understand its causes and ramifications, study ways to manage and limit its scope, and then search for solutions. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 453 Euro-Mediterranean Partnership (3.0); 3 cr.** A study of the historical and Evolving relationships between Europe and the Middle East, and the factors of trade, resources,

security, and geo-strategic consideration which influence these relationships.

**IAF 471 Modern Europe and the European Union (3.0); 3 cr.** A study of the European Union and its economic, political, social, financial, and legal institutions. Attention is given to the impact of the European integration process in Europe and beyond. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 474 China, India and the Arab World (3.0); 3 cr.** A study of the growing relationships of China and India with the Arab World, particularly after 2000, and the impact of globalization on these relationships. Topics include: examination of political, economic, cultural, religious, and military interactions between China, India, and the Arab World, and the future trends in their relationships. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 488 Current Issues in International Affairs and Diplomacy (3.0); 3 cr.** A seminar highlighting topic areas and theoretical approaches of particular interest to the study of international affairs and diplomacy as a profession. This course will deal with both the critical thinking and practice in a specific area. The content and focus of the course will be altered from semester to semester in order to remain up to date with technical experience and scholarly discourse in the field.

**IAF 490 Senior Study (3.0); 3 cr.** Special topics in International Affairs and Diplomacy.

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## The Degree of Master of Arts in International Affairs and Diplomacy

The program is designed to provide students with indepth knowledge in international affairs and diplomacy, national foreign service, and contemporary political and economic issues. It offers a variety of courses in international relations, comparative government, international organizations, international law, and draws on some courses in economics and business.

### Admission Requirements

Refer to the University graduate admission policy.

### Graduation Requirements

Students seeking the degree of M.A. in International Affairs and Diplomacy must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

1. 36 credits of course work in addition to a comprehensive written and oral examination;  
or
2. successful completion of 30 credits course work and six credits thesis.

### Degree Requirements (36 credits)

#### Core Requirements

IAF 601, PAD 604, POS 681

**9 cr.**

#### Major-Related Electives

Choose 5 courses from

IAF 602, IAF 604, IAF 605, IAF 609, IAF 615, IAF 621, IAF 631, IAF 632, IAF 633, IAF 641, IAF 645, IAF 651, POS 611, POS 661

**15 cr.**

#### Free Electives

*Option I:* Thesis (IAF 699) in addition to 30 cr. Of course work

*Option II :* Successful completion of 36 credits of course work culminating in comprehensive written and oral exams.

**6 or 12 cr.**

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## Graduate Courses: International Affairs and Diplomacy

**IAF 601 International Relations; Theory and Practice (3.0); 3 cr.** The seminar surveys major theories of international relations and evaluates their utility for understanding international politics. It emphasizes: (1) The broad trends and theoretical frameworks which shape relations among states, both at the international and regional levels; (2) The implications of the power factors on the external and domestic policies of states; and (3) The factors leading to international cooperation and confrontation and their implications.

**IAF 602 Economics of International Politics (3.0); 3 cr.** The course investigates the relationship between economic and political processes in the international system, and the institutions involved in conducting these processes. Major theoretical understandings of international political economy are examined along with specific issues in the field. These issues include: International trade, trade and developing nations, transnational corporations, multinational investment, and the World Trade Organization.

**IAF 603 Advanced International Relations Theories (3.0); 3 cr.** The seminar analyzes the writings of major international theorists in the field of IR theories and evaluates the validity and significance of these theories in explaining and understanding contemporary international relations in particular and world politics and history in general. Emphasis is on the use, application, development of IR theories in the context of academic studies of world politics in recent decades.

**IAF 604 Human Rights in International Politics (3.0); 3 cr.** This seminar focuses on the role played by the UN and other intergovernmental organizations in protecting, promoting, and advancing these rights. Special emphasis is placed on problems of human rights violations worldwide, on international conventions, and the role of human rights organizations internationally.

**IAF 605 International Organizations and Specialized Agencies (3.0); 3 cr.** This seminar focuses on the role played by the UN and other intergovernmental organizations in international affairs. Special emphasis is placed on the operations of the specialized agencies (IMF,

World Bank), the determinants of their policies, and the impact of these policies internationally.

**IAF 609 Ethnic Conflict and Conflict Resolution (3.0); 3 cr.** The seminar focuses on the theories and methods of conflict resolution, the relevant literature in the field, and the importance of conflict resolution mechanisms and modalities in international politics. These theories and modalities are applied to various intra- and interstate conflicts in the international system, some of which are focused upon as case studies in the seminar.

**IAF 611 Globalization (3.0); 3 cr.** Analyzes the multitude of factors that have increasingly been leading to the phenomenon of globalization in the international system: political, economic, technological, communication, cultural, organizational, financial, legal, and structural/political. The seminar focuses on case studies in the various dimensions of globalization worldwide, and on directed individual and group research.

**IAF 612 International Political Economy and Globalization (3.0); 3 cr.** Focuses on the factors, powers, and actors shaping international economies, explores the politics of transnational economic flows, the globalization of production, the phenomenal expansion of the MNCs, as well as the relationship between power and wealth in the global economy. Emphasis is on the structural and market factors shaping economic interactions in the world, and the political economic settings shaping globalization.

**IAF 613 Theories of War and Peace (3.0); 3 cr.** Comprehensive analysis of the contending theories on war and peace, including causes, applications, and outcomes. The course covers the various philosophical, economic, religious, ideological, national, regional, and international factors that affect the phenomena of war and peace globally, and the institutional frameworks that address the problems of war or manage and promote peace regionally and internationally.

**IAF 615 Statesmanship and Diplomacy (3.0); 3 cr.** Deals with the role of leaders and diplomats in protecting and promoting countries' interests and in influencing international politics, and addresses the factors that may guide or constrain statesmen in conducting foreign policy.

**IAF 617 Democracy and Democratization in the International System (3.0); 3 cr.** Covers the recent trends towards democratization and the factors which promote or hinder democracy internationally. The seminar covers the theories of democracy and their evolution since the late eighteenth century, the development and expansion of democracy in various parts of the world or the constraints limiting its spread in others, as well as the implications of these questions on peoples, states, and international relations.

**IAF 619 Nationalism and the politics of identity (3.0); 3 cr.** Studies the different and complex factors shaping identity and national formations of groups and states, and explores how issues of ethnic and national identities have shaped world politics, and how subnationalism, supranationalism, and/or internationalism are reshaping it. Covers recent research and literature in the field concerning questions of identity in the international system and their effects on national integration and/or disintegration.

**IAF 621 Contemporary International Issues (3.0); 3 cr.** Provides an overview of the contemporary issues in international affairs that have political, strategic, and socio-economic significance in interstate relations. These issues range from ideological conflicts to technology and politics, warfare and politics, violence and terrorism, and nuclear proliferation.

**IAF 623 The European Integration: Its impact (3.0); 3 cr.** Analysis of the institutional structures of the European Union. Emphasis is on the economic and political effects of the integration process on Europe and beyond.

**IAF 631 U.S. Foreign Policy Making (3.0); 3 cr.** The seminar explores the United States' foreign policy-making from an institutional perspective. It focuses on Congress, the Presidency, and the relevant executive agencies. Attention is given to U.S. policy toward the Middle East.

**IAF 632 Diplomacy (3.0); 3 cr.** The focus in this seminar is on the role of diplomacy in interstate relations and how diplomacy can facilitate interaction among governments and nations and help to achieve national goals. It emphasizes the basics of diplomatic negotiations and bargaining along with the etiquettes of diplomatic and political relations.

**IAF 633 Comparative Foreign Policy (3.0); 3 cr.** The focus in this course is on how foreign policy is made in the context of a state's declared objectives. A primary attention is directed to the foreign policy-making of the major states in the international system and the various processes used to accomplish political goals. Ideologies, national interest, and the type of political system are focused upon insofar as they shape a state's foreign policy direction.

**IAF 635 Terrorism in the international System (3.0); 3 cr.** Generically defined as violence targeting indiscriminately civilians and civil communities and milieus at the national or international levels, terrorism, in recent decades, has become a concern of global scale. The seminar analyses the factors causing the spread of this phenomenon and the measures or policies applied, or that may be applied, to deal with such threats.

**IAF 641 Public International Law (3.0); 3 cr.** A graduate seminar that deals with the sources and development of international law, with a special attention given to current trends and problems. A critical evaluation of contemporary problems of world legal order is provided, covering issues related to global resources regimes, war, social and economic and trade laws.

**IAF 645 Political Risk Analysis (3.0); 3 cr.** This course aims at investigating current international events and highlighting their potential negative impacts in the political, economic, social, and business arenas. Students will be given case studies in the detection and analysis of risk indicators and their probable consequences.

**IAF 649 International Energy and Environmental Issues (3.0); 3 cr.** A study of energy questions globally from the perspectives of economic developmental needs, on the one hand, and environmental considerations and concerns, on the other. The seminar surveys the evolution of energy usage internationally and assesses the use of different sources of energy over time, the efficiency of these various sources, and their effects on development, the environment, and human society.

**IAF 651 Comparative Economic Systems (3.0); 3 cr.** A study of the major economic systems around the world in their theories as well as practices. Emphasis is on comparing and contrasting the tenets of these systems, how they

are applied, and their advantages and shortcomings.

**IAF 657 Politics of International Economic Relations (3.0); 3 cr.** Theories of international interdependence, dependence, and integration; politics of decision making on protectionism and international finance; role of multinational corporations in world political economy; North-South debate; economic issues and national security.

**IAF 660 Special Topics in International Affairs (3.0); 3 cr.** The seminar deals with current issues in international affairs that have political, strategic, or economic significance at

the global or regional levels. The questions to be studied in this seminar are based on current international developments and are chosen according to the specialty of the professor directing the course.

**IAF 699 Thesis; 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of international affairs and diplomacy. The project involves the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound, written report available to later researchers.

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## The Degree of Master of Arts in International Affairs and Diplomacy International Law Emphasis

### Objectives:

In an increasingly interactive world influenced by state and non-state actors in which governments, peoples, and large varieties of organizations and multinational corporations interact on a daily basis through an enormity of contracts, regulations, laws and procedures, it has become necessary that higher educational institutions stress in their academic curricula the importance of International Law. This specialty helps students understand the basic different legal systems applied in international relations.

### Admission Requirements:

Compliance with the general rules and regulations applied by NDU in the general Catalogue.

### Graduation Requirements

Successful completion of 36 semester credits with an overall GPA of at least 3.0/4.0.

### Degree Requirements (36 credits)

#### Core Requirements

IAF 601, PAD 604, POS 681

9 cr.

#### Major-related Electives: choose 5 courses

Choose any 5 INL courses from those listed in the catalog.  
CPL 611 is considered a major related elective.

15 cr.

#### Free Electives

*Option I:* Thesis (INL 699) in addition to 30 credits of course work.

*Option II:* Successful completion of 36 credits of course work culminating in comprehensive written and oral exams.

6 or 12 cr.

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## Graduate Courses: International Law

**INL 620 International and Comparative Patent Law (3.0); 3 cr.** A study of patent reform issues including domestic patent reform legislation and ongoing harmonization treaty discussions under WIPO; review of selected topics with comparative study from the viewpoint of Japan, the United States, and Europe.

**INL 622 International Environmental Law (3.0); 3 cr.** Studies of the treaty negotiation process, role of international institutions in developing and implementing environmental agreements, relationship between environmental law and international issues, developing countries' perspectives on environmental law. Issues covered include climate change, export of hazardous waste, deforestation and biodiversity, Antarctica, and environmental concerns in war, human rights, and development financing.

**INL 624 International Business Transactions (3.0); 3 cr.** U.S. law and practice relating to characteristic forms of international transactions, including the transnational sale of goods (the law governing the documentary sale, various forms of letters of credit, commercial terms and insurance); the export of technology through franchising, distributorship, and licensing contracts; and the export of capital through the establishment, operation, and withdrawal of foreign direct investment. The impact of relevant international organizations and/or emerging substantive international commercial law (e.g., the United Nations convention on Contracts for the International Sale of Goods). Specialized problems in the negotiation and structure of international transactions.

**INL 626 International Trade Law (3.0); 3 cr.** Study of domestic and international laws and institutions governing foreign trade. Legal aspects of U.S. participation in the World Trade Organization, NAFTA, and other international forums, laws regulating customs and tariffs, most-favored nation treatment, subsidies, dumping, unfair trade practices, and disruptive imports under the escape clause. Specialized problems in regulating exports under the Export Administration Act, boycotts, corrupt practices, and restrictive business practices may be covered.

**INL 628 International Litigation (3.0); 3 cr.** Study of the history, forms, progress, problems, and future of interstate, third party dispute

resolution. Examination of basic issues and principles of public international litigation and arbitration between governments and between a government and a private entity. Investigation of the guiding principles and essential elements of conducting litigation in the arena of public international law and with state parties through in-depth examination of leading cases before the International Court of Justice. Problems of mixed and interstate arbitration, both ad hoc and institutional.

**INL 630 Immigration Law (3.0); 3 cr.** Theory and application of the Immigration and Nationality Act and 8 Code of Federal Regulations. Examination of practice before the Executive Office of Immigration Review, Immigration and Naturalization Service, Department of State and Department of Labor. Removal, political asylum, adjustment of status, naturalization, and other issues. Focus on family-and employment-based immigration practice. Examination of the procedural aspects of obtaining lawful permanent resident status in the U.S. through the family and/or employment preferences categories, as well as the process for obtaining non-immigrant admission.

**INL 632 Refugee and Asylum Law Seminar (3.0); 3 cr.** Selected topics from the areas of international law pertaining to the protection of refugees and domestic law of political asylum.

**INL 634 International Banking (3.0); 3 cr.** Study of the legal aspects of international banking and finance, including international laws and regulations concerning the structure and transactions of international banks and institutions. Topics include the institutional, legal and regulatory framework for international commercial banking and development finance; the emerging rules regarding international trade in financial services; international supervision of banking activities and regulation of banking transactions; contractual instruments for international financial transactions; and international debt and development crisis.

**INL 636 Foreign Direct Investment (3.0); 3 cr.** An examination of the legal, business and financial problems involved in investing across national borders. Focuses on the strategies and techniques for structuring such investments and on the framework of regulation that affects them. The analysis includes US regulation of foreign investors, different types of foreign regulation of

US investments, and international controls on domestic regulation of foreign investment through treaties and conventions. Model international transactions and sample documents are used to illustrate basic issues.

**INL 638 International Law of Human Rights (3.0); 3 cr.** An overview of international and regional human rights instruments and institutions, focusing on the manner in which the U.N., Middle Eastern, European, Inter-American, African and Asian human rights systems seek to protect individual and group rights. Examination of the problems these systems have encountered in discharging their mandate and exploration of ways to strengthen international and regional governmental and non-governmental efforts in the human rights field.

**INL 640 Air and Space Law (3.0); 3 cr.** Study of the development of international law related to the use of air space and outer space; analysis of air and space treaties in force; the role of various inter-governmental and non-governmental international organizations; consideration of special problems such as liability resulting from space activities, space technology, reusing of earth resources, arms control, and pollution and contamination of outer space.

**INL 642 Law of the Sea (3.0); 3 cr.** International law related to the use of ocean space. Development of international law concerning internal waters, territorial sea, contiguous zone, high seas, continental shelf-fisheries, exclusive economic zone, maritime boundaries, marine environment, marine scientific research, deep seabed and settlement of disputes. Current legal and policy issues associated with these areas.

**INL 644 International Law of Territory (3.0); 3 cr.** Basic principles of the international law of territory, including the definition of territory, the forms it may take, its relationship to states and other subjects of international law, how territory is acquired, how it is lost and how it is transferred, how it is delimited and demarcated, how the title to territory is affected by historical and demographic factors, and traditional and

contemporary principles and mechanisms for resolution of territorial disputes. Consideration of the modification of these principles since World War II and their possible application to several intense post-Cold War territorial disputes.

**INL 646 Law of War (3.0); 3 cr.** Examines the origins of the law of war, the 1949 Geneva Conventions for the Protection of War Victims, the Geneva Protocols of 1977, the 1980 Geneva Conventional Weapons Convention, other treaties and customary international law relating to means and methods of warfare, the role of the International Committee of the Red Cross, war crimes and enforcement mechanisms, and current problems in the regulation of hostilities.

**INL 648 International Criminal Law (3.0); 3 cr.** Study of selected issues attending the application of criminal law across international boundaries. Topics may include war crimes, terrorism, narcotics trafficking, money laundering, business fraud, extradition, and the recognition of foreign penal judgments.

**INL 650 International Arbitration (3.0); 3 cr.** Survey of arbitration and related mechanisms of dispute resolution in the international legal system that arise out of commercial, financial, and governmental transactions. Analysis of the arbitration agreement, the process of arbitration, and the enforcement of arbitrate awards as well as the common principles governing the disposition of claims. Review of the various arbitrate tribunals and their rules.

**INL 652 International Negotiations (3.0); 3 cr.** The art and science of international negotiations from a practitioner's perspective: analysis of the roles of the legislative and executive branches; examination of the inter- and intra-agency processes, including pre-, during, and post-negotiation, impact of external influences; and arms control negotiations, and practical exercises in negotiations.

**INL 699 Thesis; 6 cr.** The thesis involves The application of research methods to a significant Topic of current relevance to the spheres of international law.

## DEPARTMENT OF POLITICAL SCIENCE

The Department of Political Science offers two programs, leading to the degrees of Bachelor of Arts and Master of Arts.

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### The Degree of Bachelor of Arts in Political Science

The program is designed to provide students with a full awareness of the discipline of Political Science. The major program will equip students with deep knowledge, and will afford them a smooth and solid transition into the graduate studies as well as professional preparation in areas which include: the public sector, foreign service, international and regional organizations, multi-national corporations, banking institutions, media and other enterprises.

#### Degree Requirements (105 credits)

##### General Education Requirements

33 cr.

##### A. Communication skills in English and Arabic (6 cr. ENL + 3 cr. ARB)

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

##### C. Cultural Studies and Social Sciences (6 cr.)

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301

##### D. Citizenship (6 cr.)

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

##### E. Science and Technology (6 cr.)

**3 cr. From:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. From:**

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

##### Major Requirements

45 cr.

IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.

##### Electives in PSPAD (21 crs.)

21 cr.

##### Free Electives

6 cr.

##### Minor in Political Science

18 cr.

Required: POS 210, POS 350, IAF 211,

9 credits of Electives from POS courses

**Bachelor of Arts in Political Science  
Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

POS	201	Intro. to Pol. Science	3 cr.
IAF	211	Intro. To Intl. Relations	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
CSC	201	Computer & its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PAD	201	Intro. To Public Admin.	3 cr.
POS	240	Law & Society	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
HIT	211	Hist. of Leb. & M.E.	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

PAD	241	Admin. Law	3 cr.
IAF	301	Modern Pol. Ideologies	3 cr.
POS	350	Comp. Government & Pol.	3 cr.
POS	210	Gov. & Politics of Lebanon	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

POS	331	Judicial Politics	3 cr.
PAD	302	Elements of Pub. Policy	3 cr.
POS	442	Lebanese Const. Law	3 cr.
POS	353	Gov. & Politics of the M.E.	3 cr.
—	—	Major elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

POS	345	Ethics & Leadership	3 cr.
POS	317	Pol. Parties, Pub. Op. Pressure Gr.	3 cr.
IAF	402	Human Rights in Intl. Pol.	3 cr.
IAF	407	Intl. & Regional Org.	3 cr.
—	—	Major Elective	3 cr.

**Spring Semester III (18 Credits)**

POS	421	Environmental Pol.	3 cr.
POS	479	Gov. & Pol. of US	3 cr.
IAF	401	Public Intl. Law	3 cr.
POS	409	Foreign Pol. Making of the Major Powers	3 cr.
POS	490	Special Topics in Pol. Science	3 cr.

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## **The Degree of Bachelor of Arts in Political Science**

### **NGOs Emphasis**

Non-governmental organizations (NGOs) play an important role in creating an open and viable democratic society. This rapidly expanding sector faces the challenges posed by the transition economy and society, and Lebanese and Middle East NGO managers point out the lack of managerial skills as their main problem in coping with these realities. The results of surveys of the NGO sector in this region confirmed that there is a great interest in conceptual knowledge on NGO management as a science and profession. Existing short-term training programs and seminars, proposed mostly by the NGOs themselves, can provide the participants with operational skills, but fundamental practical and theoretical knowledge is needed.

We see the Degree Program of training in NGO management and civil society to be a most adequate option for developing a stratum of professional managers in this sector in Lebanon and the Arab World. The Program allows matching basic management education with NGO management and civil society specialized knowledge and skills. The Program will be realized through BA and MA degrees in the Semester format, built up of 1575 and 540 academic hours respectively of in-class work in total. Special courses have been designed for the Program and a resource library is built up for the use of students and teachers.

This program is designed to provide students with broad knowledge in the field of International and Civil Society Organizations and specifically NGOs and NPOs. Acquaintance of the Third Sector, Development Cooperation, Civil Society Organizations, government institutions, multi-lateral and bilateral back-donors, networking with multinational corporations, and, among others, media enterprises and the like, will be part of the curricula at large. Graduates will be prepared to work in several career areas, specifically in independent international, regional and local organizations and those that operate under the umbrella of the United Nations and its various agencies, as well as other major development actors in the MENA-region and Arab World and beyond.

### **Admission Requirements**

Applicants must pass the Lebanese Baccalaureate Part II (any strand) or its equivalent as identified by the Lebanese Ministry of Education. They are required to sit for an English Entrance Test (EET) or Test of English as a Foreign Language (TOEFL).

### **Graduation Requirements**

You will need to complete:

- a. 33 credits of General Education Requirements; as the name indicates, those credits consist of 11 courses introducing basic knowledge of English and Arabic proficiency, political science, history, general science and humanities.
- b. 48 credits of Major Requirements; 16 courses will bring you to the world of NGOs, Civil Society and Development, and more specifically into the role of the NGOs in Lebanon and the MENA region, their concerns and the management of NGOs, in addition to elementary knowledge of international relations and organizations, public administration and public policy.
- c. 18 elective credits chosen from the wide range of courses offered in the Faculty of PSPAD.
- d. 6 free elective credits; 2 courses selected from the whole university course offering.

**Bachelor of Arts in Political Science**  
**NGO Emphasis - Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

NGO	201	Intro. To NGOs and Civil Society	3 cr.
ENL	222	Sophomore Rhetoric	3 cr.
NGO	202	Intro. to Development Theory	3 cr.
CSC	201	Computer & Its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

NGO	203	Intro. To NGO Management	3 cr.
ENL	235	Technical English	3 cr.
NGO	204	Civil Society in the MENA-region & Arab World	3 cr.
ECN	212	Macro – economics	3 cr.
—	—	GER	3 cr.

**Summer Session I (6 Credits)**

IAF	211	Introduction to International Relations	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

NGO	301	Intro. To Organization Development	3 cr.
PAD	201	Introduction to Public Administration	3 cr.
IAF	407	International and Regional Organization	3 cr.
NGO	302	Human Resource Management	3 cr.
POS	350	Comp. Gov. & Politics	3 cr.

**Spring Semester II (15 Credits)**

POS	442	Lebanese Const. Law	3 cr.
POS	353	Governments of the Middle East	3 cr.
NGO	303	Financial Management	3 cr.
—	—	Major Elective	3 cr.
—	—	GER	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 Credits)**

POS	382	Research Methods	3 cr.
NGO	401	Civil Society and Advocacy	3 cr.
NGO	402	Humanitarian Assistance	3 cr.
NGO	403	Social Policy	3 cr.
POS	345	Ethics & Leadership	3 cr.

**Spring Semester III (15 Credits)**

NGO	404	International Cooperation	3 cr.
NGO	490	Special Topics	3 cr.
NGO	405	Management of Social Institutions	3 cr.
POS	421	Environmental Pol.	3 cr.
NGO	406	Corporate Social Responsibility	3 cr.

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## **Minor in Middle Eastern Studies (18 credits)**

This program introduces students to the study of political systems in the Middle East, highlighting the Arab states of the region, but also focusing on Cyprus, Iran, Israel and Turkey. Along with general required Political Science courses, students will take specialized courses on the dialogue of civilizations, human rights – with an emphasis on the Middle East and NGOs in the region – and comparative public administration. The Government and Politics series of courses – including the non-Arab countries of the region – will be tailored around the needs of students interested in working in the MENA region within an international and cross-cultural context. This program will equip students with the knowledge and skills needed to work with international and regional governmental organizations, international corporations, research and advocacy based NGOs and regional and international media outlets. It will also help them bridge the gap between the economies and political systems of Europe and the Middle East and take advantage of the expanding trade relationships within the greater Mediterranean market.

### **The Minor in Middle Eastern Studies would be of particular benefit to students in the following majors and fields of study**

- Arabic Literature, Political Science, Public Administration, International Affairs and Diplomacy, Business Administration, Energy Economics, International Business Management, Education, Communication Arts, Advertising and Marketing, Graphic Design
- Sociology, Religion and Philosophy

### **Core Minor Requirements (9 credits)**

POS 353	Governments of the Middle East
POS 405	Religion and Politics in the Middle East
POS 424	Political Economy of the Middle East

### **Minor Electives (9 credits) out of a pool of the following courses:**

POS 212	Political History of the Middle East
NGO 204	Civil Society in the MENA Region
NGO 306	NGOs and Development
COA 355	Mass Media in Lebanon and the Middle East
ARB 336	Literature of Modern Arabic Renaissance
POS 303	Government and Politics of Cyprus, Turkey and Iran
POS 304	Government and Politics of Israel
POS 305	Government and Politics in North Africa
POS 306	Government and Politics of Egypt, Syria and Iraq
POS 307	Government and Politics in the Arab Gulf
POS 308	Human Rights in the Middle East
ENR 401	Petroleum in the World Economy
ECN 439	Economics of Developing Countries
POS 403	Arab-Israeli Conflict
REG 412	History of Religious Thought in the Middle East
POS 425	Business Law in the Middle East
POS 406	Cultural Pluralism in the Middle East
IAF 453	Euro-Mediterranean Partnership
ARB 415	The Arabic Modernization Movement

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## **Minor in Peace and Conflict Studies (18 credits)**

### **I. The importance of Peace and Conflict studies as an Academic Discipline**

#### **A. Worldwide**

Academic and professional programs in peace and conflict studies have considerably grown in number over the last decades to prepare students to become professional conflict resolvers. Universities that are not prepared to host such programs have opted for a minor in peace and conflict studies (e.g. the Justice and Peace Program at Georgetown University, the Justice and Peace Studies Program at the University of St. Thomas, the Certificate in Peace and Justice Studies at the University of San Francisco, etc...). These programs are key in giving students the necessary skills and credentials to:

1. Enroll in a Masters program in conflict resolution
2. Work as crisis management experts, activists, mediators, etc.
3. Widen one's horizons

Become active members in peace and justice related organizations (see table 1) and contribute to the many existing peace and conflict journals

#### **B. In Lebanon**

In addition to helping widen their students' academic horizons and increase their employment opportunities, universities in Lebanon have the social responsibility of introducing their students to peace and justice concepts and skills.

Lebanon remains a conflict zone with few grassroots initiatives aimed at managing its disputes. The absence of grassroots inventiveness is the consequence of a shortage in conflict resolution trainings and programs. Conflict resolution education empowers students by imparting the necessary skills and knowledge-base for managing social change and conflict.

The youth's powerlessness in the face of conflict leads it to despair and increase its dependency on the ruling class and/or migrate. Lebanese Universities must engage in building a qualified peace taskforce and NDU must take the lead in shaping Lebanon's future conflict resolvers.

### **II. A Peace and Conflict Studies Minor's Connection to the Goals of Notre Dame University**

Initiating a peace and conflict academic minor would draw from a variety of already established departments – Sociology, Economics, Politics, Psychology, Religion and others by bringing these varied disciplines into dialogue and collaboration, the peace and conflict minor would enable a comprehensive and original understanding with which to address the topics of peace and war. A minor that brings established fields of study together through course requirements would also bring students into dialogue.

### **III. Design of the Peace and Conflict Studies Minor**

#### **9 credits Core Minor requirements**

POS 315	Conflict Analysis and Intervention: a multitrack approach
POS 405	Diasporas: Conflict and Peacebuilding
POS 425	Understanding and Creating Social Change

#### **9 credits out of a pool of the following courses**

IAF 402	Human Rights in International Politics
IAF 411	Conflict Management and Resolution
IAF 333	Terrorism
IAF 407	International and Regional Organizations
NGO 204	Civil Society in the MENA-Region
NGO 307	Religion and Development
POS 319	Democracy and Human Rights
POS 337	Dialogue Among Civilizations
NGO 401	Civil Society and Advocacy
POS 240	Law and Society
POS 323	Minority Politics

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## **Minor in Strategic Studies (18 credits)**

Strategic studies deals with the attempts of sovereign states, and other international players (e.g. UN, EU, NATO) to deal with the contemporary issues challenging their political and economic interests. It enables students to combine their knowledge of politics with a review of the international environment in which it takes place. This interdisciplinary academic field of study is dedicated to the relationship between the political process, geography, the allocation of natural resources, economic development, and military power. The curriculum also includes the role of diplomacy and threats in the preparation and use of force. Specific topics include the emergence and resurgence of major regional powers such as China, India, and Russia, the changing role of the US as the world's remaining superpower, political Islam, and the military, economic, political developments in crisis regions in Africa, the Middle East, Central and Southern Asia.

Introducing a minor in Strategic Studies at NDU will allow students to widen their knowledge across the faculties in a comprehensive way. Issues related to economics, politics, international relations, resources and technology will thus gain different dimensions in the minds of the students, who would then be able to apply their knowledge in the world around them.

### **The minor in Strategic Studies would be of particular benefit to students in the following majors and fields of study**

- Primarily in Political Science, Public Administration, International Affairs and Diplomacy, Business Administration, Energy Economics, International Business Management, Advertising, Sociology and Marketing.
- Peripherally in Natural Sciences, Psychology and Economics

### **Core Minor Requirements (9 credits)**

- **IAF 231** *World Political Geography*
- **IAF 331** *Geopolitics*
- **IAF 332** *Introduction to strategic Studies*

### **Minor Electives (9credits) (one of which must be a 400 level course)**

- **IAF 209** *Elements of Globalization*
- **IAF 211** *Introduction to International Relations*
- **IAF 333** *Terrorism*
- **IAF 404** *Laws of Disruption*
- **IAF 411** *Conflict Managements and Resolution*
- **PAD 322** *World Political Economy*
- **POS 323** *Minority Politics*
- **POS 403** *Arab-Israeli Conflict*
- **ENR 401** *Petroleum in the World Economy*

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## The Degree of Bachelor of Arts in Political Science – American Studies

The program introduces students to the field of Political Science in general, and concentrates on American Studies. In addition to the general Political Science courses, students take courses which include: American History, American Constitutional Law, Government and Politics of the US, American Political Parties and Pressure Groups, and American culture. The major program will equip students with professional preparation in the respective areas to include: Public sector, foreign service, international and regional organizations, multi-national corporations, banking institutions, media and other enterprises.

### Degree Requirements (105 credits)

#### General University Requirements 33 cr.

##### A. Communication skills in English and Arabic (6 cr. ENL + 3 cr. ARB)

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

##### C. Cultural Studies and Social Sciences (6 cr.)

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301

##### D. Citizenship (6 cr.)

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

##### E. Science and Technology (6 cr.)

**3 cr. from:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. from:** AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

#### Major Requirements 45 cr.

IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.

#### Electives in PSPAD (21 crs.) 21 cr.

#### Free Electives 6 cr.

#### Minor in American Studies 18 cr.

AMS 305, AMS 316, AMS 408, AMS 481, AMS 483, POS 479

**Bachelor of Arts in Political Science - American Studies**  
**Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

POS	201	Intro. to Pol. Science	3 cr.
IAF	211	Intro. To Intl. Relations	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
CSC	201	Computer & its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PAD	201	Intro. To Public Admin.	3 cr.
POS	240	Law & Society	3 cr.
ENL	230	English in the Workplace	3 cr.
HIT	211	Hist. of Leb. & M.E.	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester II (15 Credits)**

AMS	316	American History	3 cr.
IAF	301	Modern Pol. Ideologies	3 cr.
POS	350	Comp. Government & Pol.	3 cr.
POS	210	Gov. & Politics Of Lebanon	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

POS	331	Judicial Politics	3 cr.
PAD	302	Elements of Pub. Policy	3 cr.
AMS	481	American Const. Law	3 cr.
IAF	321	Diplomacy: Theory & Practice	3 cr.
—	—	Major Elective	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 credits)**

POS	345	Ethics & Leadership	3 cr.
POS	317	Pol. Parties, Pub. Op. Pressure Gr.	3 cr.
IAF	402	Human Rights in Intl. Pol.	3 cr.
IAF	407	Intl. & Regional Org.	3 cr.
AMS	408	American Foreign Policy	3 cr.

**Spring Semester III (15 Credits)**

POS	421	Environmental Pol.	3 cr.
POS	479	Gov. & Pol. Of US	3 cr.
IAF	401	Public Intl. Law	3 cr.
POS	490	Special Topics in Pol. Science	3 cr.
—	—	Major Elective	3 cr.

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## **The Degree of Bachelor of Arts in Political Science – Euro-Mediterranean Studies**

The program is designed to provide students with in-depth awareness of the discipline of Political Science in general and concentrates on Euro-Mediterranean studies. In addition to the general Political Science courses, students take courses which include Modern European Thought, European Politics, European Civic Politics, politics and culture of Germany, special topics, Politics and Culture of Russia and Eastern Europe.

### **Degree Requirements (105 credits)**

#### **General University Requirements**

**33 cr.**

##### **A. Communication skills in English and Arabic (6 cr. ENL + 3 cr. ARB)**

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### **B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)**

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

##### **C. Cultural Studies and Social Sciences (6 cr.)**

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301

##### **D. Citizenship (6 cr.)**

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

##### **E. Science and Technology (6 cr.)**

**3 cr. from:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. from:** AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

#### **Major Requirements**

**45 cr.**

IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.

#### **Electives in PSPAD (21 cr.)**

**21 cr.**

#### **Free Electives**

**6 cr.**

#### **Minor in Euro-Mediterranean Studies**

**18 cr.**

EMS 303, EMS 371, EMS 391, EMS 483, EMS 490, IAF 471

**Bachelor of Arts in Political Science - Euro-Mediterranean Studies  
Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

POS	201	Intro. to Pol. Science	3 cr.
IAF	211	Intro. To Intl. Relations	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
CSC	201	Computer & its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

PAD	201	Intro. To Public Admin.	3 cr.
POS	240	Law & Society	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
HIT	211	Hist. of Leb. & M.E.	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester II (15 Credits)**

EMS	303	Modern European Thoughts	3 cr.
IAF	301	Modern Pol. Ideologies	3 cr.
POS	350	Comp. Government & Pol.	3 cr.
POS	210	Gov. & Politics Of Lebanon	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

POS	331	Judicial Politics	3 cr.
EMS	391	European Politics	3 cr.
EMS	371	European Civic Politics	3 cr.
IAF	321	Diplomacy: Theory & Practice	3 cr.
—	—	Major Elective	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 Credits)**

POS	345	Ethics & Leadership	3 cr.
IAF	453	Euro-Mediterranean Partnership	3 cr.
IAF	402	Human Rights in Intl. Pol.	3 cr.
IAF	407	Intl. & Regional Org.	3 cr.
AMS	408	American Foreign Policy	3 cr.

**Spring Semester III (15 Credits)**

POS	421	Environmental Pol.	3 cr.
IAF	471	Modern Europe	3 cr.
IAF	401	Public Intl. Law	3 cr.
POS	490	Special Topics in European Studies	3 cr.
—	—	Major Elective	3 cr.

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### Undergraduate Courses: American Studies Courses

**AMS 305 Cultural Pluralism in America (3.0); 3 cr.** Survey of the development of American Society focusing on the role of Afro Americans, concepts of cultural pluralism, racism and inter-group relations explored within a comparative historical framework.

**AMS 316 American History (3.0); 3 cr.** Studies the various stages in the American history, colonial England, Independence, Confederacy and Federacy, the Civil War, WWI, the New Deal, WWII and after.

**AMS 408 American Foreign Policy (3.0); 3 cr.** The process of formulating US foreign policy,

with emphasis on the Department of State and the Foreign Services. Analyzes the major problems of American policy in action.

**AMS 481 American Constitutional Law (3.0); 3 cr.** The development of constitutional doctrine concerning public power that has resulted from US supreme court cases and decisions.

**AMS 483 Social Welfare in America (3.0); 3 cr.** Advanced survey of social services, public policies, and the profession of social work. Issues include dependency, deviancy, crime, social security, public health, social reforms, public and voluntary institutions.

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### Undergraduate Courses: Euro-Mediterranean Courses

**EMS 303 Modern European Thought (3.0); 3 cr.** Overview of the history of ideas in Europe beginning with the Renaissance and covering the liberal age, authoritarian ideologies, and contemporary liberal democracy.

**EMS 371 European Civic Politics (3.0); 3 cr.** Focuses on the role of civic society in influencing governmental institutions and shaping the political, economic, and social settings. Particular attention is given to parties and citizens' groups.

**EMS 373 Politics and Culture of Germany (3.0); 3 cr.** This course will provide an introduction to German politics and culture, students will study the origins of Germany as a state, from unification in the 19<sup>th</sup> century – through the two World War – to reunification in 1990. Emphasis will be placed on the social, cultural, geopolitical and economic roots of the

German political system and its current role within the European Union.

**EMS 391 European Politics (3.0); 3 cr.** A survey of the new Europe, from Dublin to Moscow, in relation to its political history and future prospects. Geography, economic issues, and military matters are stressed along with the European cultural and sub-cultural identities.

**EMS 483 Politics and Culture of Russia and Eastern European Countries (3.0); 3 cr.** The ideology, political and social structures, of Russia are examined in the context of imperial expansion, the Communist Revolution, and the subsequent collapse of communism and the break-up of the Soviet Union.

**EMS 490 Senior Study: Special Topics in Euro-Mediterranean Studies (3.0); 3 cr.**

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### Undergraduate Courses: History

**HIT 101 Contemporary History of Lebanon (3.0); 3 cr.** Covers Lebanon's contemporary history. Political, economic and social developments are stressed.

**HIT 201 History of Lebanon (3.0); 3 cr.** Covers the history of Mount Lebanon and its

neighboring area, from the Arab conquest until independence. *Prerequisite:* ENL 105.

**HIT 211 History of Lebanon and the Middle East (3.0); 3 cr.** Deals with the Middle East since the beginning of the Ottoman domination till the present. *Prerequisite:* ENL 107.

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## Undergraduate Courses: NGOs

**NGO 201 Introduction to NGOs and Civil Society (3.0); 3 cr.** An introduction to NGOs and Civil Society Organizations, their scope, size, structure and funding base. A special emphasis on their contribution to poverty alleviation/reduction, sustainable societies and the progress of social welfare. *Prerequisite:* ENL 107

**NGO 202 Introduction to Development Theory (3.0); 3 cr.** An introduction to key concepts and current paradigms related to development, poverty alleviation/reduction, international cooperation and relief.

**NGO 203 Introduction to NGO Management (3.0); 3 cr.** An overview of the main areas related to NGO Management such as the context in which the Third Sector is operating, the organizational set-up of NGOs, the relations and the programs, projects and other related activities. The main focus will be on development management. *Prerequisite:* ENL 107

**NGO 204 Civil Society in the MENA-region (3.0); 3 cr.** An analysis of the interaction and networking that take place between NGOs, the State and Non-formal Social Actors in the Middle East, North Africa-region (MENA). A special focus on the typologies of CSO active in the region and the examination of current data from the Arab World.

**NGO 205 Legal Framework of NGOs (3.0); 3 cr.** This course will study the laws applied to NGOs, the procedure of their legal registration, restrictions in their activities, in Lebanon and other MENA-countries, and will also compare these laws with the legal framework of NGOs in Western countries.

**NGO 301 Introduction to Organization Development (3.0); 3 cr.** An examination of current models for organizational assessment and change related to Civil Society Organizations and how different OD-interventions and tools can be applied within the Third Sector. *Prerequisite:* IAF 211 or consent of instructor.

**NGO 302 NGOs and Human Resource Management (3.0); 3 cr.** An examination of how NGOs are managing their human resources with a special focus on how to build teams with a participatory approach. The course will treat how to do the human resource planning and

implementation, which includes recruitment, management and motivation of the personnel. *Prerequisite:* IAF 211 or consent of instructor.

**NGO 303 Financial Management for NGOs (3.0); 3 cr.** An introduction to financial management in non-profit organisations introducing the four areas of financial management which includes financial planning, the financial control systems, the monitoring and reporting and the accounting records. In addition, an overview of the basic elements, the preparation for the external audit of the accounts. *Prerequisite:* IAF 211 or consent of instructor.

**NGO 304 Project Management for NGOs (3.0); 3 cr.** An introduction to how NGOs prepare, design, fund, manage, implement, monitor and report projects mainly in the development sector. Project-tools on Project Cycle Management (PCM) as well as the Logical Framework Approach (LFA) will be introduced.

**NGO 305 Civil Society & Globalization (3.0); 3 cr.** A study which enables the understanding, analysis and interpretation of the key concepts of globalization and the related current external factors and challenges affecting Civil Society and NGOs.

**NGO 306 NGOs and Development (3.0); 3 cr.** A study of the changing role of NGOs in the development process. A special emphasis on how the focus have changed from short-term relief & welfare to a more sustainable and community based approach.

**NGO 307 Religion and Development (3.0); 3 cr.** An exploration of the social and developmental roles of Religion in the Middle East and the challenges, opportunities and threats Islamic and Christian Faith Based Organizations are facing in the current context.

**NGO 401 Civil Society and Advocacy (3.0); 3 cr.** An introduction to main concepts, definitions and challenges to advocacy in the Third Sector. This course covers how NGOs are building up their advocacy strategies, what kind of tools that are being applied and how the main stakeholders will be involved in the process.

**NGO 402 Disaster Response & Humanitarian Assistance (3.0); 3 cr.** An introduction to the Humanitarian Charter and Minimum Standards

in Disaster Response. These standards cover areas in water supply, nutrition, food aid, shelter & site planning and health services and have been adopted by all major agencies involved in Humanitarian Assistance.

**NGO 403 Social Policy (3.0); 3 cr.** An overview on how social policy is being shaped and elaborated in Welfare States and countries with emerging Civil Societies in the MENA-region. A special emphasis on networking between the State and NGOs on how to assure basic social rights.

**NGO 404 International Development Cooperation (3.0); 3 cr.** An overview of the strategic framework involving Multilateral and Bilateral agencies, International and Local NGOs and their partnerships, alliances and relations in the MENA-context. The course will also treat the current and past paradigms in Development Cooperation.

**NGO 405 Management of Social Institutions (3.0); 3 cr.** This course will outline the basic theoretical framework, as well as the administrative principles and strategic framework, on how to manage Non-Profit organizations in charge of different kinds of institutions active in sectors like education, health care and social affairs.

**NGO 406 Gender & Development (3.0); 3 cr.** This course will treat gender inequality and its correlation with poverty which results in acute failure of human capabilities. The women's empowerment deficit in the Arab World will be examined and analysed through the Arab Human Development Reports as well as the strategies to overcome the current obstacles.

**NGO 407 NGOs and Sustainable Environment (3.0); 3 cr.** This course will examine the concept of sustainable development since the World Commission on Environment and Development in 1987 and the process initiated by the UNCED Conference in Rio 992. Main areas that will be analyzed are issues

related to human needs and the main environmental factors to take into consideration in the development process.

**NGO 408 Social Responsibility and the Private Sector (3.0); 3 cr.** This course will study how the Private Sector and Corporations interact with other Civil Society Actors in integrating social and environmental concerns in their operations and activities. Related concepts on Corporate Accountability, Governance & Citizenship as well as Social Responsibility & Ethical Investments, will be examined.

**NGO 409 Social Marketing (3.0); 3 cr.** This course will introduce the basic principles of social marketing, explaining how techniques like advertising, branding, segmentation and the marketing mix can be used to tackle important social and health problems. It will outline the relevant theories underpinning social marketing, explain the range of techniques marketer's use and show how these can be applied to specific public health challenges. It will also assess criticisms of social marketing and the ethical issues the discipline has to confront.

**NGO 410 Volunteer Management in NGOs (3.0); 3 cr.** Volunteers are the heart of many NGOs and, like employees, need recruitment, reward, incentives, contracts, termination and committees. This course will study the good practices and ethical issues around management of volunteers in NGOs and community work.  
*Prerequisite:* NGO 302

**NGO 490 Special Topics (3.0); 3 cr.** Special topics in NGO Management.

**NGO 491 (1.0); 1 cr.** Internship in an NGO, UN agency or social institution.

**NGO 492 (2.0); 2 cr.** Internship in an NGO, UN agency or social institution.

**NGO 493 (3.0); 3 cr.** Internship in an NGO, UN agency or social institution.

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## Undergraduate Courses: Political Science

**POS 101 Principles of Politics & Government (3.0); 3 cr.** Introduces the basic political philosophies and governmental processes, and the relationships between rights, liberties, and responsibilities of individuals and governments.

**POS 201 Introduction to Political Science (3.0); 3 cr.** Covers the basic concepts in political science. *Prerequisite:* ENL 107.

**POS 210 Government and Politics of Lebanon (3.0); 3 cr.** An introduction to the various characteristics and factors that have shaped the Lebanese political system in the first and Second Republics. Special focus will be on democracy and national values, the political processes and national institutions, mainly the Parliament, the Executive/Administrative Branch, and the Judicial System. Attention will be given to studying the national Constitution along with the separation of powers and administrative centralization and decentralization policies.

**POS 212 Political History of the Near East Until World War I (3.0); 3 cr.** A survey of political history and culture of the Mediterranean civilizations.

**POS 213 Introduction to Gender Studies (3.0); 3cr.** This course examines how gender plays a pervasive role in structuring social life. It emphasizes how the social constructs of ethnicity, class, gender, colonial legacy, and cultural identity intersect to legitimize the power and privilege of women and men internationally, with a special focus on the Middle East. Topics include the debate between nature versus nurture, intersections of race, class, gender, and social institutions such as family, education, work, and cultural hegemony.

**POS 240 Law and Society (3.0); 3 cr.** Nature, purposes and sanctions of law sources of law private and public law. Common and civil law, courts and administration of justice. This course is a prerequisite to all law courses. *Prerequisite:* ENL 107.

**POS 303 Government and Politics of Cyprus, Turkey and Iran (3.0); 3 cr.** This course provides an overview of the political systems in these three non-Arab MENA countries, highlighting their ideological, economic, social and cultural variables. It will provide students with insight into the historical and contemporary

ties between these countries and the Arab world, focusing on Lebanon and the Eastern Mediterranean in general.

**POS 304 Government and Politics of Israel (3.0); 3 cr.** This course provides an overview of the political system of Israel, highlighting its ideological, economic, social and cultural variables. It will introduce students to the historical, geopolitical and ideological foundations of the Israeli state, the nature of its institutions and their particular embeddedness in the Arab world, focusing on Lebanon and the Eastern Mediterranean in general.

**POS 305 Government and Politics in North Africa (3.0); 3 cr.** This course provides an overview of the political systems of the countries of North Africa, with the exception of Egypt, highlighting their ideological, economic, social and cultural variables. It will concentrate on the changing nature of their political systems, their unique relationship with Europe and the current developmental trends in the region of North Africa.

**POS 306 Government and Politics of Egypt, Syria and Iraq (3.0); 3 cr.** This course provides an overview of the political systems in these three neighboring Arab countries, highlighting their ideological, economic, social and cultural variables. Emphasis will be placed both on the historical, geopolitical and ideological foundations of these three states, the nature of their current institutions and their significance for developments in Lebanon.

**POS 307 Government and Politics in the Arab Gulf (3.0); 3 cr.** This course provides an overview of the political systems of the countries of the Arab Gulf region, highlighting their ideological, economic, social and cultural variables. It will focus on the diversity within the region, the particular role played by energy and trade and the significance of these states for the Eastern Mediterranean and Lebanon in particular.

**POS 308 Human Rights in the Middle East (3.0); 3 cr.** Survey of the fundamental political, social and cultural rights of the human being in the MENA region; the course focuses on the principles, conventions, treaties and laws ratified by governments on the international, regional and national levels and the ways through which

violations of human rights are documented and countered. Emphasis will be placed on the interplay between the human rights traditions of the West and those on the MENA region.

**POS 309 Citizenship (3.0); 3cr.** This course introduces students to the concept of citizenship and the relationship between the individual and the state. Participants learn to recognize the rights and duties of the individual, thus reinforcing their capacity for critical thinking and active engagement in public affairs.

**POS 315 Conflict Analysis and Intervention: a Multitrack Approach (3.0); 3 cr.** Conflicts are complicated processes. Choosing an appropriate conflict intervention mechanism is largely dependent on the type of conflict under study. Learning the skills to analyze disputes is required to select the most accurate intervention mechanism.

**POS 317 Political Parties, Public Opinion, Pressure Groups (3.0); 3 cr.** Analysis of pressure politics and political behavior. Impact of parties and pressure group on the governmental efficiency and the public good. Evaluation of public opinions impact on governmental decisions.

**POS 319 Democracy and Human Rights (3.0); 3 cr.** This primary aim of this course is to teach students to think critically about the political and cultural dimensions of democracy and human rights. The course focuses on different strategies of democracy and their relationship with human rights, the origins and maintenance of democracy in the modern world, and the process of democratization and its impact on the state stability and on global protection of human rights.

**POS 320 Media and Politics (3.0); 3 cr.** A study of the ways in which the mass media influence politics and vice -versa. The course explores the role that media play in providing information for citizens in the different political systems. Other topics includes: the role of mass media in campaigns and elections, the ways in which media influence public opinion, how the media influence the political process, and political attitudes and behaviors.

**POS 321 State and Local Government (3.0); 3 cr.** Places subnational politics in its social, ideological, and federal setting. Concern is with both formal structure and political process. Focus on the individual's role.

**POS 323 Minority Politics (3.0); 3 cr.** An examination of the social, cultural and economic factors which affect the political choices of minorities. Analysis of minorities political rights and actions.

**POS 331 Judicial Politics (3.0); 3 cr.** Examination of the principal actors in the legal system: police, lawyers, judges, and citizens. About half of the course is devoted to the study of judicial behavior in the courts and political and personal influences on judicial behavior.

**POS 335 Classical Political Thought and Ideologies (3.0); 3 cr.** Introduction to the origin and development of inquiry about human life and political association with particular reference to ancient and medieval philosophies.

**POS 337 Dialogue Among Civilizations (3.0); 3 cr.** This course introduces the concepts of tolerance and dialogue and demonstrates how they are the prerequisites for peaceful coexistence. It also emphasizes that terrorism represents the very embodiment of intolerance, thus raising awareness for the need for core values within the national and international communities. Moreover, makes students aware that in our globalizing and increasingly interconnected world, diverse cultures can provide a needed source of stability and continuity. The challenge is to balance this need against the risk of cultural stagnation. This course assumes that there is no simple solution. Students must always understand that cultures are living, evolving entities, not lifeless artifacts.

**POS 345 Ethics and Leadership (3.0); 3 cr.** An examination of the nature of the relation between authority and moral duty in light of the long tradition of civil and religious statutes.

**POS 350 Comparative Governments and Politics (3.0); 3 cr.** A study of the basic approaches to comparative politics. Constitutional comparisons among the political systems of the United States, Great Britain, France, China, and Japan are highlighted.

**POS 353 Governments of the Middle East (3.0); 3 cr.** A comparative study of the governmental systems and political processes of Middle Eastern countries.

**POS 382 Empirical Research Methods (3.0); 3 cr.** An exposition of the scientific methods for conducting research, collecting and analyzing data, formulating hypotheses and propositions,

and developing well-organized reports.  
*Prerequisite:* ENL 213

**POS 403 Arab-Israeli Conflict (3.0); 3 cr.** A study of the Arab-Israeli conflict and its effects on the legal, economic, and political patterns of the region and the international community.

**POS 405 Religion and Politics in the Middle East (3.0); 3 cr.** An exploration of the social, cultural, economic, and developmental roles of religion in the Middle East including the challenges, opportunities and threats that Jewish, Christian and Islamic faith-based political parties and movements are facing in the current context. Emphasis will be placed on the role of religion as a potential force for development, the role of faith-based civil society organizations and the political links to the Mediterranean region and the MENA as a whole.

**POS 406 Cultural Pluralism in the Middle East (3.0); 3 cr.** Survey of the development of Middle Eastern society focusing on the role of linguistic and confessional minorities, concepts of diversity, ethnic oppression and inter-group relations explored within a comparative historical context. Emphasis will be placed on current theoretical discourse on hybridity, diversity and the roles played by globalization, migration and cyberspace in the region.

**POS 415 Diasporas: Conflict and Peacebuilding (3.0); 3 cr.** This class introduces students to the impact of diasporas on international relations in the 21<sup>st</sup> century. Students will look at diasporas as communities whose impact needs to be understood in the host country, in the homeland and on the actual diaspora community simultaneously. Because of the ability of migration studies to intersect with development studies, international security and peacebuilding, this course will adopt an interdisciplinary approach to the study of diasporic interactions.

**POS 421 Environmental Politics (3.0); 3 cr.** Political, legal, and economic forces in environmental law and policy. Special emphasis on air and water pollution and on threat to public and agricultural land. Environmental groups and their opponents.

**POS 424 Political Economy of the Middle East (3.0); 3 cr.** Studies the major economies of the Middle East and the political-administrative systems shaping these economies. The issues addressed include: the major economic centers in the Middle East, concentration of wealth and

poverty, redistributive justice and the international factors shaping Middle Eastern politics and economics. Emphasis will be placed on theories dealing with the role of the state in shaping economic development and the difficulties faced when implementing policy decisions.

**POS 425 Understanding and Creating Social Change (3.0); 3 cr.** This course identifies the causes and patterns of change and explores the origins and types of movements leading social change. Students will be exposed to change agents and change strategies and will learn how to develop a strategic advocacy plan. They will identify proponents and opponents of change and devise a tactic that ensures enough support for the transformation to be sustainable.

**POS 442 Constitutional Law (3.0); 3 cr.** A study of the precepts and provisions of the Lebanese constitution and its contributions to policy, governance, and democracy.

**POS 445 Business Law in the Middle East (3.0); 3 cr.** This course provides an overview of business laws applied in different Arab countries, the different legal systems and their origin. Special attention will be given to corporate legislation, and to the conditions required to start a business in the MENA region. The course analyzes the legal challenges confronting foreign corporations in the region, including the role of culture and business practice.

**POS 473 Government and Politics of Latin America (3.0); 3 cr.** A study of the political systems of major Latin American countries in terms of their ideological, economic, social, and cultural variables.

**POS 475 Government and Politics of South East Asia (3.0); 3 cr.** A study of the political systems of major countries in South East Asia in terms of their ideological, economic, social, and cultural variables.

**POS 477 Government and Politics of Africa (3.0); 3 cr.** A study of the political systems of major African countries in terms of their ideological, economic, social, and cultural variables.

**POS 479 Government and Politics of the United States (3.0); 3 cr.** A study of the constitution of the American government and the determinants of the political process.

**POS 480 Internship 1 cr. or POS 481 Internship 2 cr. or POS 482 Internship 3 cr.** A supervised on-the-job working experience in International Affairs, Public Administration or Political Science. The internship will be done in cooperation with recognized international and national institutions and organizations from the public and private sector. Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire new skills. A minimum of 120 hours of internship is required. A detailed report is to be submitted as a record of the work accomplished. *Prerequisite:* Senior standing.

**POS 488 Current Issues in Political Science (3.0); 3 cr.** A seminar highlighting topic areas and theoretical approaches of particular interest to political science as a profession. This course will deal with both the critical thinking and practice in a specific area. The content and focus of the course will be altered from semester to semester in order to remain up to date with technical experience and scholarly discourse in the field.

**POS 490 Senior Study - Special Topics in Political Science (3.0);3 cr.**

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## The Degree of Master of Arts in Political Science

The Department of Political Science offers graduate work leading to the Master of Art in Political Science. This Master's program is aimed at those students planning or embarking upon a career in public service and in related fields.

### Admission Requirement

In addition to the University graduate admission requirements, applicants should have a B.A. in Political Science, Public Administration, International Affairs and Diplomacy, International Law, or other related fields.

Successful passing of the EET Entrance Exam with a minimum score of 650 is required. Students' undergraduate GPA of 3.0 minimum, work experience, letters of recommendation, motivation for a career and leadership are all taken into consideration. The Faculty may require the GRE exam for non-NDU students, and the following prerequisite courses may be required of non-major applicants: IAF 211, POS 201, POS 210, or equivalent by petition.

### Graduation Requirements:

Students seeking the degree of M.A. in the Faculty of PSPAD must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

1. 36 credits of course work in addition to a comprehensive written and oral examination; or
2. successful completion of 30 credits course work and six credits thesis.

### Degree Requirements (36 credits)

#### Core Requirements

IAF 601, PAD 604, POS 681

**9 cr.**

#### Major Electives

IAF 604, IAF 605, IAF 615, IAF 633, IAF 641, IAF 645, PAD 618, PAD 627, PAD 652, PAD 654, POS 611, POS 619, POS 651, POS 659

**15 cr.**

#### Free Electives

*Option I:* Thesis 6 cr. (POS 699) in addition to 30 cr. of course work.

*Option II:* Successful completion of 36 credits of course work culminating in comprehensive written and oral exams.

**6 or 12 cr.**

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## The Degree of Master of Arts in Political Science

### NGOs Emphasis

This program is designed to provide students with in-depth knowledge in the field of International and Civil Society Organizations and specifically NGOs and NPOs. The Master's program is aimed at those students planning or embarking upon a career in independent international, regional and local organizations and those that operate under the umbrella of the United Nations and its various agencies, as well as other major development actors in the MENA-region and Arab World and beyond.

### Admission Requirements

To be eligible for admission to a graduate program, an applicant must hold a Bachelor degree or its equivalent from an accredited institution of higher education preceded by a secondary school certificate recognized by the Lebanese Ministry of Education as equivalent to the Lebanese Baccalaureate Part II. The minimum GPA must be 3.0/4.0.

### Graduation Requirements

In addition to the University graduate admission requirements, applicants should have a BA in Political Science – NGOs Concentration, Political Science, International Relations, Public Administration or any other BA or BS degree related to the scope and purpose of a NGOs vocation.

### Degree Requirements (36 credits)

#### Core Requirements

These are 3 courses that introduce you to the basic theories and practices of international organizations and specialized agencies, public administration and scientific methods for conducting research in all later courses.

**9 cr.**

#### Major Electives

five courses of your choice from the NGO program will give you advanced knowledge and varied aspects of Civil Society and development, introduce you to tools for project, human resources and financial management, strategic planning, fundraising, monitoring and evaluation, as well as advocacy and social marketing, to mention only some of the topics.

**15 cr.**

#### Free Electives

*Option I:* you complete 6 elective credits and take the thesis course of 6 credits to conduct and write a research on a significant topic related to the area of your specialization.

*Option II:* you complete 12 elective credits and sit for comprehensive written and oral exams.

**6 or 12 cr.**

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## Graduate Courses: NGOs

**NGO 601 Development Theory and Practice. (3.0); 3 cr.** This course deals with topics and issues related to the current development challenges in the MENA-region in the context of the global order. Case studies of NGOs that are active in different areas will be selected as well as different examples of sustainable projects and programs.

**NGO 602 Changing Role of Civil Society Organizations in the MENA-region (3.0); 3 cr.** The focus of this course is on the changing role of Civil Society Organizations in the MENA-region based on existing and emerging NGO-networks. The concept of Civil Society is being examined and challenged.

**NGO 603 NGO Management (3.0); 3 cr.** A comprehensive overview on issues like good governance and accountability, empowerment, partnership, measuring performance & results as well as the contexts in which NGOs are operating. Issues like advocacy and service-delivery will be examined as well as the existing paradigms in development management.

**NGO 604 Organization Development (3.0); 3 cr.** This course will examine existing theoretical models around Organization Behavior in the Civil Society Sector. Organizational Assessment & Change, OD-interventions, Organizational Culture, Leadership, and principles and practices for Organizational Learning are other main components of the course.

**NGO 605 Civil Society, NGOs, Networking and Advocacy (3.0); 3 cr.** An examination of how NGOs are networking and campaigning for human rights and core social issues with the State, the public opinion, the private sector and decision-makers on different levels.

**NGO 606 Civil Society, Welfare State and Social Policy (3.0); 3 cr.** This course will critically analyze how social policy is being shaped and social services delivered by State, Private and NGO Actors in changing political and social contexts both globally and in the MENA-region.

**NGO 607 Civil Society & Globalization (3.0); 3 cr.** This course will critically study globalization, its causes and effects on emerging Civil Societies and NGOs.

**NGO 608 Guiding Values & Principles in Civil Society (3.0); 3 cr.** A critical examination

of the values, definitions and concepts and historical background to Civil Society in the West and how it's being applied in the Development sector.

**NGO 609 NGOs and Human Resource Management (3.0); 3 cr.** A comprehensive study on HRM within the framework of Civil Society. Emphasis on Best Operating Practices (BOP), benchmarking, teamwork, staff empowerment, self-appraisal, incentives & recognitions, purposeful internal and external communication.

**NGO 610 Financial Management for NGOs (3.0); 3 cr.** This course will treat financial management in non-profit organizations with case studies on how to prepare financial reports and the accounting systems in accordance with Generally Accepted Accounting Principles.

**NGO 611 Advanced Course in Project Management for NGOs (3.0); 3 cr.** A comprehensive view with case studies on how NGOs prepare, design, fund, manage, implement, monitor and report projects mainly in the development sector.

**NGO 612 Project Cycle Management & Log-Frame Approach (PCM & LFA) (3.0); 3 cr.** This course will critically examine how NGOs are using PCM and LFA in development and humanitarian assistance projects. The principles of PCM and LFA will be introduced as well as key aspects like the intervention logic, how to define objectively measurable and verifiable indicators, assumptions and risks. *Prerequisite:* NGO 611

**NGO 613 Monitoring and Evaluation (3.0); 3 cr.** A comprehensive overview how development projects are being monitored and evaluated by the main stakeholders. Other central topics include quantitative and qualitative methods on how to collect, store and analyze data and information as well as how to design the M/E-process as an integral part of the project management system. *Prerequisite:* NGO 611

**NGO 614 Impact Assessment for Development (3.0); 3 cr.** An overview of how performance, the outcomes and impact can be measured in the development sector and what kind of indicators are being used.

**NGO 615 Strategic Planning for NGOs (3.0); 3 cr.** This course will treat how NGOs can become more proactive, efficient, focused and committed in their service delivery. The main focus will be to assess current strengths, weaknesses, opportunities and threats and elaborate a strategic framework with the vision & mission statements, guiding values & principles and appropriate plans, programs and projects.

**NGO 616 The Participatory Approach in Development Cooperation (3.0); 3 cr.** This course will treat different kinds of participatory concepts and tools, such as Participatory Rural Appraisal (PRA), Participatory Learning & Action (PLA), Rapid Rural Appraisal (RRA) and how they are being applied in development cooperation as a mean to empower the poor and marginalized.

**NGO 617 Participatory Poverty Assessment (PPA) (3.0); 3 cr.** This course will critically examine how to conduct a Participatory Poverty Assessment with existing tools for analysis and change. Cases studies from mainly the Arab World will be used and examples of different studies of poverty assessment will be analyzed and compared. *Prerequisite:* NGO 616

**NGO 618 Advanced course in Management of Social Institutions (3.0); 3 cr.** This course will examine how to handle financial and human resources within the framework of social institutions in sectors like education, health care and social affairs. This course will build on the subjects, concepts and theoretical models analyzed in NGO 405.

**NGO 619 Advanced Course in NGOs and Development (3.0); 3 cr.** A comprehensive analysis with case studies on NGOs in the development process. Current practices on social services delivery will be critically examined as well as the right-based approach, in contrast to more traditional welfare and charity-oriented concepts.

**NGO 620 Rural Development (3.0); 3 cr.** A comprehensive analysis of rural development in order to make long-term improvements in rural living conditions with case studies on food security, safety and quality production of food products, access to markets, sustainable development, environmental concerns, the community based approach and current challenges and opportunities.

**NGO 621 Advanced course on Gender & Development (3.0); 3 cr.** This course will examine and analyze gender inequality and its correlation with poverty which results in acute failure of human capabilities. The capability approach with its systematization and theoritization, based on current case studies, is also a central part of the course.

**NGO 622 NGOs and Micro-Credits (3.0); 3 cr.** This course will treat the different kinds of micro credits schemes and income-generation activities that NGOs are involved in with different stake-holders. Special case studies from the MENA-region will be analyzed and examined.

**NGO 623 Advanced Course on Religion and Development (3.0); 3 cr.** This course will analyze the social and developmental roles of secular and religious NGOs in the Middle East and beyond. The main focus will be on the praxis and the action carried out by Faith Based organizations and Religious Charities.

**NGO 624 Islamic Charities and Faith Based Organizations in the MENA-perspective (3.0); 3 cr.** This course will analyze the growing importance of Islamic charities as a global phenomenon in social service delivery and as emerging NGOs in the development sector in the MENA-region and beyond.

**NGO 625 Christian Charities and Faith Based Organizations in the MENA-perspective (3.0); 3 cr.** This course will analyze the way Christian Charities and NGOs are operating in the development sector and the challenges they are facing in the MENA-region and beyond and how they are organized.

**NGO 626 Disaster Response & Emergency Preparedness (3.0); 3 cr.** This course will study several cases of relief operations regarding man-made and humanitarian disasters utilizing the Humanitarian Charter and Minimum Standards in Disaster Response.

**NGO 627 Corporate Social Responsibility in the MENA-region (CSR) (3.0); 3 cr.** This course will analyze current models of CSR and how the principles can be applied in the Arab World and beyond. Some real life examples will be studied. Related concepts on Corporate Accountability, Governance & Citizenship as well as Social Responsibility & Ethical Investments, will be examined.

**NGO 628 Social Marketing for Advocacy and Campaigning (3.0); 3 cr.** This course will analyze how Civil Society Organizations are using social marketing techniques like advertising, branding, and segmentation in advocacy and campaigns. The course will build on the issues presented in NGO 409.

**NGO 629 Fundraising Strategies and Proposal Writing for NGOs (3.0); 3 cr.** This course will examine how NGOs can look for and approach potential donors and specifically how to prepare a written project proposal with all its components. *Prerequisite:* NGO 611

**NGO 630 Managing Diversity in NGOs (3.0); 3 cr.** An examination on the impact of confessional and cultural differences among staff and partners of NGOs, both local and

international, including different perceptions of leadership, delegation of tasks and responsibilities, and how to overcome and learn from the differences and develop a well-functioning and efficient work team.

**NGO 690 Special Topics (3.0); 3 cr.** Special topics in NGO Management.

**NGO 691 (1.0); 1 cr.** Internship in an NGO, UN agency or social institution.

**NGO 692 (2.0); 2 cr.** Internship in an NGO, UN agency or social institution.

**NGO 693 (3.0); 3 cr.** Internship in an NGO, UN agency or social institution.

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### Graduate Courses: Political Science

**POS 601 Contemporary Political Theory (3.0); 3 cr.** Analyzes the dominant and recent trends in political science theory, political philosophy, and Western political thought. It focuses on the major theories and theorists, Western and non-Western, whose writings have influenced the academic field and research institutions, and who have made their impact on the understanding and practice of politics.

**POS 603 Comparative Legislatures and Legislative Processes (3.0); 3 cr.** Analyzes the structures, procedures and norms governing the legislature: making laws, elections, representation, and relations with other branches of government. It focuses on the functions and role of legislatures in general and covers legislatures of select major and non-major states in the international system and the characteristics which make them efficient and influential in the cases of some, or render them ineffective or marginal in the cases of others.

**POS 605 Political Parties (3.0); 3 cr.** Studies the structures, activities, and role of political parties in government and society. Emphasis is on the positive role of the party in developing the citizen, the political process, and political stability of states, and the factors which make parties effective and relevant. It distinguishes between two broad categories of parties: ideological parties and issue-oriented parties.

**POS 607 Civil Liberties (3.0); 3 cr.** Examines the development of constitutional law with regard to civil liberties and the protection of all

citizens, including women and children, minorities, and ethnic, linguistic, and religious groups. The functions and roles of the courts to protect civil liberties represent one focus of the seminar, while the role of civic groups to promote them represents another. The course is supplemented by the study of case studies related to civil liberties issues.

**POS 609 Security and Conflict Resolution (3.0); 3 cr.** Reviews changing patterns of war and security since the early twentieth century. Introduces students to a wide variety of literature and cases. A special focus is on methods, techniques and the management of conflicts. Different approaches are analyzed: management of conflicts bilaterally between states, multilaterally through international or regional organizations, and through the roles of the good offices of diplomats or personalities of international stature.

**POS 611 The Middle East in International Politics (3.0); 3 cr.** The seminar examines the place of the Middle Eastern countries in the world system and the roles played by outside powers in the Middle East.

**POS 613 Politics and the media (3.0); 3 cr.** Role of the media in shaping local and international politics and in influencing agenda setting nationally and internationally. Emphasis is on the role of the various media at the local, national, and inter-state settings, and on ethical conduct, professional norms, general

organization, patterns of ownership, and the use of propaganda for various purposes.

**POS 617 Arab and Islamic Political Thought (3.0); 3 cr.** Examines the major orientations in contemporary Arab and Islamic political thought in the context of their socio-political settings as well as the international setting. Covers Arab and Islamic thought since the early twentieth century, with primary focus given to writers and/or ideologies that have emerged since WWII, the influence of political thought on the rise of fundamentalist groups.

**POS 619 Political Communication (3.0); 3 cr.** Diffusion of persuasive political communications through standard and created media. Examination of campaign techniques (i.e., research on issues and themes, electorate polling, thematic media approaches, campaign strategies) in management and administration.

**POS 625 Policy Analysis and Choice (3.0); 3 cr.** Survey of techniques for systematic analysis and evaluation of policy questions and programs, formulation of policy alternatives, cost-benefit analysis, and application of statistical computer models.

**POS 651 Contemporary Middle East Governments and Political Processes (3.0); 3 cr.** A comparative study of the governmental systems and political processes of the contemporary Middle Eastern countries and their role in world affairs. Topics include elites and political systems, democratization vs. fundamentalization, internal and external conflicts and their impact on nation-building, and constitutional law in the Arab states.

**POS 659 Comparative Defense and Intelligence Studies (3.0); 3 cr.** An evaluation of national defense policies of the major powers and the strategic roles of key regions in the international military balance. Emphasis is directed to the study of major intelligence

agencies and the role of intelligence in general (military, industrial, etc.) in national security.

**POS 661 The European Integration (3.0); 3 cr.** Topics covered include an exploration of the economic, political, social, demographic, constitutional, and legal patterns of the European integration process. The course traces the development of the European Union and evaluates its impact on member states, their economies, collective security, and international trade. A particular attention is given to the European Union's interaction with the other two major economic powers: The United States and Japan.

**POS 681 Research Methods (3.0); 3 cr.** The course introduces students to the scientific methods for conducting research, collecting data, analyzing these data, formulating hypotheses and propositions, and developing these propositions into coherent, well-organized reports.

**POS 682 Advanced Research Methodologies (3.0); 3 cr.** Focuses primarily on quantitative research methods and their application through various computer programs to conduct and apply socio-political research relating among other things to elections, public opinion polls, and demographic and economic statistics. The objective is to train advanced graduate students to conduct and operationalize major social and political research through the application of relevant methodologies.

**POS 699 Thesis in Political Science (6.0); 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of Political Science. It requires the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound report available to later researchers.

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## The Degree of Master of Arts in Political Science

### Comparative Law Emphasis

In the present world referred to as the “Global Village”, and in view of the international global system controlled to a great extent by non-governmental, multi-national corporations; where governments, peoples, businesses and others do interact on a daily basis through an enormity of contracts, regulations, laws and procedures, it has become necessary to stress in academic curricula the importance of Comparative Law. This specialty would help students of law understand the basic different legal systems applied in the world.

### Admission Requirement

In addition to the University graduate admission requirements, applicants should have a B.A. in Political Science, or Public Administration, International Affairs and Diplomacy, International Law, or other related fields.

Successful passing of the EET Entrance Exam with a minimum score of 650 is required. Students’ undergraduate GPA of 3.0 minimum, work experience, letters of recommendation, motivation for a career and leadership are all taken into consideration. The Faculty may require the GRE exam for non-NDU students, and the following prerequisite courses may be required of non-major applicants: POS 201, IAF 401, POS 442.

### Graduation Requirements:

Students seeking the degree of M.A. in the Faculty of PSPAD must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

1. 36 credits of course work in addition to a comprehensive written and oral examination; or
2. successful completion of 30 credits course work and six credits thesis.

### Degree Requirements (36 credits)

#### Core Requirements

CPL 603, CPL 605, CPL 625.

**9 cr.**

#### Major-related Electives: choose 5 courses

CPL 607, CPL 611, CPL 615, CPL 627, CPL 629, CPL 633, CPL 635, CPL 637, CPL 639, CPL 645, CPL 661, CPL 681, CPL 689, CPL 691

**15 cr.**

#### Free Electives

**6 or 12 cr.**

*Option I:* thesis 6 cr. (CPL 699) in addition to 30 cr. Of course work.

*Option II:* Successful completion of 36 credits of course work culminating in comprehensive written and oral exams.

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## Graduate Courses: Comparative Law

**CPL 603 Comparative Concepts and Issues of Justice (3.0); 3 cr.** Issues relating to justice policies, perspectives, techniques, roles, institutional arrangements, management, issues of research and innovative patterns to prevent crises and delinquency

**CPL 605 Current Issues in Human Rights and Global Justice (3.0); 3 cr.** The first part of this course focuses on the dramatic changes in the creation and enforcement of international human rights law that have taken place since World War II. Notwithstanding serious challenges from a variety of sources, no government in the world publicly dissents from the acceptance of support for human rights. Students will examine the existing international human rights regime and explore the impact of the UN charter, the Universal Declaration, and various multilateral and regional human rights treaties and regimes on the behavior of nations today. Using cases from the M.E., Europe, US and international courts, the course will the focus on ethical issues in human rights. Topics will include political repression, informed consent, and human rights. Law can be used to promote human rights

**CPL 607 Comparative Law of Lawyering and the Legal Profession (3.0); 3 cr.** Lawyers often suppose that the entire law of professional responsibility is contained in the profession's codes. However, "other" law (criminal law, tort law, procedural law, securities law, etc) plays an equally and sometimes more important role in regulating a lawyer's conduct. This three-credit course will focus on an examination of the ways in which ethics' codes and "other" laws work together to shape a lawyer's course of action in different contexts (business transactions, civil litigation, government representation criminal defense.) In addition, students will explore the contours of the profession.

**CPL 611 Comparative Constitutional Law (3.0); 3 cr.** The aim of this seminar is to develop an understanding of major international constitutional traditions. Students will focus in significant part upon the French, German and other constitutions, using the American Constitution as a comparative background. The course will cover both the citizens rights provisions and basic structures of government.

**CPL 615 Comparative Administrative Law (3.0); 3 cr.** Law governing the organization,

powers, contracts procedures of the executive and administrative establishments.

**CPL 625 Elements of World Law (3.0); 3 cr.** This course will outline what law is and how it works among nations and explore the workings of leading international organizations. It examines practical and normative issues in international security, human rights, diplomacy, international finance, and international commerce. Students will be invited to explore a juridical landscape that is peculiarly different from the one they have grown accustomed to. The course will contrast the methods, the sources, and the institutions of the international legal system with the methods, the sources, and the institutions of major world legal systems making

**CPL 627 Employment and Labor Law (3.0); 3 cr.** This course examines the legal framework governing the relationship between employers and workers. It explores common and Roman laws principles, questions of occupational safety and health; employment discrimination of various sorts, and private sector unionization and collective bargaining. There will be discussion of the employees' selection of unions as collective bargaining representatives collective bargaining and regulation of the bargaining process, use of economic weapons such as strikes and boycotts, and the enforcement of collective bargaining agreements. A recurrent question is the choice of various "models" of employment relationships: freedom of contract, information and incentives, unionization, and direct regulation.

**CPL 629 Comparative Substantive Criminal Law (3.0); 3 cr.** Criminal liability, crimes against persons' property and society. Government sanctions of individual conduct as formulated by courts and legislation.

**CPL 633 Comparative Juvenile Justice System (3.0); 3 cr.** This seminar will consider how our legal systems should respond to crimes committed by minors. In particular, students will consider the appropriateness of treating minors differently from adults in the process of preventing, adjudicating, and imposing consequences for criminal behavior. Readings on adolescent development and urban sociology will help discussions.

**CPL 635 Comparative Media Law (3.0); 3 cr.** This course will survey legal issues involving the traditional mass media primarily newspapers, broadcasting, and cable. Some emphasis on structural regulations will be applied.

**CPL 637 Electronic Commerce Law (3.0); 3 cr.** The seminar will focus on both the technology involved in electronics, commerce and the law surrounding the emerging field. This course begins with an overview of the history and infrastructure of the Internet, providing students with a working knowledge of the terminology and technology they will likely encounter working in this legal field. Additional background discussion will involve the concept of regulation of the Internet, global vs. national perspectives on the law of the Internet, and conceptions of sovereignty. Topics may include electronic contracts, digital signatures, cybernatories, the application of traditional UCC doctrines such as the mailbox rule and the statute of frauds to in e-commerce.

**CPL 639 Comparative Insurance Law and Policy (3.0); 3 cr.** This course will examine legal issues relating to first-party and third-party insurance, as well as limited aspects of domestic insurance regulation. Topics will include the special principles of construction applicable to insurance policies, particular problems arising under life and health policies

**CPL 641 Comparative Business Law (3.0); 3 cr.** Legal and ethical aspects of agency, partnership corporations, bankruptcy, antitrust, securities and other regulations and institutions.

**CPL 643 Comparative Religious Law (3.0); 3 cr.** An in-depth study of the relationship between religion and the law. The study focuses on Islamic, Christian and Jewish laws.

**CPL 645 Comparative Commercial Arbitration: Domestic and International (3.0); 3 cr.** Arbitration is a widespread and fast-growing method for resolving commercial disputes. This class examines the legal regime that governs commercial arbitration in both the domestic and international realms. The class begins with a brief overview of the legal regime governing purely domestic arbitration, and then

explores the different (but related) legal regimes that govern international commercial arbitration. Students will look at domestic and foreign statutes, national and international cases, treaties, and several arbitrate institutions.

**CPL 661 Globalization and Sovereignty in International Intellectual Property Law (3.0); 3 cr.** This course focuses upon the creation, negotiation, and implementation of multinational treaties and organizations aimed at correcting the economic inefficiencies of the international intellectual property laws. Through a rigorous reading of basic legal texts, scholarly comment, and various international working papers, students in this seminar will examine the possible barriers to harmonization efforts

**CPL 681 Comparative Family Law (3.0); 3 cr.** This course examines the law's regulation of the creation and dissolution of family relationships, and the legal rights and responsibilities that family members have in the context of their family status. These issues will be examined in both modern and historical contexts, with particular emphasis on marital relations. Topics to be covered include: polygamy, marriage and parenthood interracial marriage and adoption, same-sex marriage and parenthood, surrogate motherhood, the economic consequences of divorce, the dissolution of non-marital relationships, and the termination of parental rights.

**CPL 689 Comparative Environmental Law (3.0); 3 cr.** This course is designed to provide a broad overview of major national and international legislations with the environment, including a clean air, clean water and endangered species. Issues of institutional competence and legitimacy, such as the allocation of authority between international, national governments.

**CPL 691 Case Studies: Criminal Law (3.0); 3 cr.** Studies important cases in criminal law and provides comparison for such cases in Roman and Common law.

**CPL 699 Thesis in Comparative Law. (6.0); 6 cr.**

## DEPARTMENT OF PUBLIC ADMINISTRATION

The Department of Public Administration offers three programs leading to the degrees of Bachelor of Arts in Public Administration and in Criminal Justice, and Master of Arts in Public Administration.

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### The Degree of Bachelor of Arts in Public Administration

The program is designed to equip students with comprehensive awareness of the discipline of Public Administration. The major courses will provide students with in-depth knowledge of the field, and will afford them a smooth and solid transition into the graduate studies as well as professional preparation in the following areas: public sector in various ministries of government, budgeting and the budget process, foreign service, international and regional organizations, multi-national corporations, banking institutions, and other enterprises.

#### Degree Requirements (105 credits)

##### General Education Requirements 33 cr.

###### A. Communication skills in English and Arabic (6 cr. ENL + 3 cr. ARB)

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

###### B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

###### C. Cultural Studies and Social Sciences (6 cr.)

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301

###### D. Citizenship (6 cr.)

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

###### E. Science and Technology (6 cr.)

**3 cr. From:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. From:**

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

##### Major Requirements 45 cr.

IAF 401, PAD 201, PAD 241, PAD 302, PAD 312, PAD 332, PAD 421, PAD 422, PAD 461, PAD 462, PAD 490, POS 210, POS 345, POS 382, POS 442.

##### Electives in PSPAD (21 cr.) 21 cr.

##### Free Electives 6 cr.

##### Minor in PAD 18 cr.

Required: PAD 201, PAD 302, PAD 332

9 credits of electives from PAD courses

**Bachelor of Arts in Public Administration  
Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

POS	201	Intro. To Pol. Science	3 cr.
IAF	211	Intro. To Intl. Relations	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
CSC	201	Computer & its Use	3 cr.
POS	210	Gov. & Inst. Of Leb.	3 cr.

**Spring Semester I (15 Credits)**

PAD	201	Intro. To Public Admin.	3 cr.
POS	240	Law & Society	3 cr.
HIT	211	Hist. Of Leb. & M.E.	3 cr.
ECN	212	Principles of Macro - Economics	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester II (15 Credits)**

PAD	241	Admin. Law	3 cr.
POS	301	Modern Pol. Ideologies	3 cr.
POS	350	Comp. Governments & Pol.	3 cr.
ENL	230	English in the Workplace	3 cr.
—	—	GER	3 cr.

**Spring Semester II (15 Credits)**

POS	442	Leb. Constitutional Law	3 cr.
PAD	302	Elements of Pub. Policy	3 cr.
POS	353	Gov. of the M.E.	3 cr.
PAD	332	Admin. Beh. & Org. Theory	3 cr.
—	—	GER	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.

**Fall Semester III (15 credits)**

POS	345	Ethics & Leadership	3 cr.
IAF	407	Intl. & Regional Org.	3 cr.
PAD	312	Regulatory Politics	3 cr.
PAD	322	Intl. Pol. Economy	3 cr.
—	—	Major Elective	3 cr.

**Spring Semester III (15 Credits)**

PAD	321	State & Local Gov.	3 cr.
PAD	421	Fiscal & Budgetary Pol. Of Leb.	3 cr.
PAD	422	Pol. Admin. Dev.	3 cr.
PAD	462	Public Management	3 cr.
PAD	490	Special Topics in P.A.	3 cr.
—	—	Free Elective	3 cr.

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## Undergraduate Courses: Public Administration

**PAD 201 Introduction to Public Administration (3.0); 3 cr.** Role of the Administration in the Political process with an examination of the basic concepts of Bureaucracy. This course is a prerequisite to all PAD courses. *Prerequisite or Corequisite:* ENL 107.

**PAD 241 Administrative Law (3.0); 3 cr.** (Arabic/English) Studies law governing the organization, powers and contracts procedures of the executive and administrative establishments.

**PAD 302 Elements of Public Policy (3.0); 3 cr.** Studies consumer protection, natural resources, environmental protection in relation to science and technology.

**PAD 312 Regulatory Politics (3.0); 3 cr.** Studies the development and implementation of governmental policies regulating business activities, consumer and labor.

**PAD 322 International Political Economy (3.0); 3 cr.** Studies the contemporary issues in international political economy approaches, global welfare, international debts, equality, ecology.

**PAD 332 Administration Behavior and Organization Theory (3.0); 3 cr.** Examines the consideration of theories seeking to explain administrative behavior, evidence for and against those theories as applied to governments.

**PAD 421 Fiscal and Budgetary Policy of Lebanon (3.0); 3 cr.** A study of the budgetary process from a legal and economic perspective. Topics include, among others, the public debt, taxation, and financial policy.

**PAD 422 Political Administration Development (3.0); 3 cr.** Illustrates topics such as: Politics of social changes, comparative urbanization, political administrative development caused by various legal, social, religious and political factors.

**PAD 435 Regional & Urban Planning (3.0); 3 cr.** Examination of the theory, objectives, and methods of the planning process stressing economic distribution and ideological differences. *Optional:* case study.

**PAD 461 Comparative Public Administration (3.0); 3 cr.** Comparative public administration and theory. Bureaucracies and their input on the political development process.

**PAD 462 Public Management (3.0); 3 cr.** Analysis of advanced public management techniques. Problems of implementing techniques: Case study and research.

**PAD 490 Senior Study - Special Topics in Public Administration (3.0); 3 cr.** Special topics in Public Administration.

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## The Degree of Bachelor of Arts in Public Administration

### Criminal Justice Emphasis

#### Criminal Justice Program (CJS)

The program of Criminal Justice studies the interrelatedness of law enforcement, court services, correction, juvenile justice and private security within the criminal justice continuum.

#### Objectives

In its institutional thrust as an academic center of higher education, Notre Dame University, Louaize opted to join the on-going dialogue on man as a socio-political constituent. More than ever before, the world's progress is influenced by the protection and enhancement of human rights and security within the confines of a democratic political system based on equality and justice.

The program is designed to provide students with knowledge and awareness of the legal system in relation to police training, law enforcement, court services, correction institutions, criminal rehabilitation, crime prevention and general security of the citizen.

The program will equip students with broad knowledge and afford them a smooth and solid professional preparation in the areas of social security, and legal services.

### Degree Requirements (105 credits)

#### General University Requirements

27 cr.

##### A. Communication Skills in English and Arabic (6 cr. ENL + 3 cr. ARB)

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)

REG 212, REG 213, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

##### C. Cultural Studies and Social Sciences (6 cr.)

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301

##### D. Citizenship (6 cr.)

HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

##### E. Science and Technology (6 cr.)

**3 cr. From:** CSC 201, MAT 201, MAT 202, STA 202, **and 3 cr. From:**

AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, PHS 211

#### Core Requirements

30 cr.

CJS 200, CJS 201, CJS 222, CJS 250, CJS 315, SOL 313, POS 442, POS 240, CJS 411, CJS 420

**Major Requirements**

CJS 211, CJS 311, CJS 321, CJS 322, CJS 430, CJS 433, CJS 441, CJS 461, CJS 487, CJS 490.

**30 cr.**

**Major Electives:**

Choose 2 courses from: PAD 201, PAD 241, PAD 322, CJS 455, SOL 312, PSL 201, IAF 402, POS 323, POS 240, POS 382, POS 421.

**6 cr.**

**Free Electives**

**6 cr.**

**Bachelor of Arts in Public Administration  
Criminal Justice Emphasis - Suggested Program (105 Credits)**

**Fall Semester I (15 Credits)**

POS	201	Intro. to Pol. Science	3 cr.
CJS	200	Hist. of Criminal Justice	3 cr.
ENL	213	Sophomore Rhetoric	3 cr.
CSC	201	Computer & its Use	3 cr.
—	—	GER	3 cr.

**Spring Semester I (15 Credits)**

CJS	201	Survey of Criminal Justice	3 cr.
POS	240	Law & Society	3 cr.
ENL	230	English in the Workplace (GER)	3 cr.
CJS	222	Crime & Justice in Leb.	3 cr.
—	—	Major Elective	3 cr.

**Summer Session I (6 Credits)**

—	—	GER	3 cr.
—	—	GER	3 cr.

**Fall Semester II (15 Credits)**

CJS	211	Crime & Justice in America	3 cr.
CJS	250	Introd. To Private Security	3 cr.
CJS	311	Pol. Violence: Strategy, Tac. & Prescription	3 cr.
CJS	315	The Correctional Community	3 cr.
SOL	313	Family Violence & Child Abuse	3 cr.

**Spring Semester II (15 Credits)**

CJS	321	Peace Officers Standards & Trg.: Adm.	3 cr.
POS	442	Lebanese Const. Law	3 cr.
CJS	322	Peace Officers Trg.: Statues	3 cr.
CJS	430	Lebanese Criminal Law	3 cr.
—	—	GER	3 cr.

**Summer Session II (9 Credits)**

—	—	Major Elective	3 cr.
—	—	Free Elective	3 cr.
—	—	GER	3 cr.

**Fall Semester III (15 Credits)**

CJS	411	Org. & Adm. In Criminal Justice	3 cr.
CJS	420	Critical Issues in Law Enforcement	3 cr.
CJS	433	Ethical Studies in Criminal Justice	3 cr.
CJS	441	Probation & Parole	3 cr.
—	—	Free Elective	3 cr.

**Spring Semester III (15 Credits)**

CJS	461	Juvenile Justice Processes	3 cr.
CJS	487	Research in Criminal Justice	3 cr.
CJS	490	Special Topics in Criminal Justice	3 cr.
—	—	Major Elective	3 cr.
—	—	Major Elective	3 cr.

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## Undergraduate Courses: Criminal Justice

**CJS 200 History of Criminal Justice (3.0); 3 cr.** An introduction to the historical development of the Roman and Anglo-American criminal justice systems from their inception to the present time.

**CJS 201 Survey of Criminal Justice (3.0); 3 cr.** Overview concerning an understanding of the purpose of law enforcement, courts, penal institutions, probation, parole, and the role of the police officer in contemporary society.

**CJS 211 Crime and Justice in America (MGM) (3.0); 3 cr.** An overview of the components, structure, and functioning of the criminal justice system in America, including crime victims, law enforcement, courts, corrections, probation, parole, community corrections and juvenile justice

**CJS 222 Crime and Justice in Lebanon (3.0); 3 cr.** An overview of the components, structure, and functioning of the criminal justice system in Lebanon, including crime victims, law enforcement, courts, corrections, probation, parole, community corrections and juvenile justice. The majority of course time will document the failures of the system to provide equal justice to all people, especially women, children and people of culturally diverse backgrounds.

**CJS 250 Introduction to Private Security (3.0); 3 cr.** Introduces students to the principles of private security. Includes threat assessment, risk prevention, protection of assets, security systems, and a consideration of the issues, standards and goals of private security.

**CJS 311 Political Violence: Strategy, Tactics and Prescriptions (3.0); 3cr.** Examines the practice of political violence: the strategy and tactics adopted by those who engage in violence as well as those who eschew violence.

**CJS 315 The Correctional Community (3.0); 3 cr.** Critical examination of historical development and theories in the functions of correctional development, theories and institutions of punishment and social control. Analysis of contemporary issues: (1) the social systems of prisoners and guards; (2) institutional administration and legal issues in management; policy and strategies of intervention; (3) decision-making in sentencing and parole; and (4) treatment and custodial philosophies and

programs. Emphasis will be on a systemic evaluation of research literature.

**CJS 321 Peace Officers Standards and Training: Administration (3.0); 3cr.** Study of principles of law enforcement, career influences, stress/crisis intervention, crime prevention, community relations, court testimony, law enforcement communications, and cultural awareness.

**CJS 322 Peace Officers Standards and Training: Status (3.0); 3 cr.** Study of Lebanese Status relating Lebanon Criminal Code, law enforcement procedures relating to search, arrest, confessions, identification, and evidence, and of Lebanese Status relating to juvenile justice.

**CJS 411 Organization and Administration in Criminal Justice (3.0); 3 cr.** An overview of the principles of organization and administration in criminal justice. Emphasis is placed on current theories of organization as they relate to the needs of the criminal justice process.

**CJS 420 Critical Issues in Law Enforcement (3.0); 3 cr.** An overview of the broad spectrum of critical issues facing contemporary law enforcement officials in a free society. Areas relating to ethnic, tribal and confessional tension, civil disobedience, police conduct, unionization, civil disturbances and professionalism within law enforcement are discussed.

**CJS 430 Criminal Law (3.0); 3 cr.** Principles of criminal Liability, defenses criminal prosecution, elements of major crimes.  
*Prerequisite:* CJS 222

**CJS 431 Criminal Procedures (3.0); 3 cr.** Development of the law of criminal procedures from arrest through post-trial proceedings.  
*Prerequisite:* CJS 222

**CJS 433 Ethical Studies in Criminal Justice (3.0); 3 cr.** Development of ethical decisions relating to criminal justice issues.

**CJS 441 Probation and Parole (3.0); 3 cr.** Examines probation and parole as organizations, sentencing dispositions, and medecures of rehabilitation. The student conducts simulated interviews, pre-sentence investigations and prepares recommendations to the court.  
*Prerequisite:* CJS 222

**CJS 455 Private Security and the Criminal Justice Community (3.0); 3 cr.** The powers and authority of private security personnel. Stresses requirements and restrictions on private security. Includes criminal and civil liabilities faced by private security personnel. *Prerequisite:* CJS 250

**CJS 461 Juvenile Justice Processes (3.0); 3 cr.** Focuses on the development of justice for youth; the current conflicts within the system; its weaknesses and strengths. Primary emphasis will be on Lebanon's procedure.

**CJS 487 Research in Criminal Justice (3.0); 3 cr.** An introduction to the theoretical and

practical consideration of research in criminal justice. Examination of research designs, conceptualization and operationalization of research methods: qualitative and empirical methods of inquiry; analytical techniques, data collection and processing; interpretation of criminal justice research findings.

**CJS 490 Seminar in Criminal Justice (3.0); 3 cr.** Devoted to an exploration and analysis of special issues in the field of corrections, law enforcement, and the general areas of the administration of justice: includes detailed examinations of vital issues and emerging trends which promise to affect the future.

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## The Degree of Master of Arts in Public Administration

The department of Public Administration offers graduate work leading to the Master of Arts in Public Administration. This Master's program is aimed at those students planning or embarking upon a career in public service.

### Admission Requirements

In addition to the University graduate admission requirements, applicants should have a B.A. in Political Science, Public Administration, International Affairs and Diplomacy, International Law, or other related fields.

Successful passing of the EET Entrance Exam with a minimum score of 650 is required. Students' undergraduate GPA of 3.0 minimum, work experience, letters of recommendation, motivation for a career and leadership are all taken into consideration. The Faculty may require the GRE exam for non-NDU students, and the following prerequisite courses may be required of non-major applicants: PAD 201, POS 201, POS 210, or equivalent by petition

### Graduation Requirements:

Students seeking the degree of M.A. in the Faculty of PSPAD must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

1. 36 credits of course work in addition to a comprehensive written and oral examination; or
2. successful completion of 30 credits course work and six credits thesis.

### Degree Requirements (36 credits)

#### Core Requirements

IAF 601, PAD 604, POS 681.

**9 cr.**

#### Major Electives

IAF 641, IAF 645, INL 626, INL 636, PAD 602, PAD 612, PAD 618, PAD 620, PAD 622, PAD 627, PAD 629, PAD 632, PAD 652, PAD 654, POS 619, POS 625, POS 661

**15 cr.**

#### Free Electives

*Option I:* Thesis 6 cr. (PAD 699) in addition to 30 cr. of course work.

*Option II:* Successful completion of 36 credits of course work culminating in a comprehensive written and oral exam.

**6 or 12 cr.**

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## Graduate Courses: Public Administration

**PAD 602 Theories of Organization and the Public Sector (3.0); 3 cr.** Examination of theoretical frameworks for studying public and private bureaucracies, with emphasis on ideologies, values, behavioral patterns and concepts of organization.

**PAD 603 Public Personnel Management (3.0); 3 cr.** Studies in depth the different theories concerning personnel management, the relations between employees and government, including decentralized administrative systems. It covers selection of employees, hiring, downsizing, firing, production, productivity, and recognition as well as job development, labor relations and equal employment opportunities. The course is supplemented with case studies related to personnel management in developed and developing countries.

**PAD 604 Public Administration (3.0); 3 cr.** Theory and practice of program evaluation and evaluative research. Exploration of scope and limitations of current practice in evaluation, considering economic, political, social and administrative.

**PAD 605 Privatization: Theory and Application (3.0); 3 cr.** This course addresses privatization as one of the fastest expanding economic phenomena in market economies, particularly in the developing economies of the Third World. It studies the rationale and significance of privatization in different socio-economic sectors and the various theories on privatization, their applications as well as the future of privatization. The course is supplemented with case studies on different forms of privatization.

**PAD 607 Administrative Politics and Leadership (3.0); 3 cr.** Defines leadership in politics, stressing talent, education, experience, equality of genders, opportunities, evaluation of leaders' roles in administrative development, and the overall effects on administrative efficiency. Emphasis is on the role of leaders and other political/administrative actors in developing and maintaining efficient bureaucracies.

**PAD 609 Comparative Local and Regional Administration (3.0); 3 cr.** The course addresses the local and regional public administrations from a comparative point of view. It covers problems, methods and

structures of administration in relation to policies, finance, education, laws, regulations, administrative procedures, decision-making process, manpower, and administrative reform. The course is supplemented with practical case studies focusing on administrative reforms and the rule of law in the Arab region.

**PAD 611 The Politics of Business Regulation (3.0); 3 cr.** Examines the role of government in formulating regulatory policies by the executive and legislative branches. Bureaucratic incentives and the role of the courts and regulatory agencies will be emphasized. The course addresses government policies, laws, regulations specially in the areas of regulations relative to privatized agencies, mergers and acquisitions, the role of state, and the impact of globalization on the politics of business regulation.

**PAD 612 Comparative Development and Administration (3.0); 3 cr.** Analysis of bureaucratic structures and function in Lebanon; industrialized and less developed countries, primarily at national level.

**PAD 613 Planning, Program Analysis and Evaluation (3.0); 3 cr.** Covers the elements of public planning, analysis and evaluation of public policies and strategies in the context of declared governmental and social policies as well as public needs and welfare. This course aims at studying models and programs for assessing and evaluating public policies in relation to the administrative and economic and social performance of the public sector.

**PAD 615 Organized Interests and the State (3.0); 3 cr.** The course covers the study of interest groups, their role in today's globalized world, their role in pushing for privatization of public agencies, and the formulation of new regulatory policies by the executive and legislative branches of government. Other topics include: the study of strategies used by interest groups to push for the approval of their agenda in Europe, the U.S., and other countries through the lobbying means, as well as other methods and application processes.

**PAD 617 The Politics of Poverty and Welfare (3.0); 3 cr.** Examines the structures of income inequality, the factors which lead to wealth concentration, the policies of wealth redistribution, taxation, unemployment, welfare

support, and their overall effects on society. Evaluates models and approaches that have been implemented in different states for the purposes of alleviating poverty and bridging the gaps between classes.

**PAD 618 Public Budgeting (3.0); 3 cr.** Theory and techniques of budgeting in governmental fiscal relations and the political processes that relate to decision making within the governmental organization.

**PAD 620 Ethics and Public Values (3.0); 3 cr.** Ethical obligations of the public administrator. Whether membership in a large governmental bureaucracy vitiates individual moral responsibility. To whom or what the public administrator has moral obligations : Elected officials, the law, hierarchical superiors, professional standards, agency ethos, regime values, universal moral standards.

**PAD 622 Special Topics in Development and Planning (3.0); 3 cr.** This seminar is organized around topics related to current research in the field of economic development and planning.

**PAD 627 Political Development and Social Change (3.0); 3 cr.** It examines social change in the light of the political structures governing a state. The focus is on various developmental models used to affect or explain social change and on the social environment that may either propel or constrain change.

**PAD 629 Public Sector Labor Relations (3.0); 3 cr.** Nature of labor relations processes and practices at all levels. Attention to the political variables that distinguish public sector from private sector labor relations.

**PAD 632 Administrative Law (3.0); 3 cr.** The law governing public administration. Attention to legal reasoning, liability, due process, informality, and public access. The apparatus of administration.

**PAD 642 The Political Economy of Public Policy (3.0); 3 cr.** Nature and functions of public management and problems of choice

within the constraints of law, politics, and resource scarcity. Concepts of public interest and public goods; problems related to revenue and taxation. Basic economic and mathematical tools as appropriate.

**PAD 652 Organization Leadership (3.0); 3 cr.** This course provides an in-depth examination of the leadership function within the work organization. Essential skills of effective leaders are diagnosed with respect to : Goal setting, written and oral presentation, behavioral flexibility. The behavioral dimension and impact of various skills are emphasized to explain the necessary leadership role of both technical and non-technical personnel in the work organization.

**PAD 653 Comparative Public Policy (3.0); 3 cr.** Comparative analysis of policy formation; process of social and economic policy decision making in selected industrial societies; interaction of institutions, ideas, and power in decisions concerning social welfare, economic planning, and related policy areas.

**PAD 654 Bureaucracy and Public Management (3.0); 3 cr.** Familiarity with the Lebanese government. Nature of bureaucracy in modern government with emphasis on Lebanon. Explanation of why government agencies behave as they do. Focus on real and imagined problems with bureaucratic rule, evaluation of commonly proposed solutions for these problems. Example from schools, armies, welfare bureaus, regulatory agencies and intelligence service among others.

**PAD 699 Thesis or Project, in Public Administration (6.0); 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of Public Administration. The project involves the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound, written report available to later researchers.

## DONATIONS

### Special thanks to

Mr. Antoine Choueiry  
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Hamra Engineering  
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Libano-Suisse  
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Nahar al-Chabab wa-Riyada  
Ness Investment  
Prestige  
Khatib & Alamé  
Skaff  
Structure SAL  
UFA Assurance  
State Department, Education Office -  
USA  
Association Libanaise pour la Maitrise  
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