

# *The NDU Gazette*

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*A publication covering decisions taken at the BOD and UC meetings*

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*Issue Number Three, April-May 2008*

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## **Decisions Taken at BOD in April 2008**

### **BOD Meeting: 02 April 2008**

#### **1. Bachelor of Science in Nursing.**

Change of credits from 112 to 105. See Appendix I.

### **BOD Meeting: 09 April 2008**

#### **2. Number of GER credits.**

This proposal will come into effect as of the academic year 2008-2009. See Appendix II.

### **BOD Meeting: 10 April 2008**

#### **3. NDU Libraries Lending Policy.**

The BOD unanimously passed the motion to adopt the Libraries Lending Policy. See Appendix III.

### **BOD Meeting: 16 April 2008**

#### **4. The University Research Policy.**

This policy will enter into effect October 1<sup>st</sup>, 2008. See Appendix IV.

#### **5. The Student Exchange Policy.**

This policy will enter into effect October 1<sup>st</sup>, 2008. See Appendix V.

## **Decisions Taken at BOD in May 2008**

### **BOD Meeting: 05 May 2008**

#### **6. Merit Reward Policy.**

The BOD unanimously approved the Merit Reward Policy. See Appendix VI.

### **BOD Meeting: 07 May 2008**

#### **7. FPSPAD: Change of name and new degrees.**

The BOD unanimously approved the proposal to apply to the Lebanese Government to give the **degrees of Corporate Law and Public Law** and to change the name of the Faculty to **Faculty of Law and Political Science**. See Appendix VII.

**BOD Meeting: 15 May 2008**

**8. Graduate Research Assistantship Policy.**

The BOD unanimously approved the proposal for a Graduate Research Assistantship Policy. See Appendix VIII.

**9. Minor in Engineering Management.**

The BOD approved the adoption of the Minor in Engineering Management. See Appendix IX.

**10. New Courses in FE: ENG 210 & 310**

The BOD unanimously approved adding the courses:

**Introduction to Economic Analysis in Engineering ENG 210** (3.0) 3cr.: The course is designed to demonstrate the 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

**Ethics in Engineering ENG 310** (3.0) 3 cr.: The course is designed to discuss 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.

**11. Diplomas without Concentrations.**

The BOD unanimously approved the following proposal: As of 2008/2009, all concentrations will not appear anymore on the diploma. If, and when, concentrations need to be changed into full-fledged degree programs, the concerned Dean has to present the necessary official file to the Director General of the Ministry of Education in order to receive an official recognition.

**BOD Meeting: 29 May 2008**

**12. Minors in FNAS + new course BIO 219**

1. The BOD unanimously approved the minors in FNAS:

- a. **Mathematics** (15 credits): This minor is intended to enhance the classical knowledge of Math.
- b. **Mathematical Insurance** (18 credits): This minor is intended primarily for Business students.
- c. **Applied Statistics** (18 credits): This minor is intended to enhance competence in the use of statistical tools. See Appendix X.

2. The BOD unanimously approved **Pathophysiology BIO 219** (2 credits). This course is designed to fit the Nursing program. It 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.

### **13. FH New Courses**

a. The BOD unanimously approved the **Introduction to Spanish SPA 101** (3 credits): Students who take **SPA 101** in their Freshman program would not be permitted to take **SPA 201**. This course aims to introduce the Freshman student to the Spanish language and civilization. Students will practice speaking, reading and writing. Emphasis will be on developing the ability to communicate with Spanish-speakers.

b. The BOD unanimously approved the **Public Speaking ENL 111** (3 credits): 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 give students ample practice to participate in group discussions and to prepare for a successful transition into academic life.

c. The BOD unanimously approved the **Chess PES 345** (1 credit): This course is designed to help students engage in cognitive processing mechanisms, and accordingly develop competence in the logical thinking needed to play chess.

#### **BOD Meeting: 30 May 2008**

### **14. MS in Astrophysics**

The Board of Deans approved the proposal for a joint M.S. degree in Astrophysics with University of Saint Joseph. See Appendix XI

### **15. New Course in FNAS: Statistics for Humanities STA 202**

The Board of Deans approved the proposal for **Statistics for Humanities STA 202** (3cr.). 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; and analysis of variance. The associated computer lab sessions allow the students to apply the methods learned to data sets and interpret findings.

Appendix I

**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	210	Human Nutrition (GER)	3 cr.
BIO	207	Biochemistry for Nursing	3 cr.
----	----	GER (REG)	3 cr.
----	----	GER (ARB)	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 Semester I (6 Credits)**

BIO 216		Microbiology & Immunology for Nursing	3 cr.
NUR 203		Introduction to Bioethics (GER)	3 cr.

**Fall Semester II (15 Credits)**

BIO	219	Pathophysiology for Nursing	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 (14Credits)**

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 Semester 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	240	Law and Society (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 & Management in Nursing-Theory	3 cr.
NUR	409	Leadership & Management in Nursing-Clinical	3 cr.
NUR	410	Nursing Research	3 cr.

## Appendix II

### **Proposal for amending the total number of requested GER credits for some majors**

*Submitted to the BOD for approval on April 9, 2008,  
by Youssef Kamal El-Hage, Dean, FNAS*

Motion approved by the BOD on April 9, 2008:

“As of the academic year 2008-2009, and with reference to the BOD decision of July 4, 2007, stating that the total number of GER credits shall be 33 starting October 1<sup>st</sup>, 2008, except for majors in Engineering, Architecture and Design, which may be released from 6 credits, and in Business Administration, which may be released from 3 credits,<sup>1</sup> and since GER courses, as a guiding principle, shall cover up to one-third, but not more, of the total curriculum of any major, the BOD decides that:

- a) The total number of GER credits shall be **30** for those majors that total less than 99 credits and are not offered in Engineering, Architecture and Design, and Business Administration.
- b) The total number of GER credits shall be **33** for those majors that total 99 and more credits and are not offered in Engineering, Architecture and Design, and Business Administration.”
- c) The total number of GER credits shall be **27** for the Faculty of Nursing (BS in Nursing - 105 credits).

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<sup>1</sup> NDU Gazette, Issue # 5, July 2007

## Appendix III

### **Libraries Lending Policy**

*Approved by the University Council, March 2, 2001 and by the President, March 5, 2001.  
Revised and approved by the University Council, March 7, 2003 and by the President, March 10, 2003.  
Revised and approved by the Board of Deans, April 10, 2008.*

All NDU-Louaize Libraries resources may be accessed and used within the confines of the library. In addition, many materials are available to be checked out of the library. The type of material and the library user's category determine the loan period and other restrictions.

#### **Eligible Borrowers**

All current students and university employees (faculty, academic administrators, co-academic members, and staff) of Notre Dame University-Louaize (NDU), members of the Maronite Order of the Holy Virgin Mary, and NDU Alumni who have met the specified requirements, may borrow library materials.

The library user must appear in-person and present a valid NDU identification card to check out books or other materials. No proxy borrowing will be allowed. The library user will be held responsible for all materials borrowed in their name.

Library users who are both students and employees of the University may only borrow materials using their employee identification card.

All loans are renewable provided another user has not recalled the item.

#### **Students**

Student borrowing privileges are determined by the class standing provided to the library by the Registrar's Office.

- Freshmen, Sophomore and Junior students may borrow a maximum of seven items for a period of two weeks or as specified in the section on loan restrictions and recalls.
- Senior students may borrow a maximum of ten items for a period of four weeks or as specified in the section on loan restrictions and recalls.
- Graduate students may borrow a maximum of fifteen items for a period of four weeks or as specified in the section on loan restrictions and recalls.

#### **Full-time Faculty, Academic Administrators and Co-Academics**

Full time faculty, academic administrators and co-academics may borrow a maximum of 30 items for the duration of the current semester or as specified in the section on loan restrictions and recalls.

#### **Part-time Faculty**

Part-time faculty may borrow a maximum of 15 items for the duration of the current semester or as specified in the section on loan restrictions and recalls.

#### **Staff**

Staff members may borrow a maximum of fifteen items for a period of four weeks or as specified in the section on loan restrictions and recalls.

#### **Researchers Affiliated with the Research Centers**

Researchers affiliated with NDU Research Centers may borrow a maximum of four items for a period of four weeks or as specified in the section on loan restrictions and recalls.

Borrowing privileges will be extended to researchers affiliated with the NDU Research Centers upon presentation of a letter, signed by the Director of the concerned Research Center and the Vice President for Sponsored Research and Development.

It is the responsibility of the Director of the concerned Research Center to inform the library at least one month in advance when a researcher will be terminating their relationship with the Research Center and that borrowing privileges should be withdrawn.

The Research Center will be held responsible for all materials not returned to the library by their affiliated researchers.

#### **Division of Continuing Education (DCE) Faculty members**

Division of Continuing Education (DCE) Faculty members may borrow a maximum of ten items for a period of four weeks or as specified in the section on loan restrictions and recalls.

#### **Division of Continuing Education (DCE) Students**

Currently enrolled Division of Continuing Education (DCE) students may borrow a maximum of two items for a period of two weeks from the DCE Library ONLY.

#### **Alumni**

Notre Dame University-Louaize Alumni are allowed and encouraged to use the University library and are subject to the same rules and regulations that apply to all library users.

Alumni may access and use library materials within the library during regular operating hours. Borrowing privileges will be extended to alumni who are registered with the Alumni Affairs Office and who have paid a one-time deposit of 150,000 L.L. This deposit will be returned to the alumni member when all checked out items have been returned, any applicable fees have been paid and borrowing privileges have been suspended.

Alumni who meet the above requirements may borrow a maximum of two items for a period of two weeks or as specified in the section on loan restrictions and recalls.

Alumni are not allowed to check out course reserve materials from the library. These materials may be accessed and used in the library.

#### **Members of the Maronite Order of the Holy Virgin Mary**

Members of the Maronite Order of the Holy Virgin Mary may borrow a maximum of ten items for a period of four weeks or as specified in the section on loan restrictions and recalls.

#### **Library guests and visitors**

Guests and visitors are only allowed to access library books and materials within the confines of the library. No borrowing privileges are granted.

#### **Loans, Restrictions, Recalls and Lost Materials**

##### **Non-Circulating Materials**

The following library materials *do not circulate*, however they may be accessed and used within the library:

- Newspapers
- The most currently received issue of a periodical or magazine
- Reference books
- NDU theses
- Closed Circulation materials
- Special Collections materials

Upon request, all non-circulating materials housed at another campus library may be brought to the user's campus library for consultation within the library only.

##### **Short Loan and Restricted Materials**

The following library materials have restricted loan periods as noted:

- Books classified as Art and Architecture (700-790) circulate to students for **one week**.
- Bound periodical volumes (maximum of two) circulate only to faculty, academic administrators and co-academics for **one week**.



- Bound periodical volumes (maximum of two) circulate only to graduate students for **three days**.
- **The most recently received issue of a journal or magazine does NOT circulate.** Older copies of journal or magazine issues (maximum of two issues per title and six issues total) circulate only to faculty, academic administrators and co-academics for **one week**.
- Videocassettes and DVDs circulate for **one week**. At the Mariam and Youssef Library only, facilities are available for library users to view videocassettes and DVDs within the confines of the library.
- Materials located at the Marian Studies Center Library circulate only to members of the Maronite Order of the Holy Virgin Mary and to NDU Faculty members for **four weeks**. All other users must use these materials on-site.

### **Course Reserves**

Course reserves are placed on short-term loan periods at an instructor's request so that all students in a class may have an opportunity to read or review the materials. These materials are available on request at the Circulation Desk. Library users must have their current NDU identification card and know the instructor's name and the course title to ask for these materials.

The policies concerning the circulation of Reserve books and materials apply to students, faculty, academic administrators, co-academics, staff, and members of the Mariamite Order, and are as follows:

- Open reserve books and materials circulate for 3 days, 7 days or overnight according to the requirements of the instructor placing the materials on reserve. Overnight reserve books and materials must be returned to the library not later than 9:00 a.m. of the next working day.
- Closed reserve books and materials do not circulate outside the Library unless the instructor who placed the materials on reserve provides written permission.
- Library users may reserve materials daily for overnight use by registering their names at the Circulation Desk. Materials will be handed out on a first-come, first-served basis. A valid NDU identification card must be submitted to check out reserve materials.

Alumni are not allowed to check out course reserve materials from the library. These materials may be accessed and used in the library.

### **High Priority Requests**

Items listed in WebView (NDU Libraries online public access catalog) as *In process* or *On Order*, may be requested to be cataloged as High Priority by filling out a form at the Circulation Desk.

### **Recall of Library Materials**

At the request of another library user, any library item may be recalled at any time, from any user. Normally, the current borrower will be allowed one week to return the item(s) to the library where they will be held for the requester for one week. Borrowers may be requested to return an item within a shorter time period.

If an instructor requests an item to be placed on Reserve for class use, the item may be recalled immediately, regardless of when it is due and who has it.

Overdue fines of 3,000 L.L. per item, per day, will be charged if recalled items are not returned when requested.

### **Charges, Overdue Materials and Penalties**

#### **Overdue Library Materials**

Fines are charged for overdue or lost library materials and borrowing privileges will be suspended for any library user with overdue items or outstanding fines.

It is the responsibility of the library user to be aware of the due dates for borrowed items and return them on time. *Failure to receive notification does not relieve the borrower of the obligation to*

*return materials when they are due.* Daily fines will begin accumulating the day after the item is due.

The fines for overdue items are as follows:

<b>Regular circulating materials:</b>	<b>500 L.L. per item, per day</b>
<b>Reserve materials:</b>	<b>3,000 L.L. per item, per day</b>
<b>Recalled materials:</b>	<b>3,000 L.L. per item, per day</b>
<b>All other library materials:</b>	<b>500 L.L. per item, per day</b>

Library materials that are more than four weeks overdue will be presumed lost and charged for accordingly.

Students must pay all outstanding library fees before the University will issue transcripts, diplomas, or allow class registration for the next semester. Faculty, academic administrators, co-academics or staff members may have the library fees deducted from their paycheck or have their final paycheck stopped until all fees are paid.

Clearances will not be provided to library users until all checked out items are returned to the library and all outstanding charges are paid.

#### **Lost or Damaged Library Materials**

A library user who loses, damages, or is unable to return library materials for any reason, will be charged a replacement fee. Library materials that are more than four weeks overdue will be presumed lost and charged for accordingly.

The replacement fee for lost or damaged materials will be determined by the costs associated with replacing the item, plus any accumulated fines. If the user pays these fees and then returns the item within 3 months, the replacement fee, minus the accumulated overdue fines, will be refunded.

Students must pay all outstanding library fees before the University will issue transcripts, diplomas, or allow class registration for the next semester. Faculty, academic administrators, co-academics or staff members may have the library fees deducted from their paycheck or have their final paycheck stopped until all fees are paid.

Clearances will not be provided to library users until all checked out items are returned to the library and all outstanding charges are paid.

#### **Mutilation or Theft of Library Resources**

Mutilation or theft of library resources will incur disciplinary action, including suspension of borrowing privileges. In addition, the responsible party will be charged for the repair or replacement of the materials as described in the section on lost library materials.

Mutilation includes, but is not limited to, cutting or tearing paper-based materials, writing or highlighting in books or other materials, and damaging audio/visual and computer resources.

Library users are held responsible for all library materials borrowed in their name. It is the responsibility of the user to notify the library of any damage or mutilation of library materials, *whether it occurred before or after they borrowed the materials*, including damage caused by normal wear and tear, or they may be penalized.

# University Research Policy

*Final version amended and approved on April 16, 2008*

The following principles and guidelines constitute the groundwork from which all further policies regarding the development, promotion and carrying out of research at NDU shall be derived.

## **1) Fundamental Principles governing Research at NDU**

As a fundamental part of its mission, Notre Dame University emphasizes its commitment to carry out and disseminate the results of basic and applied research as well as of the creative work in the arts. This commitment shall be subject to fundamental principles respecting the freedom of thought, the diversity of scholarly endeavor, and the University's mission as a Lebanese, not-for-profit, Catholic institution of higher education based on the philosophy and requisites of the American model of liberal arts education.

**Research Ethics:** Ethical principles, as determined by the University's mission and as prescribed by general and Christian rules governing human rights, animal protection, and respect for the environment, shall be observed at all times in any kind of research activity at NDU. Any researcher whose work may in any way be related to these principles shall be bound to fully disclose the methods and results related to his/her research in order to ensure full transparency and accountability to the University and to the overall scientific community.

**Freedom of Research:** In tune with the basic tenets of the liberal arts tradition of education, scholarly research at NDU shall be free, provided compliance with the principles of research ethics as described above and in concordance with the mission and interests of the University are secured. Researchers at NDU are thus encouraged to carry out scholarly research in any field of interest to them, and to seek funding for this research in any way they deem appropriate.

**University Support for Research:** NDU commits itself to the creation and promotion of a general atmosphere conducive to individual and collective research, to the allocation of a specific part of its budget for research activities, to a systematic program for attracting external financing and sponsoring of research, to the dissemination of all results derived from research, and to the establishment of the best possible conditions for carrying out research at all levels, whether in development and design or in publication, dissemination and integration into the classroom. The University places special emphasis on research work that encourages and advances universal values based on humanistic principles, social justice and spiritual development.

## **2) Goals and Objectives**

Commensurate with the University's mission, vision and core values, as well as with its commitment to liberal arts education, increased emphasis shall be placed on the academic development process for both faculty members and students.

While emphasizing the paramount role of fundamental research activities by faculty members in the academic development process at NDU, emphasis on student research shall be considered as a complementary aspect of research at NDU. Student research shall go hand-in-hand with the development of faculty teaching and research skills in the respective majors and in the General Education Requirements (GER) courses. The latter offer a platform for academic development based on educational inter-disciplinarity.

Inter-disciplinarity as such, be it in the education of students or in the research activity of faculty members, shall always be considered as a commendable track towards knowledge creation and a powerful promotion of NDU as a place of choice for scholars at all levels.

The University's commitment to gender equality and cultural diversity enables it to serve the interests of the community and to help integrate and retain faculty members and students in a way that reflects

the complex makeup of the country as a whole. The use of outreach programs and Information and Communication Technology (ICT) will enable the University to introduce “Information Commons” by integrating the resources of the respective Faculties, libraries and research centers as well as the greater scientific community. This process will serve NDU targets in terms of funding and resource development by linking it to alumni, potential domestic partners and international donors and sponsors.

### **3) Supporting Research at NDU**

The following basic duties in supporting and conducting research at NDU shall be applied.

**Protecting the Right of All to Do Research:** The primary guideline of NDU in supporting research shall be to protect the right of all individuals, be they faculty members, students, or non-academic research staff, to be involved in research activities. Participants in the research process are free to carry out their research as they see fit, provided the principles of research ethics as described above are always respected.

The University shall also acknowledge the eligibility of all its researchers, including students, for financial support by the University within the limit of its resources and its priorities for funding research projects coming from the various Faculties and research centers.

In return, any researcher at NDU shall assume responsibility for protecting the best interests of the University when carrying out any kind of research, including the rights of the University as detailed in any contract pertaining to a research activity or the general duties of researchers towards the University. Possible misconduct by researchers shall be dealt with according to the general academic policies and by the appropriate committees or panels.

**Disclosure of Research Results:** The University shall not participate in research projects classified as secret or constrained by any secrecy-of-results agreements of any kind, except upon the explicit approval of the President and in concordance with the research ethical principles set above. In particular, the University shall not approve in principle that its researchers be involved in research the results of which cannot be disclosed publicly due to the researcher’s possible agreement with an outside party involved in or sponsoring the said research.

The right to publish and disseminate research results, and the obligation to disclose research methods and results, including those related to artistic production, as well as to demonstrate their compliance and transparency with regard to the general principles set above, apply to faculty members, students, and non-academic staff alike. The right and obligation to disseminate results could also be significant in cases related to the integration of certain findings into students’ Masters and doctoral dissertations.

The University does, however, recognize that the fundamental principles of research ethics allow for specific forms of constraint and confidentiality in order to protect personal and private information that might have been used in the course of the research process.

**Departments, Research Centers and Laboratories:** Research at NDU shall be undertaken as part of the activities to be performed by the basic academic units of the University, i.e. the departments, Faculties, research centers, interdisciplinary units, and laboratories. In line with its declared commitment to enhance research for the service of the community, be it in a local, national, regional or international setting, NDU emphasizes the need for all academic units to engage in interdisciplinary research besides their basic internal scholarly work. Accordingly, NDU strongly encourages research networks among its various academic units in order to achieve the following:

- Secure optimal conditions which enable active members in the individual departments and units to do research.
- Support international research projects and cooperation between individual researchers and University research centers on the one hand, and international partners on the other.
- Establish and promote national and international funding programs by connecting the University with as many external academic institutions and exchange programs as possible.
- Cooperate with the private and public sectors, nationally and internationally, in order to promote funded cooperative research.

- Work with representatives of the local community in order to disseminate research results that are beneficial to the mission of the University and to the economic and social advancement of Lebanon.
- Ensure that the results of research carried out at NDU are integrated into the teaching process as far as possible.

#### **4) Promoting Research at NDU**

Promoting research at NDU by developing research-related policies and providing administrative follow-up for research endeavors is of particular significance and shall be carried out according to the following guidelines.

The **University Council**<sup>2</sup> shall be the primary framer and initiator of policies with regard to research and research-related matters, in addition to its responsibilities in reviewing the proper functioning of the various research-related policies and establishing the necessary preconditions for supporting research at NDU.

Research activities at NDU, which are carried out according to the set fundamental principles, may be initiated and followed up through the concerned Faculties, through the **University Research Board (URB)** or through any other committee and panel that the University might find necessary to establish in order to deal with specific research-related cases requiring special attention.

Conflicts regarding authorship and ownership rights, the dissemination of research results, the ethics governing the research methods, the possible misconduct by researchers, or any related case, shall be dealt with by the appropriate University appeal bodies.

**Sponsored Research:** A **University Sponsored Research Policy (USRP)** shall govern the activities/projects sponsored by internal or external sources in all their phases, from the submission of initial proposals through budgetary control up to the final dissemination of results. Sponsored research is a fundamental part of NDU's research output and, as such, shall be given particular attention. The USRP shall also ensure that any sponsored research policy is carried out in the best interest of the research per se, the proper use and dissemination of results, the interests of the external partners and sponsors, and the mission of the University.

**Research Cooperation and Visiting Research Scholars:** In accordance with its goal of supporting a general atmosphere conducive to research, NDU shall enhance its cooperation with other universities and institutes of research, and create platforms and frameworks for exchanging research scholars with these partners. This shall include, among others, the shaping of provisions for protecting the research-related rights of visiting scholars doing research at NDU, as well as those of NDU faculty members and students doing the same abroad.

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<sup>2</sup> Or the **University Senate** (through the **University Research Committee**) if substituted for the **University Council**.

## **Student Exchange Policy**

*Final version amended and approved by the BOD on April 16, 2008*

### **Preamble**

NDU, as most universities are, is mindful of the trend towards 'Internationalization' of education. Only through building bridges for our students will they further develop their professional and cultural potential and be able to take advantage of the many opportunities that world higher education has to offer. With this rich exposure, they will be able to become more competitive candidates for career opportunities in the Middle East and the world at large. This policy serves as an attractive option for enhancing student exchange (mobility) between NDU and other universities in the world.

### **A. Definition**

An exchange program is a unique feature of international universities wherein a student may apply for a site transfer in any of the universities with which NDU shares an academic collaboration or exchange policy. Student exchange is a program coordinated by the Office of Exchange and Partnership, a unit that reports to the Vice President for Sponsored Research and Development.

### **B. Objective**

The objective of the Student Exchange Program is to promote international attentiveness and construct effective partnerships with established universities and educational institutions. A Student Exchange Program will provide academic and intellectual benefit through the exchange of students between Notre Dame University – Louaize and respective institutions that are party to a formal Exchange Agreement.

### **C. General Considerations**

1. The Office of Exchange and Partnership, in consultation with NDU academic and administrative units, will establish and maintain a register of all Exchange Agreements. This Office will be the central resource for information on agreements and the number of participating students.
2. Institution to Institution Exchange Agreements are normally authorized and approved by the President of the University, and such exchanges are available to all eligible students of Notre Dame University – Louaize who wish to participate in a Student Exchange Program.
3. Special Exchange Agreements (presidential scholarship or the like) are nonetheless authorized and approved by the President of the university, and are normally available to selected students.
4. A formal Memorandum of Cooperation or an Exchange Agreement must be in place before a student may apply to participate in a Student Exchange Program at a Host Institution.
5. Approval for a student to undertake a Student Exchange Program will be granted subject to the selection criteria detailed in the procedures below, and the availability of places.
6. The Office of Exchange and Partnership will work in the direction of making the number of exchanged students equal between NDU and the partner institution.
7. In addition to securing the consent of the Dean of Faculty, the Admissions Office and the Registrar's Office, the proposed study to be undertaken during a Student Exchange Program has to be approved by the Director of Exchange and Partnership.
8. The university policies and procedures apply to grievances about decisions arising from this policy.

### **D. Outgoing Exchange Students**

NDU exchange students will be considered 'outgoing students'. They must fulfill a set of requirements and complete an application. This means that the exchange student needs to come back to NDU in order to get the degree.

#### **1. Eligibility Requirements**

In order for the applicant to be eligible for the Student Exchange Program, the following criteria have to be met:

- a) The applicant has:

- A current enrolment at Notre Dame University – Louaize.
  - Successfully completed at least 15 credits of study.
  - No record of failing a course in the program in which the applicant is enrolled.
  - A minimum GPA of 2.5/4.00 (undergraduate) and 3.00/4.00 (graduate).
  - Provided an academic recommendation from an appropriate faculty member, and a statement of purpose.
  - A proven record that he/she is socially, psychologically, and intellectually fit for an exchange program.
  - A proper conduct.
  - No outstanding financial record.
- b) The student is expected to be in good health.
- c) The applicant agrees:
- to be responsible for meeting all costs of the Student Exchange Program such as travel, accommodation and insurance, and pay all administration fees to the Notre Dame University by the due dates
  - to enroll at the Host Institution for no more than two semesters and one summer, unless specific circumstances require other arrangements to be made
  - to abide by the rules and regulations of the Host Institution
- d) Where there are more applicants than places available for a given institution, eligible students will be ranked according to academic merit and may be offered a Student Exchange Program at their second or third preferred institution.

## 2. Application Process

Students who wish to participate in a Student Exchange Program are required to:

- a) Complete and lodge an application form with the Office of Exchange and Partnership by the date specified on the application form.
- b) Agree in writing to the terms and conditions set out in the Student Exchange Program.
- c) Be aware that the attainment of the transcript of grades is the student's responsibility at the Host Institution.

## 3. Registration Requirements

- a) The Registrar of NDU will register a student for courses if the student presents a properly signed form listing the course(s) to be taken at the Host Institution (see the attached form).
- b) The student must have completed all prerequisites of the courses for which he/she registered.
- c) All credits earned will be considered as resident credits at NDU for degree purposes.
- d) At the end of the period of study at Host Institution, no official diploma or certificate whatsoever will be delivered to the student, but an official transcript of records will be issued for the exclusive purpose of transfer to the Home Institution.
- e) An exchange student is entitled to enrolment statement from NDU.

## **E. Incoming Exchange Students**

### 1. Eligibility Requirements

Student Exchange programs at Notre Dame University – Louaize (NDU) are short-term programs that enable international students to study for up to two academic semesters and a summer session (one academic year, not renewable) in any of the three campuses of NDU. Incoming exchange students can combine formal education with traveling experiences before, during and after the study periods.

Who can be an incoming student?

- Someone who wishes to study part of his/her degree at NDU and take all credits achieved to his/her Home Institution.
- Any student registered in a university that has a formal agreement with NDU in such respect.

## 2. Prospective Study Program

The student will have many opportunities to explore his/her interests and talents and he/she will be able to negotiate a study program, which may include:

- a) Courses that accommodate international perspectives.
- b) Opportunities to learn about the Lebanese culture and traditions.

## 3. Admission Requirements

- a) Exchange agreements will assume that students coming to NDU from an approved international exchange partner, and taking courses at NDU under the exchange agreement will complete no more than one academic year (two semesters + summer) at NDU under the tuition exchange called for by the agreement.
- b) At the conclusion of the initial year, the students should either return to the Home Institution to complete their degree, or formally enroll at NDU provided they:
  - (1) Secure an approval from their Home Institution and
  - (2) Fulfill NDU admission requirements.
- c) Students applying for exchange programs will complete a special exchange program form approved by the Office of Exchange and Partnership, which will include a letter of approved participation by the Home Institution detailing the dates of participation.
- d) No exchange applicant will be accepted without proof of qualified English proficiency. All applicants to the Exchange Program must meet the English language requirement for their program of study. Typically this will be a minimum score on the TOEFL or the writing section in SAT I (please refer to NDU Admissions Guide). The Office of Exchange and Partnership must approve special exceptions to this rule.

## 4. Credit Transfer

The Office of Exchange and Partnership at NDU will work with the student to negotiate a suitable program, with credit transferable to his/her Home Institution. The student will need to work hard on this part of the process at his/her Home Institution, but doesn't expect to have it completely finished until he/she is here at NDU.

When the student finishes his/her study in the Student Exchange Program at NDU, he/she will be issued an official transcript of the courses he/she has completed and the grades achieved. It is, however, the student's responsibility to obtain his/her transcript. Follow up on the attainment of the transcript of grades is the student's responsibility.

## 5. Registration Requirements

The Registrar of NDU will register a student for courses if the student:

- a) Presents a properly signed form listing the course(s) to be taken
- b) Has completed all prerequisites of the courses to be taken.

All credits earned will be considered as resident credits at NDU for degree purposes. The registration of exchange student is valid for one academic year and is not renewable. At the end of the period of study, no official diploma or certificate whatsoever will be delivered to the student; only an official transcript of records will be issued for the exclusive purpose of transfer to the Home Institution.

An exchange student is entitled to enrollment certificate from his home institution.

## 6. Registration Procedures

For registration, incoming exchange students will observe the following steps:

- a) Secure an official exchange form from the Home Institution.
- b) Hand in all the required documents to the Director of Exchange and Partnership Programs.
- c) Obtain acceptance letter as exchange student from Admissions Office.
- d) Proceed to the Registrar's Office in order to finalize registration.
- e) The Registrar of NDU will sign the Student Exchange Program Form. The following copies should be distributed:
  - Copy to the Host Institution



- Copy to the Business Office
- Copy to the Registrar's Office
- Copy to the Office of Exchange and Partnership Programs
- Copy to the student.

NB: Attached are:

- Exchange Student Registration Form
- Glossary
- Appendices 1 and 2.



P.O.BOX: 72 ZOUK MIKHAEL  
 TEL: (09) 218950/1  
 FAX: (09) 218771  
 ZOUK MOSBEH  
 LEBANON

Exchange Student Registration Form

To: The Registrar \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

From: The Registrar's Office (N.D.U.)

Subject : Exchange Student – Registration for \_\_\_\_\_ Semester 20\_\_\_\_

Upon the approval of the concerned units at NDU,

Ms./Mr. \_\_\_\_\_

Family Name \_\_\_\_\_ First Name \_\_\_\_\_ Father's Name \_\_\_\_\_

ID No. \_\_\_\_\_

Has permission to take the following \_\_\_\_ course(s) at your institution and be given credit at Notre Dame University – Louaize

<u>Course No.</u>	<u>Course Title</u> (see attached form)	<u>Credit</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

Approved By:

Advisor \_\_\_\_\_ Date \_\_\_\_\_

Department Chairperson \_\_\_\_\_ Date \_\_\_\_\_

Faculty Dean \_\_\_\_\_ Date \_\_\_\_\_

Registrar's Office \_\_\_\_\_ Date \_\_\_\_\_

Business Office \_\_\_\_\_ Date \_\_\_\_\_

Exchange Student – Registration for the above mentioned course or courses is allowed.

\_\_\_\_\_  
 Date \_\_\_\_\_ Authorized Signature \_\_\_\_\_

Copy to: Host University – Registrar's Office – Business Office – Student

**Glossary**

*1. Exchange Student*

An exchange student is a student who participates in a Student Exchange Program that has been formally agreed between Notre Dame University – Louaize and another higher educational institution.

*2. Home Institution*

The home institution is the institution at which a student has been formally admitted to, that is, the institution at which the student is normally enrolled.

*3. Host Institution*

The host institution is the institution at which a student participates in a Student Exchange Program that is, the institution which the student visits for the exchange program.

*4. Exchange Agreement*

The Exchange Agreement is a mutual bilateral agreement that has been formalized between Notre Dame University – Louaize and another University of the like. The agreement is normally based on principles of equity and reciprocal benefit.

The Exchange Agreement by and large articulates the specific details of the Student Exchange Program.

*5. Partner Institution*

A university that has a formal exchange agreement with NDU.

**Appendix 1**

Services Provided by the Office of Exchange Programs (OEP)

The OEP will:

- a) Inform the student of funding which may be available for the Student Exchange Program.
- b) Provide advice on the financial commitment required by the student on Student Exchange Programs to cover accommodation arrangements, travel, insurance etc.
- c) Provide the student with general advice about travel and health insurance, and visa requirements.
- d) Provide the student with the required Student Exchange Program documentation, and a copy of the Student Exchange Policy.
- e) Confirm with all parties whether the Host Institution has approved the application.
- f) Submit the approved Student Exchange Program documentation to the respected Host Institution.

**Appendix 2**

Services Provided by the Student Affairs Office

NDU through its Office of Student Affairs provides the incoming exchange students with an introduction and an orientation to its campuses, counseling services, allocation of course offering and registration procedures.

Exchange students will also be provided with student ID card, access to email and other online facilities, and briefed on the many international student support services available including language and study advisors.

Students are invited to participate in all orientation sessions in the first study period on campus.

The care and well being of students on exchange programs will be monitored by the Office of Students Affairs in consultation with the concerned academic units, the relevant Program Director, and Divisions as appropriate.

The Office of Student Affairs will provide incoming exchange students with special assistance regarding visas, residency permits, lodging and food facilities.

Among the different services offered to the Exchange Students:

- a) Health Care: NDU provides all students with a variety of health services at the NDU infirmary located in the SAO. A university physician is available every day from 10:00 am to 12:00 noon at the infirmary and is on call for any emergency and for consultations 24/24 free of charge. A counselor is also available upon request and by appointment.  
NDU does not provide health insurance for exchange students. It is the responsibility of the exchanged students to ensure that they are covered by health insurance and any other insurance for the period and place of their exchange including travel between their Home and Host Institutions. Exchange students are expected to submit a photocopy of this health insurance while submitting their file to the NDU infirmary. Exchange students who have a special medical condition (physical condition or mobility issue), which requires immediate medical

attention during their exchange, have to inform the NDU infirmary about this prior to their arrival.

- b) **Student Housing:** Arrangements for on-campus housing are made through the Student Affairs Office. Exchange students are asked to reserve a room through the SAO while they are submitting their file to NDU.
- c) **Athletic Services:** Exchange students can join any of the sport activities that are offered by the Athletic Services Office.
- d) **Activities Office:** One way for exchange students to be more involved in campus life is through activities by being involved as members in Clubs and societies. Exchange students can join any activity organized by any student Club or Society.
- e) **Pastoral Work:** The NDU Pastoral Work is a space where culture, thought and civilization interact with faith. The NDU Pastoral Work is open to all students, including incoming exchange students.

## **Merit Reward Policy**

### **1. Preamble**

Faithful to its mission of encouraging excellence in the areas of teaching, research, self-development, creative activity, and service, Notre Dame University – Louaize (hereinafter called the University) shall introduce a Merit Reward Policy as of the academic year 2008-2009.

### **2. Objective**

The objective of the present policy is to recognize academic merit by granting financial rewards to eligible full-time faculty members who, beyond fulfilling all their duties adequately, whether in teaching, research/creativity, self-development, or service, are excelling in some or all of these areas.

### **3. Eligibility**

Full-time faculty members with at least three years of continuous service at the University are eligible for merit evaluation and reward. Visiting professors, full-time researchers, part-time faculty members, and emeriti are non-eligible.

### **4. Budget and Funds for Merit Reward**

- a) The budget allocated for merit shall be divided into “merit rewards” of equal amounts.
- b) The number of merit rewards allocated to each Faculty shall be the following:
  - One merit reward for Faculties with 3 to 10 full-time faculty members.
  - Two merit rewards for Faculties with 11 to 20 full-time faculty members.
  - Three merit rewards for Faculties with 21 to 30 full-time faculty members.
  - Four merit rewards for Faculties with 31 to 40 full-time faculty members.
  - Five merit rewards for Faculties with 41 to 50 full-time faculty members.

The President shall have discretionary power to slightly amend these quotas in exceptional cases.

- c) The President shall establish the amount of one merit reward on a yearly basis, subject to the availability of funds, and shall accordingly announce the total budget for merit at the beginning of each academic year.

### **5. Merit Evaluation Period**

The evaluation and rewarding of merit shall cover performance over one academic year, except for the starting period, which shall cover performance over both the academic years 2007-2008 and 2008-2009.

### **6. Merit Evaluation Plan**

- a) Based on the recommendations of all departments, each Faculty shall set its own Merit Evaluation Plan (MEP), that includes the merit evaluation criteria, a quantitative method for computing the final merit score, and guidelines for distinguishing between “fulfilling their duties” and “excellence”. To be considered for a merit reward, an eligible candidate must at least “fulfill their duties” in two categories and “excel” in one.
- b) The MEP of each faculty will be submitted to the VPAA for final approval..

- c) The merit evaluation criteria shall cover three separate categories: teaching; research/creativity or self-development; and service.
- d) The computation of the final merit score shall include the following general components:
  - The weight allocated to each category shall be:
    - i) For regular faculty in the professorial rank: 40% for teaching, 40% for research/creativity, 20% for service.
    - ii) For faculty in the professorial rank having received a substantial release from teaching for research assignments: 20% for teaching, 60% for research/creativity, 20% for service.
    - iii) For faculty in the professorial rank with significant service assignments (Faculty officers): 30% for teaching, 20% for research/creativity, 50% for service.
    - iv) For faculty in the non-professorial rank: 60% for teaching, 20% for self-development, 20% for service.
  - Each category shall be assigned a score between 0 and 4.
  - The final merit score shall be the weighted average of the category scores.
- e) The MEP shall be circulated before the end of October of each academic year.
- f) If any, amendments of the MEP can be made on a yearly basis and shall obey the same requirements as those of its adoption.

## **7. Merit Evaluation Procedure**

- a) The starting documents for merit evaluation are the annual self-evaluation report, an updated CV, and supporting documents. These documents shall be made available to the corresponding Chairperson's office no later than the end of the second week of April.
- b) The Department Personnel Committee (DPC) shall evaluate all files and compute the final merit score according to the criteria and methods set in the MEP.
- c) The Faculty Personnel Committee shall review the evaluation of the different DPCs and recommend a list of meritorious candidates, arranged in order of decreasing final merit score, to the Faculty Dean for final consideration.
- d) The Faculty Dean, taking into consideration the merit funds allocated, the report of the FPC and his/her personal judgment, shall submit his/her final decision to the VPAA by the end of the second week of May.
- e) The Faculty Dean may reserve the granting of part or all of the merit rewards.
- f) Merit rewards may be shared equally by no more than three meritorious candidates following a discretionary decision of the Faculty Dean.
- g) By the end of May of each academic year, the President shall issue the merit reward list, and shall inform each reward recipient by letter of the achievement(s) to which merit was ascribed.

## **8. Policy Review**

No later than three years after its implementation, this policy shall be reviewed for increased effectiveness by the appropriate University body.

## **BA IN CORPORATE LAW**

<b>GENERAL EDUCATION REQUIREMENTS</b>	33 credits
English	6 credits
Arabic	3 credits
Philosophy & Religion	6 credits
Cultural Studies	6 credits
Citizenship	6 credits
Science & Technology	6 credits

<b>CORE REQUIREMENTS</b>	36 credits
LAW 201	Introduction to Law
LAW 204	Civil Law I
LAW 302	The Code of Obligations and Contracts
LAW 304	Civil Law II: Special Contracts
LAW 306	Personal Status Laws
LAW 308	Civil Procedures I
LAW 241	POS 241 Administrative Law
LAW 430	CJS 430 Criminal Law
-----	PAD 421 Fiscal and Budgetary Policy of Lebanon
LAW 331	CJS 431 Criminal Procedures
LAW 350	POS 442 Constitutional Law (Decree no 2642 dated 21-9-1965)
LAW 390	Research Methods in Legal Studies

### **CORPORATE LAW**

<b>MAJOR REQUIREMENTS</b>	18 credits
LAW 341	Commercial Law
LAW 441	Special Topics in Commercial Law
LAW 343	Bankruptcy
LAW 402	Civil Procedures II
LAW 401	IAF 401 Public International Law
LAW 409	Private International Law

<b>Choose 4 courses from the following:</b>	12 credits
LAW 327	Banking Law
	PAD 312 Regulatory Politics
LAW 325	BAD 325 International Business Law
LAW 490	Senior Studies
LAW 271	HTM 211 Hospitality Law
LAW 362	COA 352 Media Law
-----	The form of the TRA 312 Translation of French Legal Documents
LAW 411	ACS 330 Insurance Law and Regulations
LAW 415	ARP 563 Building Rules and Regulations
LAW 319	Environmental Law
LAW 329	BAD 329 Labor & Social Security Law
LAW 417	International Tax Law
LAW 403	Law of the Sea

-----	PAD 462 Public Management
LAW 442	European Union Law
LAW 345	Electronic Commerce Law
LAW 470	Arbitration
LAW 405	Maritime Law
LAW 430	Ethics and Law
LAW 480	Advocacy Trial

**FREE ELECTIVES** (6 credits)

TOTAL 105

**LAW 201 Introduction to Law**

This course is an introduction to the major legal systems as well as to the sources of law including written law, jurisprudence, usage and custom, international treaties, arbitration... The course emphasizes the study of the different legal systems such as civil law, common law, and Islamic law. Other topics include the court system, evidence, litigation, etc...

**LAW 204 Civil Law I : Real Estate Law**

An introduction to the legal relationships that arise out of or constitute ownership of property. Among the topics to be covered are the initial acquisition of rights in real and personal property, the nature of ownership of natural resources, the various types of concurrent and successive interests in land, and restraints on alienation.

**LAW 302 The Code of Obligations and Contracts**

This course examines the legal nature of obligations and contracts, the classification of contracts, consent, vice of the consent, nullity of contracts, the capacity for contracting, the form of the contract, the time of contracting, the object and the cause of contracts, as well as the performance, extinction and transfer of obligations.

**LAW 304 Civil Law II: Special Contracts**

This course examines special contract in the Lebanese legal system. It includes: the study of certain special kind of unilateral contracts and the obligations they create both on buyers and sellers mainly sales contracts, rent and mandates as well as their termination and the means of appeal available to buyers and sellers.

**LAW 306 Personal Status Laws**

This course deals with issues regarding marriage, divorce, succession, filiations, and parent-child relationship in Lebanon. The course covers personal status laws and regulations of the various Lebanese religious groups recognized officially by the government i.e. Christians, Islamic, and Druze. Other topics include: alimony, and the implementation of personal status courts decisions by the Public Administration.

**LAW 308 Civil Procedures I**

This course concerns the mechanism of civil litigation, with special reference to pleading, discovery, and trial, the power of the different courts to decide cases (subject matter decision), jurisdiction of the courts over the person or things before them, the scope and effects of judgments, and the principles of finality of judgments.

**LAW 319 Environmental Law**

This course is designed to provide a broad overview of the major national as well as international agreements dealing with environment and the complex relationship between legal mandates and real-world implementation. Other topics include: quarries and mining regulations, and the legislation related to the licensing and operating industries on the Lebanese territory.

**LAW 327 Banking Law**

This course surveys legal regulations of depository institutions, the check, the letter of credit, the bills of exchange, the promissory note, the bill of lading, the documentary credit, the crossed check, the joint account, and the discount of credit. Other topics include: banking secrecy laws in Lebanon and abroad, and fighting money laundering as well as the relationship between taxation and banking secrecy law.

**LAW 341 Commercial Law**

A Study of the Lebanese commercial law, its sources and its different amendments. Topics covered include: the definition of merchants and commercial activities, the difference between commercial acts and civil acts, commercial companies, agency, commercial representation, banking operations. The course covers the different types of partnerships and corporations, their formation, characteristics, management, and dissolution.

**LAW 343 Bankruptcy**

This course studies the bankruptcy law including the law of corporate reorganization. Topics include the declaration of bankruptcy by the court, the appointment of the liquidator of the company, the concordat preventif, rights of creditors in bankruptcy, the individual's right to discharge, the treatment of executory contracts, and bankruptcy planning.

**LAW 345 Electronic Commerce Law**

The course will focus on both the technology involved in electronic commerce and the law surrounding this emerging field. Topics include electronic contracts, digital signatures, cyber notaries, copyright infringement via electronic means, electronic payment of checks digital checks, and securities law in the electronic context. The course also compares the United States and the European Union legislations related to Electronic Commerce.

**LAW 351 Mergers and Acquisitions Laws**

The course examines the legal aspects of mergers and acquisitions. In addition to considering corporate, securities, and antitrust aspects, the course also looks at pre-merger notification, valuation principles, negotiation process, offer and counter offer, and final conclusion of the contract. Special emphasis is placed on the United States and European legislation related to merger and acquisitions.

**LAW 385 Mergers and Multinational Business**

The course examines mergers and acquisitions in international business. Topics include: the context of globalization, international business environment, multinational companies, foreign direct investment regulations and government control on mergers and acquisitions. Other issues include: The legal procedures, litigation, economic impact, risks of monopoly, implication on employment, the cultural factors, and the United States and European Union policies related to companies merger and acquisition.

**LAW 390 Research Methods in Legal Studies**

An initiation on legal research required form a law student. The course reviews method for researching, and analyzing the different sources of law available such as codes of law, jurisprudence, international treaties, writings of scholars, and customs and usage. It includes the review of modern research techniques provided by technology such as: computers, court decisions data banks, internet, and other modern tools providing new sources of legal material.

**LAW 402 Civil Procedures II**

This course examines the rules of procedures, doctrine, and policies concerning jointer of claims and parties, discovery, trial, former adjudication, and appellate review in the different courts according to



the Lebanese Code of Civil procedures. Other topics include: judicial process functions, resolution of legal controversies, and the control by the courts of the process of litigation and disputes.

#### **LAW 405 Maritime Law**

This course is an introduction to maritime law, its history, and its subjects. It covers the definition of a vessel, its legal nature, and the means for owning it. The course deals with exploiting the vessel for transport, shipping documents, maritime accidents, sea accidents, insurance, environmental regulations, labor rules, and taxation.

#### **LAW 409 Private International Law**

This course deals with issues related to conflict of laws and jurisdictions, the effects of foreign courts rulings in domestic courts, the nationality of foreign businesses, and the legal rules for dealing with personal status, successions, and contract issues. Other topics include: The Exequatur, international treaties related to conflict of law, and court review procedures.

#### **LAW 417 International Tax Law**

A survey of income tax aspects of operations of foreigners and overseas investments and business operations. The principal focus is on the different techniques for calculating taxes owed by multinational companies, adjustments between tax regimes of different countries through tax credit and tax treaties. Other topics include: avoidance of double taxation, tax havens, transfer of business profit and tax exemptions.

#### **LAW 418 United States Corporate Law:**

The course examines United States corporate law. Major topics include: the basic principles of commercial law, its sources, and the role of jurisprudence in commercial litigations. Other topics include: An in depth study of partnerships and corporations including their formation, incorporation, and liabilities, court litigation, bankruptcy procedures and the protection of the courts, the trust, validity of contracts and their performance, and extinguishing of obligations.

#### **LAW 430 Ethics and Law**

This course is an examination of the principal theories of law, the foundations of the legal system, and key issues in law- such as, equality, discrimination, rights, obligations, responsibilities, moral choices, conflict of interest, corruption vs. values, and ethics and culture. It includes the study of the main philosophical theories of ethics and law, their interrelationships, the ethical foundations of the legal system, and the practical application of such theories and issues.

#### **LAW 441 Special Topics in Commercial Law**

The course deals with the enforceability and interpretation of contractual arrangements, sanctions for their breach, errors in law, errors in facts, and justifications or excuses for nonperformance. Special attention will be paid to the relevance of contract object, form, and cause as well as to the drafting, negotiations, rescission, annulment, and termination of contracts.

#### **LAW 442 European Union Law**

European Union Law studies the institutions and organic law of the European Union, together with selected problems affecting the future of the Union at the legislative level. Other topics include: the treaty of Rome, the different treaties related to the EU, the legal implications of the enlargement of the EU, and the future trends in European legislation.

#### **LAW 470 Arbitration**

This course covers the different national and international rules of arbitration and to the alternative forms of out-of-court procedures, and the different ways in which they operate. It introduces students to the reasons for increase of arbitration in today's world, especially in international trade.

#### **LAW 480 Advocacy Trial**

This course is designed for the training of law students concerning the rules of conduct in a court. It is designed to encourage students to develop effective litigation skills, self-confidence, speaking skills necessary for dealing with the special challenges that lawyers face before a court. The course will combine lectures with case simulations and interactive exercises.

## BA IN PUBLIC LAW

<b>GENERAL EDUCATION REQUIREMENTS</b>	33 credits
English	6 credits
Arabic	3 credits
Philosophy & Religion	6 credits
Cultural Studies	6 credits
Citizenship	6 credits
Science & Technology	6 credits

<b>CORE REQUIREMENTS</b>	36 credits
LAW 201	Introduction to Law
LAW 204	Civil Law I
LAW 302	The Code of Obligations and Contracts
LAW 304	Civil Law II: Special Contracts
LAW 306	Personal Status Laws
LAW 308	Civil Procedures I
LAW 241	POS 241 Administrative Law
LAW 430	CJS 430 Criminal Law
-----	PAD 421 Fiscal and Budgetary Policy of Lebanon
LAW 331	CJS 431 Criminal Procedures
LAW 350	POS 442 Constitutional Law (Decree no 2642 dated 21-9-1965)
LAW 390	Research Methods in Legal Studies

<b>MAJOR REQUIREMENTS</b>	18 credits
LAW 301	Special Topics in Administrative Law
LAW 401	IAF 401 Public International Law
LAW 329	Labor and Social Security Law
LAW 403	Law of the Sea

----- POS 350 Comparative Governments and Politics  
LAW 407 Aviation Law

### **FACULTY ELECTIVES (12 credits)**

Choose four courses from the following, or any other course from the Faculty:

-----	PAD 312 Regulatory Politics
LAW 341	BAD 311 Business Law Senior Studies
-----	IAF 402 Human Rights in International Politics
-----	POS 353 Governments of the Middle East
LAW 271	HTM 211 Hospitality Law
LAW 362	COA 352 Media Law
LAW 319	Environmental Law
-----	TRA 312 Translation of French Legal Documents
LAW 411	ACS 330 Insurance Law and Regulations
LAW 415	ARP 563 Building Rules and Regulations
LAW 327	Banking Law
LAW 417	International Tax Law
-----	POS 321 State and Local Government
-----	PAD 462 Public Management
LAW 309	Lebanese Tax Law
LAW 430	Ethics and Law
LAW 480	Advocacy Trial

**FREE ELECTIVES ( 6 credits)**

**TOTAL 105**

**LAW 204: Civil Law I: Real Estate Law**

An introduction to the legal relationships that arise out of or constitute ownership of property. Among the topics to be covered are the initial acquisition of rights in real and personal property, the nature of ownership of natural resources, the various types of concurrent and successive interests in land, and restraints on alienation.

**LAW 241 Special Topics in Administrative Law**

This course will examine the basic principles of public agency regulations, particularly the doctrines associated with authority, and responsibility as well as how agencies are managed. Other topics include: formation of public agencies, their management, their financial and administrative autonomy, and the central administration control over public agencies.

**LAW 302 The Code of Obligations and Contracts**

This course examines the legal nature of obligations and contracts, the classification of contracts, consent, vice of the consent, nullity of contracts, the capacity for contracting, the form of the contract, the time of contracting, the object and the cause of contracts, as well as the performance, extinction and transfer of obligations.

**LAW 304 Civil Law II Special Contracts**

This course examines special contract in the Lebanese legal system. It includes: the study of certain special kind of unilateral contracts and the obligations they create both on buyers and sellers mainly sales contracts, rent and mandates as well as their termination and the means of appeal available to buyers and sellers.

**LAW 306 Personal Status Laws**

This course deals with issues regarding marriage, divorce, succession, filiations, and parent-child relationship in Lebanon. The course covers personal status laws and regulations of the various Lebanese religious groups recognized officially by the government i.e. Christians, Islamic, and Druze. Other topics include: alimony and the implementation of personal status courts decisions by the administration.

**LAW 309 Lebanese Tax Law**

This course is an introduction to the study of the Lebanese Tax Law. It covers the different direct and indirect taxes and tariffs such as: the income tax, the corporate tax, the VAT, property tax, customs...Areas of additional learning include the tax collection system, tax practice, and taxation and ethics.

**LAW 319 Environmental Law**

This course is designed to provide a broad overview of the major national as well international agreements dealing with environment and the complex relationship between legal mandates and real-world implementation. Other topics include: quarries and mining regulations, and the legislation related to the licensing and operating industries on the Lebanese territory.

**LAW 327 Banking Law**

This course surveys legal regulations of depositary institutions, the check, the letter of credit, the bills of exchange, the promissory note, the bill of lading, the documentary credit, the crossed check, the joint account, and the discount of credit. Other topics include: banking secrecy laws in Lebanon and abroad, and fighting money laundering as well as the relationship between taxation and banking secrecy law.

**LAW 390 Research Methods in Legal Studies**

An initiation on legal research required form a law student. The course reviews method for researching, and analyzing the different sources of law available such as codes of law, jurisprudence, international treaties, writings of scholars, and customs and usage. It includes the review of modern research techniques provided by technology such as: computers, court decisions data banks, internet, and other modern tools providing new sources of legal material.

**LAW 402 Civil Procedures II**

This course concerns the mechanism of civil litigation, with special reference to pleading, discovery, and trial, the power of the different courts to decide cases (subject matter decision), jurisdiction of the courts over the person or things before them, the scope and effects of judgments, principles of finality of judgments and the rules governing joiner of claims and parties.

**LAW 403 Law of the Sea**

This course examines the sources of the law of the sea, its history, and the legal aspects of laws related to the use of the seas and oceans. Topics include: territorial sea, high seas, contiguous zones, marine environment, continental shelf, international treaties related to international rivers, straights, navigation rules, fighting piracy and illegal trafficking and lakes.

**LAW 407 Aviation Law**

This course examines the sources of aviation law, its history, and the various international treaties regulating aviation such as the Warsaw Convention and Chicago Convention. The course considers the legal aspects of domestic and international aviation as well as the use of air space, and outer space, and the role of various governmental and non-governmental international organizations.

**LAW 411 Insurance Law**

This course examines the legal issues related to insurance regulation. Topics will include the special principles applicable to insurance policies, problems arising under life and health insurance, bad faith issues, and the duty to defend and to settle under liability policies. The course is supplemented by practical case studies taken from Lebanese and international practices of insurance.

**LAW 417 International Tax Law**

A survey of income tax aspects of operations of foreigners and overseas investments and business operations. The principal focus is on the different techniques for calculating taxes owed by multinational companies, adjustments between tax regimes of different countries through tax credit and tax treaties. Other topics include: avoidance of double taxation, tax havens, transfer of business profit and tax exemptions.

**LAW 430 Ethics and Law**

This course is an examination of the principal theories of law, the foundations of the legal system, and key issues in law- such as, equality, discrimination, rights, obligations, responsibilities, moral choices, conflict of interest, corruption vs. values, and ethics and culture. It includes the study of the main philosophical theories of ethics and law, their interrelationships, the ethical foundations of the legal system, and the practical application of such theories and issues.

**LAW 441 Special Topics in Commercial Law**

The course deals with the enforceability and interpretation of contractual arrangements, sanctions for their breach, errors in law, errors in facts, and justifications or excuses for nonperformance. Special attention will be paid to the relevance of contract object, form, and cause as well as to the drafting, negotiations, rescission, annulment, and termination of contracts.

**LAW 442 European Union Law**

European Union Law studies the institutions and organic law of the European Union, together with selected problems affecting the future of the Union at the legislative level. Other topics include: the treaty of Rome, the different treaties related to the EU, the legal implications of the enlargement of the EU, and the future trends in European legislation.

**LAW 470 Arbitration**

This course covers the different national and international rules of arbitration and to the alternative forms of out-of-court procedures, and the different ways in which they operate. It introduces students to

the reasons for increase of arbitrage in today's world specially in international trade. The course is supplemented with case studies taken from US, EU, and Lebanese arbitration practice.

**IAF 474 China, India, and the Arab World**

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*

**LAW 480 Advocacy Trial**

This course is designed for the training of law students concerning the rules of conduct in a court. It is designed to encourage students to develop effective litigation skills, self-confidence, speaking skills necessary for dealing with the special challenges that lawyers face before a court. The course will combine lectures with case simulations and interactive exercises.

**LAW 490 Senior Studies**

The aim of the course is to provide students with specific training in one of the various fields of legal studies. The course includes the study of a real case, or topic of current interest to law students. The topic may be taken from the US, EU, or Lebanese legislation and vary according to concentration choice. The course includes a presentation and an exit exam.

## **Master of Arts in Corporate Law**

**Core Requirements:** **9 crs.**

IAF 641, PAD 604, POS 681 or LAW 601

**Major-related Electives:** **15 crs.**

Choose 5 from the below listed courses:

LAW 620, LAW 623, LAW 632, LAW 635, LAW 642, LAW 651, LAW 652,

LAW 654, LAW 655, LAW 656, INL 624, INL 626, INL 634, INL 650.

**Free Electives:** **6 or 12 crs.**

*Option I:* Thesis (6 crs.) in addition to 30 credits of course work.

*Option II:* Successful completion of 36 credits of course work culminating in comprehensive written and oral examinations.

**Major-related Electives:**

## **1. Suggested courses from the Catalog:**

**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 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 aspect 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 634 International Banking (3.0); 3 cr.** Study of the legal aspect 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 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 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. A special emphasis is given to the new legislations enacted after September 11, 2001 related to the fight against financing of terrorism, and money laundering.

**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.

## **2. New Courses in Corporate Law:**

**LAW 601 Legal Research and Writing (3.0); 3 cr.** This course covers skills basic to competent legal research and writing. The students write objective memoranda of law based on hypothetical problems composed by the instructors. The course emphasizes issue recognition, case and statutory interpretation, legal analysis, the use of plain English, as well as the use of computerized legal data.

**LAW 602 Legal Drafting (3.0); 3 cr.** Using research provided, students draft a client letter, complaint, and set of interrogatories, contract and will. For each project, 2-3 students will interview the client to obtain the necessary facts. The final work product, due at the end of the semester, is a portfolio containing corrected drafts of each assignment, plus the applicable law, rules, and sample documents used to create all five assignments.

**LAW 603 Rules of Legal Writing (3.0); 3 cr.** Students enrolled in this course will study and practice ways to improve their writing. Using a set of specific rules for enhancing writing, students will analyze and correct examples of poorly written material and compose and correct original material. With emphasis on plain English, this course is designed to improve students' understanding of the grammar and composition skills necessary for effective legal writing.

**LAW 620 Lebanese Corporate Law (3.0); 3 cr.** A general description of business corporation in Lebanon, the distinction between partnerships and companies (S.A., SARL) and between private and public companies, the role and responsibilities of organs of management, the specific cases of foreign companies established in Lebanon, of holding and off-shore companies, legal aspects of conversion from a company to another.

**LAW 623 Advanced Labor Law (3.0); 3cr.** Provides an advanced survey of the theories behind the implementation of laws governing the protection of employees' rights and labor relations in the private sector in Lebanon. This course will deal with both European and Middle Eastern traditions in this field. Specific topics include: social insurance (e.g. unemployment, accident and unemployment compensation), maternity leave, health and safety regulations, gender equality, working hours and the right to organise and participate in collective bargaining.

**LAW 624 Broadcasting and Press Law (3.0); 3cr.** This course provides a comprehensive overview of the legal norms governing both the electronic and print media in the Middle East, in general, and Lebanon, in particular. Lebanon was the first country (1994) in the MENA region to introduce a broadcasting act for private terrestrial broadcasters. Students will study both the background and concrete implementation of media law, including the new challenges created by ICTs, including, e.g. the internet, mobile phone technology, satellite broadcasting and their regulation.

**LAW 632 Insurance Law (3.0); 3 cr.** The study of insurance policies and contracts (forms, contents and construction), the determination of the risk and of insurable interests, the types of liability and the insurer's obligations, matters rendering the contract of insurance void or unavailable, losses procedure and evidence. The course is supplemented by case studies selected from the business and court practice in the field.

**LAW 635 International Taxation Law (3.0); 3 cr.** Purposes of taxation, income, taxes, taxpayers, bases of income taxation, double taxation, tax treaties, tax incentives, tax avoidance and evasion. Other topics include the study of tax incentives, foreign direct investment taxation, tax havens and their impact on international business, tax collection, tax administration, the various taxes applied on international corporations and appeals before tax courts.

**LAW 641 Private International Law (3.0); 3 cr.** Sources and scope of private international law, international persons, the rights of individuals under international law, the domain of conflict of laws and conflict of jurisdiction, dispute settlements, the choice of applicable law in international disputes,

the choice of competent tribunals in civil and commercial cases, the refusal to exercise jurisdiction and the recognition of foreign judgments.

**LAW 642 International Intellectual Property Law (3.0); 3 cr.** The course will examine the principal doctrines concerning copyrights, trade marks and passing off, rights of publicity, trade secrets, the legal regulation of design and confidential information, legal and philosophical theories on the legitimacy of intellectual property will be considered. Other topics include: patents and their registration in accordance with international treaties, the problem of the piracy of copyright through the internet and other modern technologies.

**LAW 643 European Union Law (3.0); 3 cr.** This survey offers students an introduction to the structures, substantive law and dispute resolution mechanisms of the European Union. Topics covered include the history and structure of the European Union, including growing federalism issues; sources of law in the European Union, European Union business law, and various policies designed to create a single European economic and political body.

**LAW 650 US Business Law (3.0); 3 cr.** Legal aspects of business in the U.S.: contracts, sales, agency problems, employment, business organization, property, securitization, commercial paper etc..., from an American perspective. Other topics include: a comparative approach between civil and common law in relation to commerce, rules governing partnerships and corporations, bankruptcy issues, evidence before the courts, and liability for non performance of contracts.

**LAW 651 Commercial Operation Law (3.0); 3 cr.** This course covers basic commercial law doctrine, focusing on two central devices in commercial credit, negotiability and the security interest. The treatment of security interests in bankruptcy is also covered. The topics to be addressed include the use of notes to separate payment obligations from their underlying transactions, creation and perfection of security interests in personal property, and priorities and remedies upon default in these secured transactions.

**LAW 652 Bankruptcy Law (3.0); 3 cr.** This survey of bankruptcy law covers basic concepts such as the automatic stay, adequate protection and property of the estate and also examines personal and business bankruptcy options under the appropriate legal systems. The course gives limited treatment to non-bankruptcy law of debt collection. It is recommended, but not required, that Commercial Law be taken first.

**LAW 653 Antitrust Law (3.0); 3 cr.** This course covers the principal law regulating anticompetition activity, the Sherman Act of 1890 and its amendments, the Clayton Act of 1914, the Robinson-Patman Act of 1936 and relevant sections of the Federal Trade Commission Act. The legal concepts include ventures which substantially lessen competition or tend toward monopoly in any product in any section of the USA. Other topics include: regulation of anticompetitive behavior in the European Union and Japan, and the extraterritorial application of Unfair Competition Laws.

**LAW 654 Mergers and Acquisitions Law (3.0); 3 cr.** This course introduces students to the various legal problems surrounding corporate acquisitions, both from the perspective of the acquiring company and the company acquired. The course will also call on students to consider the policy problems raised by various aspects of mergers and acquisitions. The course will not, however, presume any previous knowledge of either economics or finance theory. Heavy emphasis will be placed on current issues involving hostile takeovers.

**LAW 655 Corporate Transactions: Negotiating and Drafting (3.0); 3 cr.** This course provides exposure to corporate transactions and hands-on drafting experience with an active corporate practitioner. By the end of the course, students will have a basic understanding of the structure of a corporate agreement, and the purposes of its basic components, including recitals, representations and



warranties, covenants, conditions, precedent, closing logistics and post-closing obligations. Students work on a fictitious corporate acquisition from letter of intent through stock purchase agreement to closing documents, with emphasis on drafting, but including some discussion of structuring the transaction, negotiating strategies and practice negotiations. Course work includes weekly in-class drafting exercises and frequent take-home drafting exercises.

**LAW 656 Government Contracts: Formation and Administration (3.0); 3 cr.** This course will provide an overview of the basic consideration in contracting with the government, including the sovereign's power to contract, the applicable statutes, regulations and executive orders, and sovereign immunity. The course is supplemented by various case studies related to government procurement regulations in the United States and the European Union in light of international agreements such as the WTO rules and regulations in the field.

## **Graduate Research Assistantship Policy**

*Approved by the BOD on May 15, 2008*

### **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.

#### **X. Enactment**

The present policy shall take effect as of October 1<sup>st</sup>, 2008.

Model of a  
**Student Research Assistantship Appointment (SRAA)**  
form

Date \_\_\_\_\_

Dear *\_(Name of the appointed student)\_*\_\_\_\_\_ ,

This is to confirm the agreement between yourself and Notre Dame University-Louaize with regard to the following research assignment:

1. *\_\_\_\_\_(Nature and Purpose of the Research Assignment)\_\_\_\_\_*
2. Expected duration: from *\_\_\_\_\_(starting date)\_\_\_\_\_* to *\_\_\_\_\_(termination date)\_\_\_\_\_*.

You agree to:

1. Carry out the said research assignment as a *\_\_\_\_\_(type of appointment)\_\_\_\_\_* within the *\_\_\_\_\_(Faculty/Center) \_\_\_\_\_* at Notre Dame University-Louaize, *\_\_\_\_\_(campus)\_\_\_\_\_*.
2. Satisfactorily perform the expected research work on a weekly basis.
3. Work on this assignment for *\_\_\_\_\_(Number of hours)\_\_\_\_\_* hours per week
4. Be compensated for your work with a remuneration of *\_\_\_\_\_(amount of remuneration in full letters)\_\_\_\_\_* to be paid in *\_\_\_\_\_(number of installments)\_\_\_\_\_* installments of *\_\_\_\_\_(amount of installment)\_\_\_\_\_* each and/or to be granted as a tuition waiver equivalent to *\_\_\_\_\_(amount of tuition waiver)\_\_\_\_\_*

While working under this SRAA, no fringe benefit of any sort may accrue. By signing this form, you accept to be paid the said compensation without any employer-employee additional right or benefit.

This SRAA rests on the entire understanding of the signing parties and may not be amended without their written mutual consent, except for a compelling cause as outlined in §VIII of the University *Student Research Assistantship Policy*.

If the above reflects your understanding, please sign below.

\_\_\_\_\_  
Appointee's Signature

\_\_\_\_\_  
President's Signature

## Minor In Engineering Management

### 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. Interaction with industry is then easier, and this additional skill to engineering is highly valued.

### Objectives and Outcomes

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 opened 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 Courses (12 credits)

ACO 201	Principles of Accounting I	3cr
CEN 492	Engineering Economy	3cr
CEN 393	Project Management	3cr
BAD 201	Fundamentals of Management	3cr

#### B- Elective Courses (6 credits)

Choose 2 courses from the following pool:

BAD 317	Organizational Behavior	3cr
BAD 425	Quantitative Techniques for Management	3cr
BAD 429	Operations Management	3cr
CEN 471	Civil Engineering Laws and Ethics	3cr
CEN 493	Construction Planning	3cr
ECN 200	Survey of Economics	3cr
MAT 339	Numerical Analysis	3cr
MGT 201	Principle of Human Resources	3cr
MGT 411	Leadership Quality & Performance	3cr
MRK 201	Fundamentals of Marketing	3cr

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.” All application forms accompanied by a petition form 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 in writing, and the letter addressed to the Department of Civil and Environmental Engineering.

**Contact Information**

Dr. Jacques Harb, Chairperson  
Department of Civil and Environmental Engineering  
[jharb@ndu.edu.lb](mailto:jharb@ndu.edu.lb) or x 2030  
[www.ndu.edu.lb](http://www.ndu.edu.lb)  
Faculty of Engineering

## Minors in FNAS

The minors in the mathematics and statistics department are designed to give students in other majors the opportunity to strengthen their background and improve their comprehension in the mathematical sciences and their role in their disciplines.

### Admission to a Minor

In order to complete a minor, the student should consult the policy of Undergraduate Academic Minors at NDU for rules and regulations. No other special requirements are needed.

We offer the following minors. Motivation for each of the three minors along with course requirements and descriptions are given in details.

### Minors offered:

#### **1. 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 enhance his understanding for example in the areas of real and complex analysis, algebra, and/or numerical analysis.

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.

To satisfy the requirements of a minor in mathematics, a student must choose five courses from the above pool as follows:

Suggested schedule

First semester

MAT 224, MAT 215 or MAT 235.

Second semester

Choose two courses from the pool: MAT 325 or MAT 326, MAT 305, MAT 324 or MAT 333, MAT 335, MAT 339.

Third semester

MAT 411 or MAT 412 or MAT 418.

#### **2. 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.

Pool of courses: ACS 310, ACS 314, MAT 205 or MAT 206, MAT 213, MAT 325 or MAT 326, STA 207 or STA 210.

To satisfy the requirements of a minor in mathematical insurance, a student must choose six courses from the above pool as follows:

Suggested schedule

First semester

MAT 213, MAT 205 or MAT 206, **and** STA 207 or STA 210.

Second semester

ACS 310 **and** MAT 325 or MAT 326

Third semester

ACS 314

### **3. 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. Dependent 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 to the fields of finance, industrial quality control, optimization as well as statistical decision making.

Pool of courses: MAT 213, MAT 325 or MAT 326, STA 207 or STA 210, STA 312, STA 315, STA 370.

To satisfy the requirements of a minor in applied statistics, a student must choose any six courses from the above pool as follows:

#### **Suggested schedule**

First semester

MAT 213, STA 207 or STA 210.

Second semester

STA 312, MAT 325 or MAT 326.

Third semester

STA 315, STA 370.

#### **Course Descriptions**

**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 Life and Multi-life Contingencies (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.



**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 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 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 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 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 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 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-Riemann 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 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 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-Steiltjes 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.

**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 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 312 Introductory Time Series Analysis (3.0); 3 cr.** Introduces the basic concepts of regression analysis starting with two variable model 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 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.

**Changes to catalog**

ACS 310 prerequisite: STA 210.

Add to catalog: prerequisite one of the following courses: STA 210, STA 207, MAT 325 or MAT 326.

STA 312 prerequisite: STA 210.

Add to catalog: prerequisite: STA 210, STA 207 or MAT 326.

STA 315 prerequisite MAT 325

Add to catalog: prerequisite: MAT 325 or MAT 326.

STA 370

Add to catalog: prerequisite: MAT 325 or MAT 326

## **Master of Science (MS) in Astrophysics**

A proposal for a dual-degree MS program (*Master en co-diplômation*) between  
**Notre Dame University and St. Joseph University**

### **Preamble**

Astronomy and Astrophysics are presently witnessing an increasing interest in Lebanon and the Middle East. In less than ten years, the number of Lebanese astrophysicists in Lebanese universities has increased from zero to five. Two of the astrophysicists in Lebanon are at NDU (Roger Hajjar and Bassem Sabra), and one is affiliated to USJ (Jamal Bittar). Since 2004, scientists interested in astronomy grouped under the *Task-Force for Astronomy and Astrophysics* that was formed by the Lebanese *Conseil National de la Recherche Scientifique* (L-CNRS). This group organized a number of activities that helped develop an unquestionable interest for the discipline among the physics student population of Lebanon and the region. Many astronomy clubs have also been started at some universities in Lebanon, particularly at NDU and USJ.<sup>3</sup>

NDU and USJ have invested significantly in astrophysics over the last couple of years, equipping themselves with astronomical instrumentation (telescopes, CCD cameras, spectrographs, and accessories) adequate for teaching and research purposes. Since 2004, the astrophysicists at these two universities have supervised senior projects and masters theses for no less than 20 students. Many of these students are now pursuing their studies abroad, mainly in France.

It is important to note that the Jesuit Fathers, back in 1920, have founded one of the very first observatories in Lebanon, in Ksara. It remained active until 1979 and served for the measurement of telluric lines and photometry of variable stars. It also worked in meteorology and seismology.

Most recently, Lebanon joined the International Astronomical Union (IAU) as an interim member. Also, the L-CNRS has funded for the first time two research proposals in astrophysics jointly submitted by astrophysicists from the Task-Force belonging to NDU, AUB, and USJ. These projects will partly rely on NDU and USJ astronomical equipment for their implementation.

A proposal for an MS program in astrophysics, proposed as a dual-degree program between NDU and USJ, would be the natural consequence of an already launched long collaboration between these two institutions in view of establishing a pole of excellence for observational astrophysics in Lebanon and the Arab region. This project will build a specific agreement within a framework convention of cooperation between NDU and USJ. At present, the two universities have the required competencies to successfully start such a program of study, expected to attract about 15 students per year. This MS would also help improve the research output of the "Task-Force" and create a favorable environment for the creation of a center (or institute) for Astronomy and Astrophysics at the national and even regional level. In addition, such a program would strengthen the resolve of interested students to choose physics as an academic field of specialty.

### **Objectives**

1. Graduate astrophysicists endowed with those competencies required to meet the above-mentioned needs, and prepared to be the pillars of establishing a network of regional and national observatories, mainly in the optical and infrared ranges.
2. Prepare graduates who can carry on PhD studies in astrophysics.
3. Allow the students to acquire, through research, the essential competencies requested by the job market.

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<sup>3</sup> The NDU astronomy club is the oldest among these clubs and will celebrate its tenth anniversary in the academic year 2008-2009.

4. Form students capable of engaging in more advanced research, predominantly in observational astrophysics.
5. Graduate competent physicists capable of integrating astronomy and astrophysics within physics curricula in schools.

### **Targeted Group**

This Masters targets students who hold:

1. A BS in physics, mathematics, or chemistry from NDU or USJ, or any other degree deemed equivalent by the competent authorities at NDU and USJ.
2. A bachelor of engineering from NDU or USJ, or any engineering degree deemed equivalent by the competent authorities at NDU and USJ.

To be admitted, the candidate must successfully pass an interview with a selection committee.

Students for this Masters are normally admitted in the fall semester of each academic year (starting September-October). However, students who are required to complete remedial courses may be granted conditional admission in the spring semester of each academic year (starting February).

### **Job Opportunities**

All job opportunities accessible to a physicist are accessible to an astrophysicist as well, with the additional advantage for the latter of being competent in one of the most attractive fields in modern science. Accordingly, graduates of this program may either choose a teaching career, or engage in the development of relevant curricula.

In addition, holders of this Masters can immediately start doctoral research in astrophysics with the aim of either engaging in an academic career or in research work within specialized institutes. Other jobs requiring a solid knowledge of astronomy and astrophysics, such as managing small observatories, or working in science museums and planetariums, can be targeted as well.

### **Admission**

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.

Candidates should submit the following documents:

1. A filled out application for admission in the Masters program.
2. A photocopy of the Identity Card or passport.
3. A Family Status Record not older than one year.
4. A certified photocopy of the Lebanese Baccalaureate or its officially recognized equivalent.
5. Two letters of recommendation.
6. A certified copy of already earned university degrees.
7. An official university transcript of records.
8. A certified copy of the course description of all courses taken.
9. Two recent ID photos
10. An attested affiliation to any of the following institutions:
  - a. National Social Security Fund (NSSF).
  - b. Mutual Fund for Judges
  - c. Cooperative of civil servants
  - d. Mutual fund for the teaching body of the Lebanese University
  - e. Lebanese Army
  - f. General Security
  - g. Internal Security
  - h. State Security
  - i. Customs
  - j. Municipalities

**PS:** Any diploma to be handed in for registration and not delivered by NDU, USJ, or the Lebanese University must first be submitted for legalization to the Commission for Equivalence at the Ministry of Education and Higher Education.

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 adopted at NDU, or a minimum weighted mean point average of 60/100 according to the European Credits Transfer System (ECTS) adopted at USJ.
2. They shall be able to follow lectures in both English and French. To this end, the French aptitude test adopted at USJ for class “A” students shall serve to evaluate the proficiency of students in French, and NDU English Entrance Exam shall serve to evaluate their proficiency in English.

The admissions offices of both institutions shall separately issue a letter of admission to the selected candidates.

### **Registration**

1. The student shall register in both institutions and have two academic files. Both files shall be identical and synchronized through both competent services.
2. The registration in a course shall take place at the university where it is offered. For courses predominantly taught in French, registration shall take place at USJ, and for courses predominantly in English, registration shall take place at NDU.
3. Students registered in this MS shall have two student IDs, one issued by USJ and the other by NDU, to facilitate their access to both institutions.
4. The student shall choose the academic institution in which s/he wants to complete the NSSF formalities.
5. The student shall benefit from the insurance coverage provided by the institution in which s/he has completed NSSF clearance.

### **Teaching setup**

1. The curriculum is organized by semester. A student cannot register for more than 12 credits per semester in the American system and 30 credits per semester in the ECTS.
2. The minimum residency shall be 4 semesters, and the maximum residency 8 semesters.
3. Courses offered at NDU are generally taught in English and those at USJ generally in French.
4. The institution that provides the teaching of a course shall cash its tuition fees and remunerate its instructor according to its own rates.
5. The courses shall be distributed between the two institutions in such a way that the credit volume per institution shall be about half of the credits volume required by this Masters program.
6. There shall be no course duplication between the two institutions during the same semester.

### **Grading and Exams**

1. For each course, the final grade is the weighted average of all grades related to continuous evaluations, partial exams, observational and/or computational projects, data analysis, presentations, papers, and the final exam.
2. The grades for each course shall be validated by the joint committee prior to final registration in the records.
3. Grades are transformed back and forth from the ECTS to the American grading system according to the cubic equation:  $y = 10^{-5} x^3 - 9.6 \times 10^{-3} x^2 + 1.852 x$ , where  $x$  and  $y$  are the ECTS grade and the American System grade, respectively.<sup>4</sup>
4. The passing grade shall be 50/100 in the ECTS, and 70/100 (C) in the American grading system.

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<sup>4</sup> This relation is based on fitting the following four pairs: (0,0), (50,70), (68,85), (100,100)

5. The student must pass his Masters thesis with a minimum average of 79/100 in the American grading system, or 60/100 in the ECTS.
6. Exams shall be administered at the institution where the courses are offered.
7. Master thesis projects shall always be co-supervised between both Faculties.
8. Masters theses shall be defended before a mixed committee from both institutions.
9. The defenses of theses shall take place at both Faculties alternatively.
10. Students who pass successfully the Masters shall receive two diplomas, one from NDU and one from USJ.

### **Graduation Requirements**

To fulfill the graduation requirements, the student must earn a minimum GPA of 3.0/4.0, that is, a minimum grade equivalent of 80/100 in the American system, corresponding to a weighted average of 62/100 in the ECTS.

### **Proposed Curriculum (NDU)**

The program covers four regular (Fall and Spring) semesters. The first two semesters will be essentially devoted to covering the basic areas in astrophysics. As of the second semester, the student will start studying different fields of astrophysics depending on his/her interests and the research projects of the group. These fields are addressed by a pool of elective courses. The preparation of the Masters thesis is started as of the third semester. The last semester of the program is entirely devoted to research.

#### ***Core Courses:***

Stellar Astrophysics (AST601); Radiative Processes (AST602); Astrophysics of Galaxies (AST603); Interstellar Medium (AST612); Active Galaxies (AST613); Site Evaluation Techniques & Atmospheric Optics (AST614); Variable Phenomena in Astrophysics (AST620); Observational Astrophysics (AST670); Thesis I (AST691); Thesis II (AST692).

#### ***Elective Courses:***

Nuclear Astrophysics (AST621); Circumstellar Environments (AST622); Cosmology (AST623); etc.

	<b>YEAR 1</b>	
<b>1st Semester</b>		<b>Credits</b>
AST 601	Stellar Astrophysics	3
AST 602	Radiative Processes	3
AST 614	Site Evaluation & Atmospheric Optics	2
	<b>Total # credits</b>	<b>8</b>
<b>2nd Semester</b>		
AST 603	Astrophysics of Galaxies	3
AST 612	Interstellar Medium	2
AST 613	Active Galaxies	2
AST 670	Observational Astrophysics	3
	<b>Total # credits</b>	<b>10</b>
	<b>YEAR 2</b>	
<b>3<sup>rd</sup> Semester</b>		
AST 620	Variable Phenomena in Astrophysics	2
AST ---	Elective	2
AST ---	Elective	2
AST 691	Thesis I	3

	<b>Total # credits</b>	<b>9</b>
<b>4th Semester</b>		
AST 692	Thesis II	9
	<b>Total # credits</b>	<b>9</b>

### Programme d'Etude Proposé (USJ/ECTS)

<b>Année 1</b>		
<b>1<sup>er</sup> Semestre</b>		<b>Crédits</b>
ASTSTE	Astrophysique Stellaire	10
ASTRAD	Processus Radiatifs	10
ASTEVA	Evaluation de Site. & Opt. Atmosph.	7
	<b># total de crédits</b>	<b>27</b>
<b>2<sup>ème</sup> Semestre</b>		
ASTGAL	Astrophysique des Galaxies	10
ASTMIS	Matière Interstellaire	6
ASTCOS	Galaxies actives	7
ASTOBS	Astrophysique Observationnelle	10
	<b># total de crédits</b>	<b>33</b>
<b>Année 2</b>		
<b>3<sup>ème</sup> Semestre</b>		
ASTVAR	Variabilité en Astrophysique	7
AST	Optionnel	6
AST	Optionnel	7
ASTTHE 1	Thèse I	10
	<b># total de crédits</b>	<b>30</b>
<b>4<sup>ème</sup> Semestre</b>		
ASTTHE 2	Thèse II	30
	<b># total de crédits</b>	<b>30</b>

### Brief Description of the Courses and Possible Instructors

<b>Course</b>	<b>Description</b>	<b>Possible Instructor(s)</b>
Stellar Astrophysics (AST 601)	Stellar parameters and classification; Structure and evolution; Energy production and transport in stellar interiors; compact objects; binary systems.	Mounib El-Eid, Roger Hajjar
Radiative Processes (AST 602)	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...).	Jamal Bittar, Frédéric Paletou
Astrophysics of Galaxies (AST 603)	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.	Bassem Sabra, Jihane Moultaqa
Interstellar	Interstellar Medium (ISM) in the Milky Way ;	Cyrine Nehmé



Medium (AST 612)	HII regions ; photoionisation equilibrium in the ISM ; Interstellar Dust ; ISM distribution and phases ; Absorption and emission in the ISM...	Bassem Sabra
Active Galaxies (AST 613)	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.	

Site Evaluation Techniques & Atmospheric Optics (AST 614)	Effects of the atmosphere on astronomical observations; Seeing; Opacity; Turbulence; Measurement techniques of the different parameters of interest to astronomy.	Marc Sarazin
Variable Phenomena in Astrophysics (AST 620)	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.	Jamal Bittar, Roger Hajjar, Bassem Sabra
Nuclear Astrophysics (AST 621)	Elements in the universe; Stellar and primordial nucleosynthesis; Hydrogen burning sequences; r and s processes; Post hydrogen-burning reactions; neutron stars.	Mounib El Eid
Circumstellar environments (AST 622)	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.	Roger Hajjar, Jamal Bittar
Cosmology (AST 623)	Newtonian Cosmology. Introduction to General Relativity, Big Bang, Inflation, Primordial Nucleosynthesis, CMB, Large-Scale structure, Dark Matter and Dark Energy.	Bassem Sabra
Observational Astrophysics (AST 670)	Magnitudes & photometric systems, coordinates and time, telescope optics, CCD observation & reduction techniques, spectroscopy, polarimetry.	Roger Hajjar, Bassem Sabra, Jamal Bittar
Thesis I (AST 691)	Thesis project	
Thesis II (AST 692)	Continuation of Thesis I up to the defense of the Masters thesis.	

**Table of correspondence of grades between the ECTS and the NDU system (Sample transcript)**

University	Course	Credits	ECTS credits	Grades ECTS	Letter Grades
NDU	AST 601	3	10	(76)*	A-
USJ	ASTRAD	3	10	62	(B)**
NDU	AST 615	2	7	(70)*	B+
USJ	ASTGAL	3	10	56	(C+)**

GPA: 3.05\*\*\*

\* Grades between brackets are ECTS grades equivalent to the grades attributed at NDU.

\*\* Letter marks between brackets reflect the American grades equivalent to the ECTS grades attributed at USJ.

\*\*\* The calculation of the GPA is based on the American grading system.

**Course description to appear in the NDU Catalog**

**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 670 Observational Astrophysics (1.6); 3 cr.** Magnitudes & photometric systems; Coordinates and time; Telescope optics; CCD observation & reduction techniques; Spectroscopy; Polarimetry.

**AST 691 Thesis I; 3 cr.** Thesis project.

**AST 692 Thesis II; 9 cr.** Continuation of Thesis I up to the defense of the Masters thesis.