



NDU Catalog © 2012-2013

Editing: Office of the Registrar and Miss Fadia El-Hage  
Word Processing: Ms.Vera Jabbour  
Printing & Cover Design: Meouchy & Zakaria Printing Press

**CATALOG  
2012 - 2013**



## **Notice**

*The contents of this catalog are subject to change, without prior notice after publication...*

*Not all courses listed in this catalog are offered during any one semester or any one year. The University reserves the right to change fees, limit the number of students registered in any course, cancel any course, change any program, and change the content of any course it offers, without notice. Each enrolled student is subject to all requirements stipulated in this catalog; enrollment is evidence of full acceptance of these responsibilities.*

*This catalog can also be viewed at <http://www.ndu.edu.lb>*

# **Notre Dame University-Louaize Lebanon**

## **Catalog 2012-2013**

Notre Dame University-Louaize  
Zouk Campus  
Zouk Mosbeh, Lebanon  
Phone: 09-218950-5  
09-208000  
Fax: 09-218771  
<http://www.ndu.edu.lb>

Notre Dame University-Louaize  
North Lebanon Campus (NLC)  
Barsa, Koura, Lebanon  
Phone: 06-416100/1/2/3  
Fax: 06-416103

Notre Dame University-Louaize  
Shouf Campus  
Mar Abda, Deir El Kamar  
Phone: 05-511202/3/4/5  
Fax: 05-511206

Washington, D.C., Office  
Suite 300, 1629 K Street, NW  
Washington, DC 20006  
Phone: (202) 349-1705  
Fax: (202) 331-3759  
E-mail: [dc-office@ndu.edu.lb](mailto:dc-office@ndu.edu.lb)

For more information, contact

Registrar's Office  
P.O. Box 72 – Zouk Mikael  
Tel. +961 (9) 218950-5 ext. 2150  
Fax. +961 (9) 218771  
E-mail: registrar@ndu.edu.lb

Admissions Office  
P.O. Box 72 – Zouk Mikael  
Tel. +961 (9) 218950-5 ext. 2156  
Fax. +961 (9) 218771  
Telefax: +961 (9) 225164  
E-mail: admission@ndu.edu.lb

# TABLE OF CONTENTS

<b>MESSAGE FROM THE PRESIDENT .....</b>	<b>1</b>
<b>UNIVERSITY DIRECTORY 2012- 2013.....</b>	<b>2</b>
<b>SUPREME COUNCIL .....</b>	<b>2</b>
<b>Board of Trustees .....</b>	<b>2</b>
<b>University Administration and Staff 2012-2013.....</b>	<b>3</b>
<b>List of Full-Time Faculty Members 2012-2013.....</b>	<b>16</b>
<b>ACADEMIC CALENDAR 2012-2013.....</b>	<b>24</b>
<b>University Profile .....</b>	<b>27</b>
<b>Location and Climate.....</b>	<b>27</b>
<b>Identity, Mission, Vision, and Values.....</b>	<b>28</b>
<b>Historical Overview and Heritage .....</b>	<b>29</b>
<b>CAMPUS MINISTRY .....</b>	<b>31</b>
<b>ACADEMIC SUPPORT SERVICES.....</b>	<b>32</b>
<b>Academic Advisory Services.....</b>	<b>32</b>
<b>The Libraries .....</b>	<b>32</b>
<b>Division of Computing Services .....</b>	<b>33</b>
<b>Faad Academic Support Facilities.....</b>	<b>34</b>
<i>MAC Computer Laboratory.....</i>	<i>34</i>
<i>Photography Laboratory.....</i>	<i>34</i>
<i>Dorothy Salhab Kazemi - Ceramic Atelier.....</i>	<i>34</i>
<i>Metal and Wood Workshop.....</i>	<i>34</i>
<i>Smart Rooms.....</i>	<i>34</i>
<i>Architecture Computer Workshop .....</i>	<i>34</i>
<i>Design Computer Workshop .....</i>	<i>34</i>
<i>Fashion Design Studio.....</i>	<i>34</i>
<b>Writing Center.....</b>	<b>35</b>
<b>Division of Audio Visual Arts.....</b>	<b>35</b>
<i>Smart Rooms.....</i>	<i>35</i>
<i>DVD Library .....</i>	<i>35</i>
<b>Engineering Laboratories .....</b>	<b>35</b>
<b>SCIENCE LABORATORIES.....</b>	<b>36</b>
<i>Biology Lab.....</i>	<i>36</i>
<i>Chemistry Lab.....</i>	<i>37</i>
<i>Geology Lab.....</i>	<i>37</i>
<i>Physics Lab.....</i>	<i>37</i>
<b>STUDENT AFFAIRS OFFICE (SAO).....</b>	<b>38</b>
<b>Undergraduate Financial Aid .....</b>	<b>38</b>
<i>Objectives.....</i>	<i>38</i>
<i>Work-Study Grants (WSG).....</i>	<i>38</i>
<i>Student Employment .....</i>	<i>39</i>
<i>Grants.....</i>	<i>39</i>
<b>Social Security Office .....</b>	<b>41</b>
<i>Returning Students.....</i>	<i>41</i>

<i>Health Services</i> .....	43
<i>Counseling Services</i> .....	44
<i>Insurance Policy</i> .....	44
<b>Student Life Office</b> .....	<b>45</b>
<i>International Student Services</i> .....	45
<i>Lost and Found</i> .....	45
<b>Student Housing</b> .....	<b>45</b>
<i>Mission Statement</i> .....	45
<b>RESERVATIONS</b> .....	<b>45</b>
<b>Athletic Services</b> .....	<b>45</b>
<b>Student Activities Office</b> .....	<b>46</b>
<i>Clubs and Societies</i> .....	46
<i>Community Service Office</i> .....	47
<i>Student Union (SU)</i> .....	47
<b>Campus Services</b> .....	<b>47</b>
<i>Identification Card (ID)</i> .....	47
<i>Campus Parking</i> .....	47
<b>SPONSORED RESEARCH AND DEVELOPMENT</b> .....	<b>48</b>
The Office of Sponsored Research and Development.....	48
Center for Applied Research in Education (CARE).....	48
Lebanese Center for Societal Research (LCSR).....	48
Lebanese Emigration Research Center (LERC).....	48
The Marian Studies Center (MSC).....	48
Water, Energy and Environment Research Center (WEERC).....	48
Center for Digitization and Preservation (CDP).....	49
NDU Press.....	49
American Friends of NDU (AFNDU).....	49
WASHINGTON, D.C., OFFICE.....	50
University International Affairs Office.....	50
Memoranda of Cooperation and/or Understanding.....	50
<b>CENTRE INTERNATIONAL D'ETUDE DE SPORT</b> .....	<b>50</b>
International Memberships.....	51
<b>PUBLIC RELATIONS AND CULTURAL AFFAIRS OFFICE</b> .....	<b>52</b>
Press Office.....	53
Placement Office.....	53
Internship Office.....	53
Museum.....	53
<b>EVENT ORGANIZING OFFICE</b> .....	<b>54</b>
<b>ALUMNI AFFAIRS OFFICE</b> .....	<b>54</b>
NDU Alumni Association.....	54
<b>DIVISION OF CONTINUING EDUCATION</b> .....	<b>55</b>
Business Certificates.....	55
Computer Certificates.....	55
English Language.....	55

Other Programs .....	55
<b>ADMISSIONS OFFICE.....</b>	<b>56</b>
<b>UNDERGRADUATE ADMISSION .....</b>	<b>56</b>
Freshman Admission Requirements .....	57
Sophomore and First Year Admission Requirements.....	57
Transfer Admission Requirements .....	57
Admission Requirements for International Students .....	58
Admission Requirements for Special Students.....	58
Admission Requirements for Auditors .....	58
Admission Requirements for a Second Degree.....	58
Admission Requirements for Teaching Diploma/ Certificate .....	58
Admission Requirements for Summer Arabic Program .....	58
Admission Requirements for University Employees.....	59
English Proficiency Requirements .....	59
Faculty Admission Requirements .....	60
<b>GRADUATE ADMISSION .....</b>	<b>64</b>
Statement of Purpose .....	64
Types of Admission .....	65
Readmission .....	66
<b>ACADEMIC RULES AND REGULATIONS (UNDERGRADUATE) .....</b>	<b>67</b>
Student Classes .....	67
Full-Time Students .....	67
Part-Time Students.....	67
Special Students or Non-Degree Students .....	67
Transfer Students .....	67
Auditors.....	68
Hours of Classes.....	68
Attendance Policy.....	68
Examinations and Quizzes .....	68
Final Examination Make-Up .....	69
Graded Final Examination Paper .....	69
Final Grades .....	69
Record Book or Blue Book.....	69
Transcripts .....	69
Change of Grade .....	69
Change of Provisional Grade.....	70
Grades for Repeated Courses .....	70
Grades upon Change of Major .....	70
System of Grades .....	71
Grade-Point Average.....	72
Academic Standing .....	73
<i>Good Academic Standing.....</i>	<i>73</i>
<i>Academic Probation.....</i>	<i>73</i>
<i>Academic Suspension.....</i>	<i>73</i>
<i>Academic Dismissal.....</i>	<i>74</i>
Academic Recognition .....	74
Academic Integrity.....	74

<i>Penalties of Academic Dishonesty</i> .....	75
<i>Reporting Academic Dishonesty</i> .....	75
<b>Change of Major</b> .....	75
<b>Deadline for Submission of Change of Major</b> .....	76
<b>Graduation Requirements</b> .....	76
<b>Teaching Diploma Requirements</b> .....	77
<b>Teaching Certificate Requirements</b> .....	77
<b>Graduation Check List</b> .....	77
<b>Conferring of Degrees</b> .....	77
<b>Residency Requirements</b> .....	77
<b>Participation in Commencement Exercises</b> .....	78
<b>Course Designation</b> .....	78
<b>UNDERGRADUATE REGISTRATION</b> .....	<b>83</b>
<i>Academic Advising</i> .....	83
<i>Registration Eligibility</i> .....	83
<i>Registration</i> .....	83
<i>Registration by Absentia</i> .....	83
<i>Late Registration</i> .....	84
<i>Cross-Registration</i> .....	84
<i>Improper Registration</i> .....	84
<i>Changes in Registration</i> .....	84
<i>Adding and/or Dropping Courses</i> .....	84
<i>Withdrawal From Courses</i> .....	85
<i>Attendance after Withdrawing</i> .....	85
<i>Student Reinstatement</i> .....	85
<i>Dropping a Course while on Probation</i> .....	85
<i>Registration in a Course with an 'I' Grade</i> .....	85
<b>Student Academic Load</b> .....	<b>85</b>
<i>Full-Time and Part-Time Loads</i> .....	85
<i>Maximum Load for Registration per Semester</i> .....	85
<i>Maximum Load for Registration in the Summer Session</i> .....	85
<i>Maximum Load for Students on Probation</i> .....	85
<i>Maximum Load for Students with Incomplete(s)</i> .....	86
<i>Maximum Load for Students with Cross-Registration</i> .....	86
<b>Tuition and Fees</b> .....	<b>87</b>
<i>Refund Policy</i> .....	87
<i>Financial Support for Re-enrolled courses</i> .....	88
<b>UNDERGRADUATE ACADEMIC MINORS</b> .....	<b>88</b>
<b>Rationale</b> .....	<b>88</b>
<b>General Rules and Regulations for Minors at NDU</b> .....	<b>88</b>
<b>ACADEMIC RULES AND REGULATIONS (GRADUATE)</b> .....	<b>90</b>
<b>Cross-Registration</b> .....	<b>90</b>
<b>Auditing</b> .....	<b>90</b>
<b>Tutorials</b> .....	<b>90</b>
<b>Course/Program changes</b> .....	<b>90</b>
<b>Supervision</b> .....	<b>90</b>
<b>Courses and Grades</b> .....	<b>91</b>
<i>Graduate Level Courses</i> .....	91

<i>Remedial Courses</i> .....	91
<b>Probation and Dismissal</b> .....	91
<b>Comprehensive Examination</b> .....	91
<b>Thesis</b> .....	92
<b>Provisions for the Master’S Degree</b> .....	93
<b>Grading System</b> .....	94
<b>Attendance Policy</b> .....	95
<b>Academic Advisor</b> .....	95
<b>Academic Honesty Policy</b> .....	95
<b>Academic Standards</b> .....	95
<b>Withdrawal Policies</b> .....	95
<i>Leave of Absence</i> .....	95
<i>Withdrawal from courses</i> .....	96
<b>Application For Graduation</b> .....	96
<b>Participation In Commencement Exercises</b> .....	96
<b>Summer Session</b> .....	96
<b>Graduate Research Assistantship Policy</b> .....	96
<b>GRADUATE REGISTRATION</b> .....	<b>99</b>
<b>Registration Process</b> .....	<b>99</b>
<i>Payment of Fees</i> .....	99
<i>Consultation with Academic Advisors</i> .....	99
<b>Course Load</b> .....	<b>99</b>
<b>Auditing</b> .....	<b>99</b>
<b>Disclosure of Students' Records</b> .....	<b>99</b>
<b>Tuition and Fees</b> .....	<b>100</b>
<b>Refund Policy</b> .....	<b>100</b>
<b>Financial Support For Re-Enrolled Courses</b> .....	<b>101</b>
<b>Doctor of Education (Ed.D.) Tuition and Fees</b> .....	<b>101</b>
<b>GER, FRESHMAN PROGRAM AND DEGREES</b> .....	<b>102</b>
<b>General Education Requirements (GER)</b> .....	<b>102</b>
<b>Freshman Program</b> .....	<b>104</b>
<b>Degrees Offered</b> .....	<b>105</b>
<b>FACULTY OF ARCHITECTURE, ART AND DESIGN (FAAD)</b> .....	<b>109</b>
<b>Faculty Directory</b> .....	<b>110</b>
<b>Objectives</b> .....	<b>115</b>
<b>Mission, Vision, and Values</b> .....	<b>115</b>
<b>Faculty Profile</b> .....	<b>116</b>
<b>Academic Departments and Programs</b> .....	<b>117</b>
<b>Policies and Procedures</b> .....	<b>118</b>
<b>Department of Architecture</b> .....	<b>119</b>
<i>The Degree of Bachelor of Architecture</i> .....	119
<b>Department of Design</b> .....	<b>124</b>
<i>The Degree of Bachelor of Arts in Graphic Design</i> .....	125
Minor in Graphic Design.....	126
<i>The Degree of Bachelor of Arts in Interior Design</i> .....	128
<i>The Degree of Bachelor of Arts in Fashion Design</i> .....	132
<i>The Degree of Bachelor of Arts in Photography</i> .....	134
Minor in Photography (18 credits) .....	136

<i>The Degree of Master of Arts in Design</i> .....	138
<b>Department of Music</b> .....	<b>141</b>
<i>The Degree of Bachelor of Arts in Music and Musicology</i> .....	141
<i>The Degree of Bachelor of Arts in Music and Musicology - Music Education</i> .....	142
<i>The Degree of Bachelor of Arts in Music- Musimedialogy</i> .....	142
<i>The Degree of Bachelor of Arts in Music and Musicology - Arabic Musicology</i> .....	143
<i>The Degree of Bachelor of Arts in Music and Musicology - Jazz Music</i> .....	143
Minor in Jazz (15 credits).....	144
<i>The Degree of Master of Arts in Music</i> .....	150
<b>FACULTY OF BUSINESS ADMINISTRATION AND ECONOMICS (FBAE).....</b>	<b>153</b>
<b>Faculty Directory</b> .....	<b>154</b>
<b>Student Advisors of the Graduate Program:</b> .....	<b>155</b>
<b>Faculty Profile</b> .....	<b>156</b>
<b>Mission, Vision, and Values</b> .....	<b>156</b>
<b>Academic Departments and Degree Programs</b> .....	<b>156</b>
<b>Undergraduate Degrees</b> .....	<b>158</b>
<b>Graduate Programs</b> .....	<b>164</b>
<i>The Degree of Master of Business Administration (M.B.A.)</i> .....	164
<b>Department of Accounting, Finance and Economics</b> .....	<b>171</b>
<i>The Degree of Bachelor of Business Administration–Banking and Finance.</i> .....	174
<i>Financial Engineering Emphasis</i> .....	179
<i>The Degree of Bachelor of Business Administration–Accounting</i> .....	181
<i>The Degree of Bachelor of Business Administration (BBA)-Economics</i> .....	185
<b>Department of Management and Marketing</b> .....	<b>189</b>
<i>The Degree of Bachelor of Business Administration (B.B.A.)</i> .....	189
<i>Management Emphasis</i> .....	189
<i>Minor in Management (15 credits)</i> .....	190
<i>The Degree of Bachelor of Business Administration (B.B.A.)-International     Business Management</i> .....	193
<i>The Degree of Bachelor of Business Administration (B.B.A.)</i> .....	195
<i>Distribution and Logistics Management Emphasis</i> .....	195
<i>The Degree of Bachelor of Business Administration (B.B.A.)</i> .....	200
<i>Human Resources Management Emphasis</i> .....	200
<i>Health Care Management Emphasis</i> .....	203
<b>Department of Hospitality and Tourism Management</b> .....	<b>206</b>
<i>The Degree of Bachelor of Hotel Management and Tourism (BHMT)</i> .....	206
<i>Emphasis (19 cr.):</i> .....	207
<i>Emphasis</i> .....	207
<i>D- Hospitality Events Management Emphasis (19 cr.)</i> .....	208
<i>Minor in Hospitality Services Management (18 credits)</i> .....	209
<i>Minor in Food and Beverage Management (20 credits)</i> .....	210
<i>Minor in Travel and Tourism (16 credits)</i> .....	211
<i>Minor in Events Management</i> .....	212
<b>FACULTY OF ENGINEERING (FE).....</b>	<b>219</b>
<b>Faculty Directory</b> .....	<b>220</b>
<b>Faculty Profile</b> .....	<b>222</b>
<b>Mission, Vision, and Values</b> .....	<b>222</b>
<b>Academic Departments and Degree Programs</b> .....	<b>223</b>

<b>Policies and Procedures</b> .....	<b>223</b>
<b>General Education Requirements</b> .....	<b>225</b>
<i>Minor in Engineering Management</i> .....	228
<b>Department of Civil and Environmental Engineering</b> .....	<b>230</b>
<b>Department of Electrical &amp; Computer and Communication Engineering</b> .....	<b>235</b>
<b>Department of Mechanical Engineering</b> .....	<b>241</b>
<b>FACULTY OF HUMANITIES (FH)</b> .....	<b>247</b>
<b>Faculty Directory</b> .....	<b>248</b>
<b>Faculty Profile</b> .....	<b>252</b>
<b>Mission, Vision and Values</b> .....	<b>252</b>
<b>Academic Departments and Degree Programs</b> .....	<b>253</b>
<b>general education requirements (33 crs.)</b> .....	<b>254</b>
<b>Department of English, Translation, and Education</b> .....	<b>256</b>
<i>Intensive English Program</i> .....	256
<i>Communication Skills Courses</i> .....	256
<i>Languages</i> .....	256
<i>Teaching Diploma</i> .....	257
<i>Teaching Diploma in Arabic Language and Literature</i> .....	257
<i>Teaching Certificate</i> .....	258
<i>Teaching Certificate in Arabic Language and Literature</i> .....	258
<i>The Degree of Bachelor of Arts in Education</i> .....	259
<i>The Degree of Bachelor of Arts in Education–Basic Education with Teaching Diploma</i> .....	261
<i>The Degree of Bachelor of Arts in Physical Education and Sport</i> .....	267
<i>The Degree of Bachelor of Arts in English Language</i> .....	272
<i>Minor in English (18 credits)</i> .....	272
<i>The Degree of Bachelor of Arts in Translation and Interpretation</i> .....	278
<i>Minor in Translation (16 credits)</i> .....	279
<i>The Degree of Master of Arts in English Language and Literature</i> .....	282
<i>Literature Emphasis</i> .....	282
<i>Applied Linguistics and TEFL Emphasis</i> .....	286
<i>The Degree of Master of Arts in Education</i> .....	288
<i>The Degree of Master of Arts in Translation</i> .....	291
<i>Doctor of Education (Ed. D.) in collaboration with Saint Louis University, USA</i> .....	294
<b>Department of Mass Communication</b> .....	<b>297</b>
<i>The Degree of Bachelor of Arts in Advertising and Marketing</i> .....	297
<i>Minor in Advertising and Marketing (18 credits)</i> .....	298
<i>The Degree of Bachelor of Arts in Communication Arts</i> .....	299
<i>Journalism Emphasis</i> .....	299
<i>Minor in Journalism</i> .....	300
<i>Radio and Television Emphasis</i> .....	302
<i>Minor in Radio and Television (17 cr)</i> .....	303
<i>The Degree of Master of Arts in Media Studies</i> .....	309
<b>Department of Social and Behavioral Sciences</b> .....	<b>312</b>
<i>Minor in Arabic Language and Literature</i> .....	312
<i>The Degree of Bachelor of Arts in Psychology</i> .....	314
<i>Minor in Psychology</i> .....	315
<i>The Degree of Master of Arts in Psychology-Educational Psychology</i> .....	320

<i>Summer Arabic Program</i> .....	323
<b>FACULTY OF NATURAL AND APPLIED SCIENCES (FNAS)</b> .....	<b>327</b>
<b>Faculty Directory</b> .....	<b>328</b>
<b>Faculty Profile</b> .....	<b>329</b>
<b>Mission, Vision and Values</b> .....	<b>329</b>
<b>Academic Departments and Degree Programs</b> .....	<b>330</b>
<b>Policies and Procedures</b> .....	<b>331</b>
<b>Department of Computer Science</b> .....	<b>333</b>
<i>Bachelor of Science in Computer Science</i> .....	333
<i>Information Technology (IT) Emphasis</i> .....	335
<i>Computer Graphics and Animation (CGA) Emphasis</i> .....	336
<i>Bachelor of Science in Business Computing</i> .....	337
<i>Management Information Systems (MIS) Emphasis</i> .....	338
<i>Bachelor of Science in Geographic Information Systems</i> .....	345
Minor in Geographic Information Systems (15 credits) .....	346
<i>Master of Science in Computer Science</i> .....	348
<b>Department of Mathematics and Statistics</b> .....	<b>352</b>
<i>Bachelor of Science in Actuarial Sciences</i> .....	353
<i>Bachelor of Science in Mathematics</i> .....	359
Minor in Mathematics (15 credits).....	360
<i>The Degree of Master of Science in Mathematics</i> .....	364
<i>The Degree of Master of Science in Financial Mathematics</i> .....	368
<b>Department of physics &amp; astronomy</b> .....	<b>371</b>
<i>Bachelor of Science in Physics</i> .....	371
<i>Minor in Physics</i> .....	373
<i>The Degree of Master of Science in Astrophysics</i> .....	377
<b>Department of Sciences</b> .....	<b>379</b>
<i>Bachelor of Science in Biology</i> .....	380
<i>Minor in Biology</i> .....	381
<i>Master of Science in Biology</i> .....	385
<i>Bachelor of Science in Chemistry</i> .....	389
<i>Bachelor of Science in Environmental Science</i> .....	394
<b>FACULTY OF NURSING AND HEALTH SCIENCES (FNHS)</b> .....	<b>399</b>
<b>Faculty Directory</b> .....	<b>400</b>
<b>Mission, Vision and Values</b> .....	<b>401</b>
<b>Degree Programs</b> .....	<b>402</b>
<b>Department of Nursing and Health Sciences</b> .....	<b>403</b>
<i>Bachelor of Science in Medical Laboratory Technology</i> .....	403
<i>Bachelor of Science in Nursing</i> .....	405
<i>Bachelor of Science in Nutrition and Dietetics</i> .....	408
<b>FACULTY OF POLITICAL SCIENCE, PUBLIC ADMINISTRATION, AND DIPLOMACY (FPSPAD)</b> .....	<b>413</b>
<b>Faculty Directory</b> .....	<b>414</b>
<b>Faculty Profile</b> .....	<b>415</b>
<b>Mission, Vision and Values</b> .....	<b>415</b>
<b>Academic Departments and Degree Programs</b> .....	<b>416</b>
general education requirements .....	417
<b>Department of International Affairs and Diplomacy</b> .....	<b>418</b>

<i>The Degree of Bachelor of Arts in International Affairs and Diplomacy</i> .....	418
<i>The Degree of Master of Arts in International Affairs and Diplomacy</i> .....	421
<i>International Law Emphasis</i> .....	424
<b>Department of Political Science</b> .....	<b>427</b>
<i>The Degree of Bachelor of Arts in Political Science</i> .....	427
<i>Emphasis</i> .....	428
The Degree of Bachelor of Arts in Political Science, American Studies Emphasis.....	429
The Degree of Bachelor of Arts in Political Science - Euro-Mediterranean Studies Emphasis .....	430
Minors in the Political Science Department.....	431
<i>Minor in Middle Eastern Studies (18 credits)</i> .....	431
Minor in Peace and Conflict Studies (18 credits) .....	432
<i>Minor in Strategic Studies (18 credits)</i> .....	432
<i>Minor in Gender Studies (18 Credits)</i> .....	433
<i>The Degree of Master of Arts in Political Science</i> .....	439
<i>The Degree of Master of Arts in Political Science, NGOs Emphasis</i> .....	440
<b>Department of Public Administration</b> .....	<b>445</b>
<i>The Degree of Bachelor of Arts in Public Administration</i> .....	445
<i>The Degree of Master of Arts in Public Administration</i> .....	447



# MESSAGE FROM THE PRESIDENT

Many of you may already know that after celebrating our Silver Jubilee, this academic year demands even more dedication, perseverance, hard work, and creative thinking from each of you within the scope of your position, role, and area of responsibility.

Our aim is to achieve a clear-cut objective by ensuring a successful NEASC team visit and obtaining a distinguished self-study result.

I know that this is a pivotal moment in our history and crucial academic year for all of us.

Perhaps, this is yet another reason why we should meet the challenge fully prepared, fully aware of what is expected from us, and fully confident that we will land on the shores of success.

Based on this mission, or because of it, major changes and developments are taking place on campus.

A few examples include:

- producing a document that covers the learning outcomes of our degree programs at both the graduate and undergraduate levels;
- reviewing the University Catalog in order to meet the requirements of a dynamic course program offering and to step up the tempo of our students' learning growth;
- systemizing and updating our Fact Book in order to continue with this annual study as a major outcome of our new Institutional Research Office;
- finalizing the newly proposed University Bylaws in order to better manage the present expansion and growth of our University;
- embarking on the next phase of our five-year strategic plan; and
- launching the new Faculty of Law and Political Science.

All the steps cited above are essential aspects of our University's historic development and attest to its standing as a preeminent academic institution.

It is important to realize that physical construction, along with its requisite facilities at different levels and areas of specialty, is a necessity. What is also especially important to understand, however, is that top-of-the-line physical construction is lacking without top-of-the-line academic "construction".

The first is physically visible. Our campus is taking shape beautifully and stands in a class of its own, impressing every visitor at every turn. The second, although imperceptible, is extremely vital in shaping our academic plans, pivotal in planning our academic role, and fundamental in helping us play our scholarly and intellectual role, which, in turn, will help us develop our community and our country.

I am convinced that you are all wholeheartedly participating in this major endeavor, and that you are all dedicated to this major task, which serves to propel higher education both on campus and across Lebanon.

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

# UNIVERSITY DIRECTORY 2012- 2013

## SUPREME COUNCIL

Most Reverend Boutros Tarabay, *Superior General of the Maronite Order of the Holy Virgin*

Reverend Joseph Abi-Aoun

Reverend Joseph Zgheib

Reverend George Nassif

Reverend Hanna Tayar

Reverend Marwan Khoury

## BOARD OF TRUSTEES

Dr. Francois Bassil, *President*

Mr. Youssef Kanaan, *Vice-President*

Mrs. Mona Kanaan, *Secretary*

Mr. Ghassan Khoury, *Treasurer, Finance and Auditing Committee*

Reverend Walid Moussa

Reverend Hanna Tayar

Abbott Semaan Abou-Abdo

Reverend Marwan Khoury

Reverend Pierre Ghsoub

Dr. Georges Abou Jaoudé, *Academic Committee*

Mrs. Rose Choueiry

Minister Ziad Baroud

Minister Michel Edde

Mr. Ronald Farra, *Planning and Development Committee*

Mrs. Hayat Frem

Mr. Johnny Ibrahim, *Student and Alumni Committee*

Mrs. Annette Maalouf- E-Rami

Mr. John Moufarrej

Minister Salim Sayegh

Mr. Nassib Shdeed

Dr. Joseph Tarabay

## **UNIVERSITY ADMINISTRATION AND STAFF 2012-2013**

### **Office of the President**

Fr. Walid Moussa, *President*  
Dr. Ameen A. Rihani, *Vice-President, Academic Affairs*  
Dr. Assaad Eid, *Vice-President, Sponsored Research and Development*  
Mr. Suheil Matar, *Vice-President, Cultural Affairs and Public Relations*  
Dr. Roger Hajjar, *Assistant to the President*  
Fr. Ziad Antoun, *Director, Administration*  
Fr. Bechara Khoury, *Director, Finance*  
Fr. Khalil Rahme, *Director, University Choir*  
Mr. Simon Abou Jaoudeh, *Director, Alumni Affairs Office*  
Fr. Fadi Bou Chebel, *University Chaplain General*  
Mr. Sabah Matar, *University Attorney*  
Mr. Maroun Moubarak, *External Auditor*  
Mrs. Joyce Chidiac Ghossain, *Manager, President's Office*  
Miss Mary Khoueiry, *Secretary*  
Mrs. Andre Charbel, *Services Worker*

### **Office of Academic Affairs**

Dr. Ameen A. Rihani, *Vice-President, Academic Affairs*  
Dr. Kamal Abouchedid, *Assistant VP, AA*  
Miss Fadia El-Hage, *Administrative Assistant*  
Miss Pauline Nohra, *Assistant Coordinator for Accreditation*  
Mrs. Diala El-Mast, *Secretary*  
Miss Maya Lahoud, *Secretary*

### **Office of the Registrar**

Mrs. Lea Eid, *Registrar*  
Miss Mirna Nehme, *Associate Registrar*  
Miss Roula Hakim, *Assistant Registrar*  
Mrs. Nisrine Merhej, *Academic Records Officer*  
Mrs. Dunia Baradhi, *Academic Services Officer*  
Mrs. Claudine Fahed, *Registrar's Office Archive*  
Mrs. Colette Errou, *Secretary*  
Mrs. Orietta El-Kassis, *Secretary*

### **Office of Admissions**

Mrs. Viviane Nakhle, *Director*  
Mr. Fadi Khoury, *Assistant Director for Orientation*  
Miss Karla Sfeir, *Coordinator, office of Admissions, Orientation and Events*  
Mrs. Mirna Waked-Sfeir, *Admissions Officer*  
Mr. Elias Fattouh, *Admissions Officer*  
Miss Rita Orfali, *Administrative Assistant*  
Mr. Mario Kozaily, *Admissions Assistant*  
Mrs. Aline Jabbour, *Office Assistant*  
Mrs. Manuella Angelini, *Secretary*

### **Office of Tests, Measurement & Evaluation**

Mr. Fadi Khoury, *Assistant Director*

### **Student Affairs Office**

Dr. Ziad Fahed, *Dean*

Mrs. Reine K.-Gunstone, *Administrative Assistant - Students Life*

Mrs. Joceline Chidiac Jade, *Administrative Assistant*

**Financial Aid Office**

Mrs. Eliane Harfouche-Khoury, *Financial Aid Officer*

Mrs. Jessica Saba, *Social Worker*

Miss Rania Chehab, *Social Worker*

**National Social Security Office**

Mrs. Sana El-Khoury, *Students' Representative to the National Social Security*

**Counseling Services**

Dr. Marie Khoury, *Counselor*

**Athletic Office**

Mr. George Nader, *Head*

Mr. Elias El-Hachem, *Gym Instructor*

Mr. Joseph Matta, *Services Worker*

**Activities Office**

Mr. Elias Boutros, *Students' Activities Coordinator*

**Health Services**

Dr. Elias Chemaly, *University Physician*

Mrs. Mary Kosseify, *Medical Laboratory Technician*

Mrs. Rémie Moussa Sarnouk, *University Nurse*

**Community Service Office**

Mr. Majed Bou-Hadir, *Community Service Officer*

**Student Housing**

Fr. George Nassif, *Director, Student Housing*

Mr. Paul Khoury, *Manager, Student Housing*

Mrs. Carla El-Rajji-Spir, *Student Housing Coordinator*

Mr. Pierre Khallouf, *Front Desk Clerk, Student Housing*

Mrs. Nisrine Souaid, *Front Desk Clerk, Student Housing*

Mr. Assaf Assaf, *Night Staff, Student Housing*

Mr. George Khachoyan, *Night Staff, Student Housing*

Mr. Tony Nakhle, *Front Desk Clerk, Student Housing*

Mr. Alain Sayah, *Front Desk Clerk, Student Housing*

Mr. Bachoura Bechara, *Front Desk Clerk, Student Housing*

Mr. Naja Abi-Nakhoul, *Front Desk Clerk, Student Housing*

Mr. Raymond Rajha, *Front Desk Clerk, Student Housing*

Mr. Karam Khalil, *Front Desk Clerk, Student Housing*

**Pastoral Office**

Fr. Fadi Bou Chebel, *University Chaplain General*

Fr. George Nassif, *University Chaplain*

Miss Solange Helou, *Secretary*

**The Library**

Mrs. Leslie Alter-Hage, *Director of the University Libraries*

Miss Elite Feghali, *Administrative Assistant*

Miss Itab Chebli, *Library Assistant*

**Access Services Department**

Miss Dany Nasr, *Supervisor, Circulation*

Miss Rita Mehanna, *Circulation Assistant*

Mrs. Dalal Khalil Salameh, *Circulation Assistant*

Mr. Georges Mghayar, *Circulation Assistant*

Miss Joyce Draiby, *Supervisor, Evening Services*

Mr. Naji Tabet, *Evening Services Assistant*

Mrs. Mireille Kassis-Jarjour, *ILL/DDS Specialist*  
**Acquisitions Department**

Mrs. Roula Awad-Harb, *Head*

Miss Antoinette Kattoura, *Acquisitions Specialist*

Miss Zeina Fahed, *Acquisitions Assistant*

**Cataloging Department**

Mrs. Charla Chebl-Mhanna, *Head*

Miss Christine Noujeim, *Cataloging Specialist*

Miss Maya Tannous, *Cataloging Specialist*

**Collection Development Department**

Miss Domingua Abboud, *Head*

**Library Information Systems Department**

Mr. Amine Moussa, *Head*

Mr. Maroun El-Rayess, *Library Information Systems Officer*

**Physical Processing Department**

Miss Cecilia Doumit, *Physical Processing Officer*

**e-Resources and Serials Department**

Mr. Joseph Mhanna, *Head*

**Mariam and Youssef Library Security**

Mr. Raymond Ghossoub, *Security Officer*

Mr. Toni Wehbé, *Security Officer*

Mr. Assaad Jabbour, *Security Officer, Evening Services*

**Division of Computing Services and e-Learning Center**

Dr. Fawzi Baroud, *Director*

**IT Infrastructure, Security and Support**

Mr. Nazih Khalil, *Assistant Director, IT Infrastructure, Security and Support*

**Network and User Support Services**

Mr. Ziad Azzi, *Head, Network and User Support Services*

Mr. Jimmy Antabi, *Network Services Specialist*

Mr. Peter Khallouf, *Computer Laboratory Assistant*

Mr. Elias Nemr-Khalaf, *Computer Laboratory Assistant*

**Technical Support Services**

Mr. Bachir Abou-Halloun, *Head, Technical Support Services*

Mr. Azar Bassil, *Help Desk Assistant*

Mr. Charbel Badr, *Help Desk Assistant*

**Applications and Software Development**

Mr. Joseph Abi Nassif, *Assistant Director, Applications and Software Development*

Mr. Dany Azzi, *Blackboard Administrator*

**Programming and Development**

Mrs. Nathalie El-Kallassy Rechdan, *Head, Programming and Development*

Mrs. Sylvana Youssef Ghosh, *Senior Systems Analyst*

Mr. Antoine Saber, *Senior Programmer*

Mr. Elias Dargham, *Programmer*

Mrs. Grace Baroud-Khalil, *Web Coordinator*

Mrs. Brigitta Kassis-Akiki, *Web Developer*

Mrs. Sahar Nassar, *Web Designer*

**Division of Continuing Education**

Dr. Fawzi Baroud, *Director*

Mr. Wakim Wakim, *DCE Registrar & Student Affairs Officer*

Miss Andre Kahy, *Accountant*  
Mrs. Gisele Mrad-Ghanem, *Secretary*

***School of Music***

Fr. Khalil Rahme, *Director*  
Mrs. Mira Tawk *Assistant to the School of Music*

**Office of Sponsored Research and Development**

Dr. Assaad Eid, *Vice-President, Sponsored Research and Development*  
Mrs. Nadine Fares, *Administrative Assistant*  
Mrs. Samira Ziadeh-Hassoun, *Office Assistant*  
Mrs. Christine El-Rayess-Atallah, *Translation Officer*  
Mr. Mario Najm, *English Editor*

***University Research Board (URB)***

*Board Members:*

Dr. Assaad Eid, *Chairman*  
Dr. George Abdelnour  
Dr. Abdo Kahi  
Ms. Guita Hourani  
Dr. Michel Nehmeh  
Dr. Fadi Comair  
Mrs. Dina Baroud  
Dr. Charbel Bassil  
Dr. Semaan Georges  
Dr. Christine Sabieh  
Dr. Elsa Sattout  
Dr. Jocelyne Bou Mosleh  
Dr. George Labaki  
Mrs. Leslie Hage

***Center for Applied Research in Education (CARE)***

Dr. George Abdelnour, *Director*  
Miss Vera Jabbour, *Research Projects Coordinator*

***Center for Digitization and Preservation (CDP)***

Fr. Pierre Najem, *Director*  
Mr. Walid Mourad, *CDP Manager*  
Mr. Sami Salameh, *Head, Archiving Unit*  
Miss Talin Agop, *Technical Assistant*

***Lebanese Center for Societal Research (LCSR)***

Dr. Abdo Kahi, *Coordinator*  
Mrs. Darine Rachkidi-Bouloot, *Secretary*

***Lebanese Emigration Research Center (LERC)***

Miss Guita Hourani, *Director*  
Dr. Eugene Sensenig-Dabbous, *PT Researcher*  
Mrs. Liliane Haddad, *Indexer*  
Miss Maritta Sislian, *Secretary*  
Dr. Eugene Sensenig Dabbous, *Research Associate*  
Dr. Rudyard Kazan (*Lebanon*), *Research Associate*  
Dr. Peter Adebayo (*Nigeria*), *Research Associate*  
Dr. Suzanne Menhem (*France*), *Research Associate*  
Dr. Rita Stephan (*Department of State, USA*), *Research Associate*  
Dr. Salwa Karam (*Lebanon*), *Research Associate*  
Dr. Andrew Karim Arsan, (*UK*), *Research Associate*

Dr. Rosemary Suliman, (*Australia*), *Research Associate*  
 Dr. Youssef Taouk, (*Australia*), *Research Associate*  
 Dr. Nelia Hyndman- Rizk (*Australia*), *Research Associate*  
 Dr. Wolf Hagen von Angern, (*Germany*), *Research Associate*  
 Dr. Minerva Nasser-Eddine (*Australia*), *Research Associate*  
 Dr. Norman Nikro (*Germany*), *Research Associate*  
 Dr. Patricia Nabti, (*Lebanon*), *Research Associate*  
 Mr. Roberto Khatlab (*Latin America and Brazil*), *Liaison Officer*  
 Dr. Walter Muller (*Argentina*), *Liaison Officer*  
 Dr. Youssef Taouk (*Australia*), *Liaison Officer*  
 Mr. Elvis Alam (*The Dominican Republic*), *Liaison Officer*  
 Ms. Nicole Naciff (*Chile*), *Liaison Officer*  
 Ms. Wafaa Osta (*Canada*), *Liaison Officer*  
 Mr. Graham Pitts (*USA*), *Research Fellow*  
 Ms. Reem Bailony (*USA*), *Research Fellow*  
 Ms. Stacy Fahrenthold (*USA*), *Research Fellow*  
 Mr. Alexander Henley (*UK*), *Research Fellow*  
 Ms. Marie Jose Tayah (*USA*), *Research Fellow*  
 Ms. Eliane Fersan (*Lebanon*), *Research Fellow*  
 Mr. Sam Van Vliet (*Netherlands*), *Research Fellow*  
 Ms. Antoinette Moubarak (*Lebanon*), *Research Fellow*  
**The Marian Studies Center (MSC)**  
 Fr. Abdo Antoun, *Director*  
 Mr. Richard Tannous, *Assistant to the MSC*  
**NDU Press**  
 Mr. George Mghames, *Director*  
 Mrs. Lydia Zgheib-Chidiac, *Secretary*  
**University International Affairs Office (UIAO)**  
 Dr. Michel Nehme, *Director*  
 Mrs. Rania Najem, *Administrative Assistant*  
**Washington D.C. Office**  
 Miss Haley Kalil, *Coordinator*  
**Water Energy & Environment Research Center (WEERC)**  
 Dr. Fadi Comair, *Director*  
**Council Members**  
 Dr. Michel El-Hayek, *Dean, Faculty of Engineering*  
 Dr. Jacques Harb, *Chairperson, Department of Civil and Environmental Engineering*

**Office of Cultural Affairs and Public Relations**  
 Mr. Suheil Matar, *Vice-President, Cultural Affairs and Public Relations*  
 Mrs. Nada Saad-Saber, *Assistant Director*  
 Miss Suzanne Saadeh, *Administrative Assistant*  
 Mrs. Yolla Chalhoub, *Event Organizer*  
**Press Office**  
 Mrs. Tatiana Rouhana-Bou-Hadir, *Press Attaché*  
**Museum**  
**Placement Office**  
 Mrs. Layal Nehme Matar, *Placement Officer*  
**Internship Office**  
 Miss Rita Azar, *Internship Officer*

**Office of Administration**

Fr. Ziad Antoun, *Director of Administration*

Mr. Sayed Ghoussain, *Assistant Director for Administration*

Mrs. Viviane Tarabay Abi Nader, *Administrative Assistant*

Mrs. Amale Hajj, *Administrative Archive*

**Human Resources Office**

Mr. Nabil Saber, *Manager*

Mrs. Christine Abou-Khalil Gabriel, *Recruitment and PAS Officer*

Mr. Joseph Azzi, *NDU's Representative to the National Social Security Fund*

Mrs. Rita Eid-Sawaya, *NDU's Representative to the Insurance Company*

Mr. Pierre Ghosn, *NDU's Representative to the Insurance Company*

**Maintenance Office**

Mr. Jad Maalouf, *Maintenance Engineer*

Mr. Gaby Saliba, *Maintenance Supervisor*

Mr. Rizkallah Daccache, *Warehouse Dispatcher*

Mr. Assaad Wehaibe, *Maintenance Worker*

Mr. Jean Eid, *Maintenance Worker*

Mr. Joseph Bou-Nassif, *Maintenance Worker*

Mr. Sleiman Merhij, *Maintenance Worker*

Mr. Micheal Tannous, *Maintenance Worker*

Mr. Charbel Sleiman, *Maintenance Worker*

**Purchasing Office**

Mr. Charbel Hajj, *Assistant Director of Administration for Purchasing*

Miss Claire Hoballah, *Secretary*

Mr. Khattar Hajj, *Office Assistant*

Mr. Edward Nakhle, *Warehouse Controller*

**Inventory Control Office**

Mr. Charbel Abi-Nakhoul, *Inventory Control Officer*

**Receiving Office**

Mr. Charles Abi Nader, *Receiving Officer*

Mr. Joseph Mghames, *Stock Keeper*

**Landscaping Office**

Fr. Elie Sfeir, *Associate Director of Administration for Landscaping*

Mr. Nemer Ghanem, *Gardener*

Mr. Youssef Antoun, *Gardener*

Mr. Nabil Abi-Zeid, *Gardener*

Mr. Salim Ishak El-Saiid, *Gardener*

Mr. Romany Ishak El-Saiid, *Gardener*

Mr. Fadi Khairallah, *Gardener*

**Campus Services Office**

Mr. Sayed Ghoussain, *Assistant Director for Administration*

Mrs. Carol Habchi, *Campus Services Officer*

Mr. George Tahtah, *Campus Grounds Controller*

**Classroom Services**

Mr. Ghassan Khalil, *Classroom Services Coordinator*

Mr. Elie Yammine, *Services Worker*

**Mail Office**

Mr. Mansour Abi-Aoun, *Mail Clerk, Lead*

Mr. Bassam Merheb, *Mail Clerk*

**Services Unit**

Miss Amal Ghsoub, *Services Worker*

Miss Josephine Ghsoub, *Services Worker*

Mrs. Fatima Arafat, *Services Worker*

**Transportation Office**

Mrs. Viviane Tarabay Abi Nader, *Administrative Assistant*

Mr. Hanna Keraoun, *Driver*

Mr. Maroun Mhanna, *Driver*

Mr. Jack El Bayeh, *Driver*

Mr. Jean Zakhia, *Driver*

Mr. Samir Salameh, *Driver*

Mr. George Adem, *Driver*

Mr. Mikhael Antoun, *Driver*

**Telephone Services**

Mrs. Mary Al-Achkar, *Information Desk*

**Construction Office**

Mr. Sami Zoghbi, *University Engineer*

**Office of Finance**

Fr. Bechara Khoury, *Director of Finance*

Mr. Maroun Moubarak, *Financial Analyst*

Ms. Danielle Abboud, *Administrative Assistant*

**Sponsorship Office**

Miss Jocelyne Issa, *Sponsorship Coordinator*

**Business Office**

Mr. Elias Saadeh, *Director*

Mrs. Marcelle Kosseify, *Assistant Director*

Mrs. Rita El-Saliby, *Accountant*

Mr. Eddy Lteif, *Accounting Clerk*

Miss Rola Ghorra, *Accounting Clerk*

Mr. Fady Bteich, *Cashier*

**University Choir**

Fr. Khalil Rahme, *Director*

Mr. Fadi Khalil, *University Choir Assistant*

**Alumni Affairs Office**

Mr. Simon Abou Jaoude, *Director*

Mrs. Rose Madi, *Administrative Assistant*

**FACULTIES**

**Faculty of Architecture, Art and Design**

Dr. Jean-Pierre El-Asmar, *Dean*

Mrs. Janane Younes, *Administrative Assistant*

Mr. Nicolas Haddad, *Faculty Technician*

**Department of Architecture**

Dr. Nicolas Gabriel, *Chairperson*

Mrs. Diane Sarkis, *Secretary*

**Department of Arts**

Ms. Danielle Zaccour, *Coordinator*  
Mrs. Liliane Haddad, *Photography Lab. Assistant*

***Department of Design***

Mr. John Kortbawi, *Chairperson*  
Miss Adelle Dib, *Secretary*  
Miss Antoinette Wehaibe, *Technical Assistant*

***Department of Music***

Fr. Elias Kesrwani, *Chairperson*  
Miss Adelle Dib, *Secretary*

**Faculty of Business Administration and Economics**

Dr. Elie Menassa, *Dean*  
Mrs. Ghada Cattan, *Administrative Assistant*

***Graduate Business Program***

Dr. Roy Khoueiry, *Assistant Dean*  
Mrs. Maya Rashed, *Administrative Assistant*

***Department of Accounting, Finance and Economics***

Dr. Mohamad Hamadeh, *Chairperson*  
Mrs. Kamale Moubarak, *Secretary*

***Department of Management and Marketing***

Mrs. Joyce Menassa, *Chairperson*  
Mrs. Grace Kanaan, *Secretary*

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

Mr. Ghassan Beyrouthy, *Chairperson*  
Mrs. Dunia Akiki, *Secretary*

***Printing Office***

Miss Rita Khalil, *Printing Operator*

**Faculty of Engineering**

Dr. Michel El-Hayek, *Dean*  
Miss Janette Elias, *Administrative Assistant*  
Miss Nancy Turc, *Academic Support Officer*

***Department of Civil and Environmental Engineering***

Dr. Jacques Harb, *Chairperson*  
Miss Loulou Saliba, *Secretary*

***Department of Electrical and Computer and Communication Engineering***

Dr. Semaan Georges, *Chairperson*  
Mrs. Jacqueline Hobaiter, *Secretary*

***Department of Mechanical Engineering***

Dr. Ghazi Asmar, *Chairperson*  
Miss Ghada Khoury, *Secretary*

***Engineering Laboratories***

Mr. George Breidy, *Laboratory Supervisor*  
Mr. Wissam Daou, *Senior Laboratory Instructor*  
Ms. Aline Siranossian, *Senior Laboratory Assistant*  
Miss Nisrine El-Turkey, *Laboratory Instructor*  
Mr. Wissam El-Beaino, *Laboratory Instructor*  
Mr. Wissam Haddad, *Laboratory Instructor*  
Mrs. Yara Maalouf, *Laboratory Instructor*  
Mrs. Sylvie Melki, *Laboratory Instructor*  
Mr. Fady Awad, *Senior Laboratory Technician*  
Mr. Elie Lahoud, *Laboratory Technician*

**Faculty of Humanities**

Dr. Mary-Angela Willis, Acting *Dean*

Mrs. Wassil Chemaly, *Administrative Assistant*

***Department of English, Translation and Education***

Dr. Maha Mouchantaf, *Chairperson*

Miss Fabienne Zarifeh, *Secretary*

***Department of Mass Communication***

Mr. Sam Lahoud, Acting *Chairperson*

Miss Alice Eid, *Secretary*

***Department of Social and Behavioral Sciences***

Dr. Mansour Eid, *Chairperson*

*Ms. Karen Dabaghi*

***Audio/Visual Facilities***

Mr. Nicola Khabbaz, *Head*

***Audio/Visual Academic Services Unit***

Mrs. Zoya Awky, *Academic Services Supervisor*

Mr. Naoum Abi-Adam, *Senior Production Coordinator*

Mr. Samer El-Achi, *Postproduction Coordination*

Mr. Anthony Gunstone, *Sound Coordinator*

Miss Najwa Mallah, *Graphics and Multimedia Coordinator*

Mr. Tony Abi-Adm, *Warehouse Dispatcher*

***Audio/Visual Event Services Unit***

Mrs. Rania Saade-Zeidan, *Event Services Coordinator*

Mr. Charbel Tarabay, *Event Assistant Coordinator*

Mr. Abdo Bejjani, *Audio-Visual Technical Assisnat*

Mr. Melhem Bou-Chebl, *Audio-Visual Technical Assisnat*

Mr. Milo Ghanem, *Theaters Technical Assistant*

Mr. Charbel Francis, *Theaters Technical Assistant*

Miss Sanaa Youssef, *Venues Assistant*

***Audio/Visual Cultural Activities Unit***

Mr. George Tarabay, *Project Coordinator*

Ms. Rania El-Khoury, *Project Assistant*

**Faculty of Natural and Applied Sciences**

Dr. George M. Eid, *Dean*

Mrs. Nelly Geara Nakad, *Administrative Assistant*

***Department of Computer Science***

Dr. Hoda Maalouf, *Chairperson*

Mrs. Eliana Yazbeck-Kosseify, *Secretary*

***Department of Mathematics and Statistics***

Dr. Bassem Ghalayini, *Chairperson*

Miss Sandra-Doris El-Khoury, *Secretary*

***Department of Physics and Astronomy***

Dr. Bassem Sabra, *Chairperson*

Ms. Nicole Antoun, *Secretary*

***Department of Sciences***

Dr. Colette Kabrita Bou-Serhal, *Chairperson*

Ms. Nicole Antoun, *Secretary*

***Actuarial Science & Insurance Program***

Mrs. Claudia Freiji-Bou Nassif, *Academic Advisor*

***Freshman Science Program***

Dr. Elsa Sattout, *Academic Advisor*

***Academic Assistants***

Mrs. Rita El-Hage El-Amm

Mrs. Nada El-Ghossein-Maalouf

Miss Catherine Zoghbi

***Lab Assistant***

Mrs. Elizabeth Saliba-Tabet

**Faculty of Nursing and Health Sciences**

Dr. Antoine Farhat, *Dean*

Mrs. Nathalie Fahed-Mozaya, *Administrative Assistant*

**Department of Nursing and Health Sciences**

Dr. Doris Jaalouk, *Chairperson*

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

Dr. Chahine Ghais, *Dean*

Mrs. Nayla Basbous, *Administrative Assistant*

**Department of Political Science, Public Administration and Diplomacy**

Dr. Elie El-Hindy, *Chairperson*

## **NDU - North Lebanon Campus**

### ***Office of the Director***

Fr. Samir Ghsoub, *Director*

Dr. Dorine Haddad, *Assistant Branch Director for Academic Affairs*

Fr. Joseph Khalil, *University Chaplain*

Mr. Edgard Merheb Harb, *Assistant Director, Public Relations*

Mrs. Nancy Rizk-Diab, *Administrative Assistant, Office of the Director*

Mrs. Elsy Girgis, *Secretary*

### ***Architecture, Art and Design***

Mr. Joseph Chartouni, *Coordinator*

Mrs. Nicole Ayoub-Al-Ojaimy, *Administrative Assistant*

### ***Business Administration and Economics***

Dr. Dorine Haddad, *Coordinator*

Mrs. Nicole Ayoub-Al-Ojaimy, *Administrative Assistant*

### ***Engineering***

Dr. Chady Makary, *Coordinator*

Mrs. Rena Ayoub-Nicolas, *Administrative Assistant*

### ***Engineering Laboratories***

Mr. Walid Zakhem, *Laboratory Instructor*

### ***Humanities***

Mr. Michael Hajj, *Coordinator*

Mrs. Nicole Ayoub-Al-Ojaimy, *Administrative Assistant*

### ***Natural and Applied Sciences***

Mr. Bachir Maroun, *Coordinator*

Mrs. Rana Naynou-Nabbout, *Science Laboratory Assistant*

Mrs. Rena Ayoub-Nicolas, *Administrative Assistant*

### ***Nursing & Health Sciences***

Mr. Bachir Maroun, *Coordinator*

Mrs. Rana Naynou-Nabbout, *Science Laboratory Assistant*

Mrs. Rena Ayoub-Nicolas, *Administrative Assistant*

### ***Office of University Services***

Dr. Elias Rizk, *Assistant Director, University Services*

### ***Office of Finance***

Mrs. Joelle Khlal-Kfoury, *Accountant, Business Office*

### ***Office of the Registrar***

Mr. Jean Malkoun, *Registrar's Officer*

### ***Office of Admissions***

Mr. Raymond Khoury, *Admissions Officer*

Miss Coline Ayoub, *Admissions Assistant*

### ***Student Affairs Office***

Miss Rita Yaghmour, *SAO Officer*

### ***The Library***

Miss Carina Hawat, *Supervisor*

Mrs. Suzanne Doumit-Saad, *Circulation Assistant*

### ***Computer Center***

Mr. Khalil Serhan, *Head*

Mr. Charbel Merheb, *Computer Lab. Assistant*

### ***Telephone Services***

Ms. Nada Mousallem, *Information Desk*

**General Services**

Mr. Tony Ayoub, *Driver*

Mr. Miled Daou, *Driver*

Mr. Chalita Harb, *Driver*

Miss Therese Assaf, *Services worker, Cafeteria*

Mrs. Jacqueline Fayjaloun, *Services Worker, Cafeteria*

**NDU - Shouf Campus****Office of the Director**

Fr. Francois Akl, *Director*

Dr. Charbel Zgheib, *Coordinator*

Miss Marie-Reine Bou Nassif, *Administrative Assistant*

**Architecture, Art and Design**

Mr. Charbel Akl, *Acting Coordinator, Lab Instructor*

Ms. Mayssam Bou-Hamdan, *Secretary*

**Business Administration and Economics**

Mr. George Ghaleb, *Coordinator*

Ms. Mayssam Bou-Hamdan, *Secretary*

**Engineering**

Dr. Charbel Zgheib, *Coordinator*

Mrs. Siham Antoun Chalhoub, *Secretary*

**Humanities**

Mr. Vatche Donerian, *Coordinator*

Ms. Mayssam Bou-Hamdan, *Secretary*

**Natural and Applied Sciences**

Dr. Khalil Challita, *Coordinator*

Mrs. Siham Antoun Chalhoub, *Secretary*

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

**Nursing & Health Sciences**

Dr. Khalil Challita, *Coordinator*

**Office of Admissions**

Ms. Maya Abou Khzam, *Admissions Officer*

Mrs. Marina Bou Karroum-Beainy, *Secretary*

**Office of the Registrar**

Mrs. Nancy Khoury Jurdy, *Assistant Registrar*

Mrs. Marina Bou Karroum-Beainy, *Secretary*

**Student Affairs Office**

Ms. Denise Nassif-Saad, *SAO Officer*

**Business Office**

Mr. Elie Bou Abdo, *Accountant*

**Library**

Ms. Isabelle Bittar-Ghanem, *Library Supervisor*

Mrs. Sahar Abboud-Moussa, *Library Assistant*

**Computer Center**

Mr. Jean Hedary, *Technical Support Specialist*

Ms. Viviane Moussa, *Assistant, Computer Center*

**Office of Public Relations**

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

**Pastoral Work**

Fr. Walid Nassif, *Univeristy Chaplain*

**Telephone Services**

Miss Rona El-Bouez, *Information Desk*

***Security Services***

Mr. Saïd Bou Nassif, *Security Supervisor*

Mr. George Habib, *Security Guard*

Mr. Fadi Antoun, *Security Guard*

Mr. Abdo El-Hayek, *Security Guard*

Mr. George Nader, *Security Guard*

Mr. Antoine Lahoud, *Security Guard*

Mr. Richa Kozhaya, *Security Guard*

Mr. Youssef Oudaimy, *Security Guard*

***Cafeteria Services***

Mrs. Antoinette Jraidy, *Senior Cafeteria Worker*

Mrs. Jihane Mouawad, *Cafeteria Worker*

Miss Daed Bou Nassif, *Cafeteria Worker*

Mrs. Fadia Keyrouz Madi, *Cafeteria Worker*

Mrs. Roula Khattar Antoun, *Cafeteria Worker*

***General Services Office***

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

Miss Jeanette Younes, *Secretary*

Mr. Toni Bou Abdo, *Maintenance Worker*

Mr. Abdo Mghames, *Gardener*

Mr. Dib Haddad, *Gardener*

Mr. Charbel Saadeh, *Driver*

Mr. Refaat Nasr, *Services Worker*

## LIST OF FULL-TIME FACULTY MEMBERS 2012-2013

### Professors

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

<sup>1</sup>*Chedid, Fouad*, Ph.D., 1990, *Computer Science: Parallel & Distributed Computing, Algorithms Theoretical Computer Science.*, Illinois Institute of Technology, USA

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

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

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

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

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

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

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

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

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

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

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

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

### Associate Professors

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

---

<sup>1</sup> Leave of absence 2012/2013

<sup>2</sup> Tenure appointment

**Haddad, Robert**, Master of Fine Arts, 1980, University of Pennsylvania, USA  
**Hage, Tanos G.**, Ph.D., 1995, *Plant Biochemistry and Molecular Biology*, Pennsylvania State University, USA  
**Hajjar, Roger**, Ph.D., 1997, *Physics and Astronomy*, Université de Montréal, Canada  
**Hamad, Mustapha**, Ph.D., 1995, *Electrical Engineering*, University of South Florida, USA  
**Hamadeh, Mhamad**, Ph.D., 1998, *Economics*, Syracuse University, USA  
**Harb, Jacques**, Ph.D., 1996, *Civil Engineering*, Northeastern University, USA  
**Hasham, Elham S.**, Ph.D. 2004, *Educational Leadership, Management and Administration*, Leicester University, United Kingdom.  
**Jaalouk, Doris**, Ph.D., 1997, *Cell Biology*, Université de Sherbrooke, Canada  
**Jahshan, Paul**, Ph.D., 2000, *American Studies*, Nottingham University, UK  
**Jajou, Amer F.**, Ph.D., 1987, *Operations Research*, Univerzita Karlova, Czechoslovakia  
**Kabrita-Bou Serhal, Colette**, Ph.D., 1998, *Biology (Circadian Rhythms, Neurobiology)*, Northeastern University, Boston, USA  
**Kassem, Abdallah**, Ph.D., 2005, *Electrical Engineering*, Ecole Polytechnique de Montreal, Canada  
**Keirouz, Malhab**, Ph.D., 1991, *Mathematics*, Purdue University, USA  
**Kfoury, Carol**, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon  
**Khair, Marie**, Doctorate, 1996, *Computer Science*, Aristotle University of Thessaloniki, Greece  
**Khalaf-Keirouz, Leila**, Doctorate, 1995, *Environmental Geology*, Westfälische Wilhelms-Universität, Germany  
<sup>1</sup>**Khalil, Antoine**, M.B.A., 1981, *Finance*, Pace University, USA  
**Khoueiri, Roy**, Doctorate, 2003, *Economics*, Université Paris 13, Paris Nord, France  
**Labaki, George**, Doctorate, 1984, *Law*, Université de Paris-I, Pantheon, Sorbonne, France.  
**Maalouf, Hoda**, Ph.D., 1998, *Communication Engineering*, Imperial College, University of London, England  
**Maalouf, Ramez**, Ph.D., 1994, *Mathematics*, Imperial College, University of London, England  
**Malek, Amal**, Doctorate, 1<sup>ère</sup> Catégorie, 2000, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon  
<sup>2</sup>**Matar, Suhail**, C.A.P.E.S., 1969, *Arabic Language and Literature*, Lebanese University, Lebanon  
**Matar-Haddad, Dorine**, Ph.D., 2006, *Management*, University of Leicester, UK  
**Melki, Habib**, Master of Architecture, 1985, Ball State University, USA  
**Menassa, Elie**, D.B.A., 2003, *Accounting & Finance*, De Montfort University, UK  
**Mendalek, Nassar**, Ph.D., 2003, *Electrical Engineering*, Ecole de Technologie Supérieure, Canada  
**Naimy, Viviane**, Doctorate, 2001, *Economics and Finance*, Université de Paris XI, France  
**Sabra, Bassem**, Ph.D., 2000, *Physics*, Ohio University, USA  
**Salameh, Doumit**, Ph.D., 1988, *Philosophy*, St. Louis University, USA  
**Salem, Naim**, Ph.D., 1992, *International Studies*, University of South Carolina, USA  
<sup>3</sup>**Saliba, Holem**, Ph.D., 1997, *Mathematics*, Moscow State University, Russia  
**Samra, Sami**, Doctorate 1<sup>ère</sup> Catégorie, 1997, *Philosophie et Sciences Humaines*, Université du Saint-Esprit Kaslik, Lebanon

---

<sup>1</sup> Honorary Associate Professor

<sup>2</sup> Tenure appointment

<sup>3</sup> Leave of absence 2012/2013

**Sensenig-Dabbous, Eugene**, Doktor Der Philosophie, 1985, *Political Science and German Literature*, Paris-Lodron-Universität, Salzburg, Austria  
**St. Pierre, James**, *Doctoral of Philosophy*, 2001, University of Alabama, USA  
**Yaacoub, Youssef**, Ph.D., 1990, *Education*, Loyola University of Chicago, USA  
**Younes, Farid**, Ph.D., 1997, *Aménagement*, Université de Montréal, Québec, Canada  
**Zgheib, Charbel**, Doctorate, 2005, *Physics of Condensed Matter*, University of Montpellier II, France

### **Assistant Professors**

**Aad, Pauline**, Ph.D., 2008, *Animal Breeding and Reproduction*, Oklahoma State University, USA  
**Abdel-Nour, George**, Ph.D., 1997, *Spanish*, Yale University, USA  
**Akar, Bassel**, Ph.D., 2009, *Education*, Institute of Education, University of London, UK  
**Akhras, Caroline**, Ph.D., 2007, *Doctor of Education*, University of Leicester, UK  
**Antaby, George (Fr.)**, Doctorate, 2008, *Philosophy*, University of Ottawa, Canada  
**Antoun, Ziad**, Ph.D., 2010, *Education*, Eastern Michigan University, USA  
**Aoun, Rosy**, Ph.D., 2010, *Computer Science and Networks*, Telecom Paris Tech, France  
**Assaad, Joyce**, Ph.D., 2010, *Harmonic Analysis*, Bordeaux University, France  
**Atallah, Jad**, Ph.D., 2008, *Electrical & Computer Systems*, Royal Institute of Technology, Sweden  
**Azouri, Pamela**, MA, 2004, *Political Science*, Università Degli Studi Roma Tre, Italy  
**Azzi, Marwan**, Ph.D., 2008, *Materials Engineering*, McGill University, Canada  
**Badr Layla**, Doctor, 2010, *Natural Sciences, Chemistry*, Westfälische Wilhelms Universität, Germany  
<sup>1</sup>**Barakat, Edgard**, M.B.A., 1981, *Marketing*, University of Dayton, USA  
**Baroud, Fawzi**, Ph.D., 2011, *Educational Technology-eLearning*, Sheffield Hallam University, UK  
**Bassil, Charbel**, Doctorate, 2010, *Economics*, Cergy Pontoise University, France  
**Bechara, André**, Master of Arts in Design, 2007, Notre Dame University-Louaize, Lebanon.  
**Beyrouthy, Lola**, Doctorate, 2002, *Music*, Université du Saint-Esprit Kaslik, Lebanon  
**Bitar, Nicolas**, Ph.D., 2005, *International Finance and Economics*, University of Wisconsin-Milwaukee, USA  
**Bou-Mosleh, Charbel**, Ph.D., 2005, *Mechanical Engineering*, University of Colorado, USA  
**Bou-Sanayeh, Marwan**, Dr.-Ing., 2008, *Electrical Engineering*, University of Duisburg-Essen, Germany  
**Bou-Zeid, Maria**, Doctorate, 2010, *Media & Communications*, University Paris II, France  
**Chakar, Elie**, Doctorate, 1994, *Sciences et Techniques du Bâtiment*, Ecole Nationale des Ponts et Chaussées, France  
**Challita, Khalil**, Doctorate, 2005, *Computer Science*, Paul Sabatier University, France  
**Chibani, Wissam**, *Doctor of Education*, 2011, Saint Louis University, Missouri, USA  
**Chidiac, May**, Doctorate, 2008, *Information Sciences*, Université Pantheon, Assas, Paris II, France  
**Chikri, Roger (Fr.)** *Doctor of Education*, 2000, Wayne State University, Detroit, Michigan  
**Choueiri, Linda Selwood**, Master of Science, 2000, *Supervision & Administration in the Visual Arts*, Parsons School of Design / Bank Street College, USA  
**Daghfal, Graziella**, Master of Arts in Design, 2002, Middlesex University, UK  
**Dib, Robert**, Doctorate, 1998, *Biochemistry*, Université de Nantes, France

---

<sup>1</sup> Honorary Assistant Professor

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

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

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

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

**El-Hayek, Jessy**, Ph.D., 2011, *Nutrition and Dietetics*, McGill University, Canada

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

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

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

**El-Khoury, Diala**, Doctorate, 2010, *Molecular Biology*, Paris VII University, France

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

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

**Gabriel, Nicolas**, Doctorate, 2011, *Urban Geography and Planning*, University Paul Valery, Montpellier III, France

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

**Ghanem, Esther**, Ph.D., 2010, *Cell Biology*, Jacobs University, Bremen, Germany

**Ghanimeh, Sophia**, Ph.D., 2012, *Environment & Water Resources Engineering*, American University of Beirut, Lebanon

**Ghosn-Chelala, Maria**, Doctor of Education, 2011, Saint Louis University, Missouri, USA

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

**Hage, Leslie**, MS, 1996, *Library Science*, The University of Arizona, USA

**Hage, Hicham F.**, Ph. D., 2010, *Computer Science*, University de Montreal, Canada

**Hage, Re-mi**, Doctorate, 2012, *Applied Math*, University de Nantes, France

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

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

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

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

**Hosry, Aline**, Ph.D., 2011, *Commutative Algebra*, University of Missouri, USA

<sup>2</sup>**Hovivian, Hrair**, M.S., 1984, *Finance and Economics*, Beirut University College, Lebanon

**Ibrahim, Elsy**, Doctor of Engineering, 2010, *Civil Engineering*, Katholieke Universiteit Leuven, Belgium

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

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

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

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

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

---

<sup>1</sup> Honorary Assistant Professor

<sup>2</sup> Honorary Assistant Professor

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

**Khoury, Naji**, Ph.D., 2005, *Civil Engineering*, University of Oklahoma, USA

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

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

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

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

**Maalouf, Rita**, Doctorate, 2006, *Chemistry*, Claude Bernard University, France

**Matar-Bou Mosleh, Jocelyne**, Ph.D., 2006, *Epidemiology & Biostatistics*, University of Pittsburgh, USA, MPH, 1994, *Hospital Service Administration*, American University of Beirut, Lebanon

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

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

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

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

**Nakad, Roger**, Doctorate, 2011, *Mathematics*, University of Nantes, France

**Nehmé, Cyrine**, Doctorate, 2005, *Astrophysics*, University Paris VII, France

**Oueijan, Harvey**, *Doctor of Education*, 2011, Saint Louis University, Missouri, USA

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

**Rahme, Chady**, Doctorate, 2011, *Philosophy/Epistemology*, Université du Saint-Esprit Kaslik, Lebanon

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

**Sabat, Rita**, Ph.D., 2010, *International Relations*, Florida Intl. University, USA

**Sabiini, Guitta**, Doctorate, 2010, *Mathematics*, Université Paul Sabatier Toulouse II, France

**Salem, Talal**, Doctorate, 2007, *Civil Engineering*, Institut National des Sciences Appliquées de Lyon, France

**Samaha, Maya**, Ph.D., 2009, *Computer Science*, Claude Bernard University, Lyon 1, France.

**Sarkis, Walid**, Doctorate, 2009, *Clinical Psychology*, Lebanese University, Lebanon

**Sattout, Elsa**, Ph.D., 2005, *Agricultural Botany*, University of Reading, UK

**Sleilati, Esther**, D.B.A., 2011, *Marketing*, Grenoble Ecole de Management, Grenoble, France

**Slim, Rayan**, Doctorate, 2008, *Energy & Thermal Sciences*, Ecole des Mines de Paris, France

**Tannous, Joseph, (Fr.)**, *Doctor of Education*, 2011, Saint Louis University, Missouri, USA

**Tannous, Marie**, Ph.D., 1998, *Clinical Chemistry*, University of Windsor, Canada

**Tawk, Youssef**, Ph.D., 2011, *Electrical Engineering*, University of New Mexico, USA

**Willis, Mary-Angela**, Ph.D., 2001, *Francophone Literature*, University of Alabama, USA

<sup>2</sup>**Yazigy, Amal**, Ph.D., 1992, *Applied Linguistics*, Leicester University, UK

**Youssef-Abdel-Massih, Dalia**, Doctorate, 2007, *Civil Engineering*, University of Nantes, France

---

<sup>1</sup> Honorary Assistant Professor

<sup>2</sup> Leave of Absence 2012/2013

**Youssef, Lara**, M.D., 2012, *Pathology Laboratory Medicine*, American University of Beirut, Lebanon  
**Zaccour, Danielle**, Diplôme d'Etudes Supérieures, 1991 *Arts Plastiques*, Académie Libanaise des Beaux-Arts, Liban  
**Zgheib, Hani**, Doctorate, 2001, *Engineering: Living Environmental Studies*, Kyushu University, Japan  
**Zgheib, Youssef**, Ph.D., 2002, *International Hospitality Management*, University of Strathclyde, Scotland, UK

### Senior Lecturers

**Abou-Jawdeh, Simon**, D.E.S., 1992, *Clinical Psychology*, Lebanese University, Lebanon  
**Akkari, Juliet**, M.A., 1971, *TEFL*, American University of Beirut, Lebanon  
**Assaf Carole**, M.B.A., 1995, *Tourism and Marketing*, Notre Dame University-Louaize, Lebanon  
**Beyrouthy, Ghassan**, Doctorate (abd), 2008, *Economics*, Université de Québec a Montréal, Canada  
**Freiji-Bou Nassif, Claudia**, M.S., 1991, *Applied Statistics*, Ohio State University, USA; M.S., 1998, *Financial Economics*, University of London  
**Ghaleb, George**, M.B.A., 2002, *Management*, Notre Dame University-Louaize, Lebanon  
**Hajj, Michael**, M.A., 1997, *English Literature*, Notre Dame University-Louaize, Lebanon  
**Hajjar-Muça, Theresa**, M.P.H., 1994, *Biostatistics*, American University of Beirut, Lebanon  
**Karam, Salim**, M.B.A., 1983, University of Detroit, USA  
**Menassa, Joyce**, M.S., 1994, *Marketing*, Beirut University College, Lebanon  
**Nakhlé, Vivianne**, M.S., 1993, *Business Administration*, Strayer College, Washington D.C.  
**Saadeh, Ban**, M.S., 1978, *Mathematics*, American University of Beirut, Lebanon  
**Samrani, Diana**, M.A., 1990, *Education*, Andrews University of Michigan, USA  
**Shaffu, Raja**, M.B.A., 1970, *Finance*, American University of Beirut, Lebanon  
**Wehbe, Boulos (Fr.)**, M.A., 1981, *Middle Eastern Studies*, American University of Beirut, Lebanon  
**Zakhour, Kamal**, M.B.A., 1982, *Marketing*, University of Pittsburgh, USA

### Lecturers

**Abi-Saleh, Richard**, Master, *Finance*, 2010, Université Paris 12, France  
**Abou-Jaoude, Maya**, M.S., 1999, *Food Technology*, American University of Beirut, Lebanon  
**Akl, Salim**, Diplome d'Etudes Supérieures en Architecture d'intérieur, 1990, Académie Libanaise des beaux Arts, Lebanon  
**Baroud, Dina**, M.A., 2007, *Landscape Urbanism*, Notre Dame University-Louaize, Lebanon  
**Bassil, Janet**, M.B.A., 1996, *International Affairs and Diplomacy*, Notre Dame University-Louaize, Lebanon  
**BouJaoude-Khoury, Karen**, MBA, 2006, *Master of Business Administration-MIB*, Notre Dame University-Louaize, Lebanon  
**Bteich, Chadi**, Master of Architecture, *Landscape Urbanism*, 2007, Notre Dame University-Louaize, Lebanon  
**Chamoun, Claudine**, D.E.S., 1992, *Interior Design*, Lebanese University, Lebanon  
**Chamoun, Marlyse**, M.A., 2012, *Design*, Notre Dame University-Louaize, Lebanon  
**Chartouni, Joseph**, Master in Architecture, 2006, Harvard University, USA.  
**Gharzouzi, George**, M.B.A., 1984, University of Tulsa, USA

**Jabbour, Layla**, D.E.S.S., 2003, *Restoration & Conservation of Monuments*, Lebanese University, Lebanon

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

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

**Khabbaz, Nicolas**, M.A., 2009, *Media Studies: Electronic Media*, Notre Dame University-Louaize, Lebanon

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

**Lahoud, Sam**, M.A., 2010, *Media Studies: Journalism*, Notre Dame University-Louaize, Lebanon

**Madi, Christy**, M.A., 1999, *English Literature*, Notre Dame University-Louaize, Lebanon

**Majdalani, Roula**, Diplome D'Etudes Supérieur, 1985, *Plastic Arts*, ALBA, Lebanon

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

**Mouawad, Paul**, M.A., 2006, *Real Estate Development*, Columbia University, USA

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

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

**Sakr, Omar**, M.Sc., *Responsible Tourism Management*, 2011, Leeds Metropolitan University, UK

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

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

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

**Vanloan, Amira**, M.A., 1995, *TESOL*, American University, USA and M.B.A., 2010, *Finance*, American University of Dubai, UAE

### **Instructor**

**Saad-Saber, Nada**, D.E.A., 2005, *Business Administration*, Liege University, Belgium

### **Lab Senior/Instructors**

**Akl, Charbel**, Bachelor, 2005, *Architecture*, Notre Dame University-Louaize, Lebanon

**Bou-Dergham, Nadine**, MS, 2009, *Computer & Communication Engineering*, American University of Beirut, Lebanon

**Breidy, George**, M.B.A., 2004, Notre Dame University-Louaize, Lebanon

**Daou, Wissam**, Bachelor, 2000, *Mechanical Engg.*, Notre Dame University-Louaize-, Lebanon

**El-Beaino, Wissam**, Bachelor, 2010, *Computer & Communication Engg.*, Notre Dame University-Louaize, Lebanon

**El-Hage Al-Amm, Rita**, M.P.H., 1988, *Public Health*, American University of Beirut, Lebanon

**El-Ghoussain-Maalouf, Nada**, M.S., 1996, *Microbiology*, American University of Beirut, Lebanon

**El-Turky, Nisrine**, Bachelor, 2003, *Computer & Communication Engg.*, Notre Dame University-Louaize, Lebanon

**El-Zakhem, Walid**, M.S., 1992, *Electrical Engineering.*, Southern Illinois University, USA

**El-Zoghbi, Catherine**, D.E.A., 2003, *Material Physics*, Lebanese University, Lebanon

**Haddad, Wissam**, Bachelor, 2002, *Civil Engineering*, Lebanese American University, Lebanon

**Lawoun, Dolcy**, Diplome de Maitrise, 1996, Chemistry, Lebanese University, and B.A., 2000, *Music-Piano*, The Academie Nationale Supérieure de Musique-Conservatoire, Lebanon

**Maalouf, Yara**, Bachelor, 2008, *Civil Engineering.*, 2008, Notre Dame University-Louaize, Lebanon

**Melki, Sylvie**, Bachelor, 2009, *Mechanical Engineering.*, Notre Dame University-Louaize, Lebanon

**Moussa, Layale**, Master 2, 2010, *Industrial Chemical Analysis*, Lebanese University, Lebanon

**Siranossian, Aline**, Bachelor, 2002, *Electrical Engineering*, Notre Dame University-Louaize, Lebanon

**Skaff, Nibelle**, M.S., 2012, *Physics*, American University of Beirut, Lebanon

## ACADEMIC CALENDAR 2012-2013

### Fall 2012

Sep 17-21	M-F		Orientation Sessions for New Students
Sep. 24-26	M-W	8:00-12:30/ 1:30-4:00	Registration Period
Sep. 27	Th	7:30 a.m.	Classes Begin
Sep. 27-Oct.5	Th-F		Application for Sibling Grant
Oct. 1	M	8:00-12:30/ 1:30-4:00	Late Registration (classes are in session)
Oct. 3	W	8:00-12:30/ 1:30-4:00	Drop and Add (classes are in session)
Oct. 12	F		Opening Ceremony (Main Campus) for the Academic Year 2012-2013
Oct. 19	F		Opening Ceremony (NLC) for the Academic Year 2012-2013
Oct. 25	Th		Opening Ceremony (Shouf Campus) for the Academic Year 2012-2013
*Oct. 26-28	F-S		Al-Adha: Holiday
Nov. 1	Th		All Saints' Day: Holiday
*Nov. 15	Th		Hijra New Year: Holiday
Nov. 22	Th		Independence Day: Holiday
*Nov. 24	Sat		Ashoura: Holiday
Nov. 27	T	4:00 p.m.	Deadline for Spring and Summer 2012 Incomplete Grades
Dec. 3-14	M-F	8:00 a.m.- 4:00 p.m.	Advising and Preregistration Period for Spring 2013
Dec. 21	F		Christmas Mass
Dec. 21	F	9:00 p.m.	Christmas Vacation Begins
Jan. 1	T	9:00 p.m.	Christmas Vacation Ends
Jan. 2	W	7:30 a.m.	Classes Resume
Jan.2- 28	W-M		Application for Work-Study Grant
Jan. 6	S		Epiphany and Armenian Christmas: Holiday
Jan. 10-11	Th-F		Entrance Examinations for Spring Semester 2013
Jan. 17	Th		Saint Anthony's Day: Holiday
Jan. 22	T	4:00 p.m.	Deadline for Officially Withdrawing from a Course
Jan. 23	W		Wednesday, Classes Do Not Meet; Thursday, Classes Meet
*Jan. 24	Th		Prophet's Birthday: Holiday
Jan. 25	F		Friday, Classes Do Not Meet; Thursday, Classes Meet
Jan. 28	M		Classes End (Monday, classes do not meet; Thursday, classes meet)
Jan. 29	T		Reading Day

Jan. 30-Feb. 8	W-F		Final Examinations Period
Feb. 5	T		Reading Day
Feb. 9	Sat		St. Maroun's Day: Holiday

## Spring 2013

Feb. 13	W		Orientation Sessions for New Students
Feb. 15-18	F-M	8:00-12:30/ 1:30-4:00	Registration Period
Feb. 19	T	7:30 a.m.	Classes Begin
Feb. 19- 27	T-W		Application for Sibling Grant
Feb. 21	Th	8:00-12:30/ 1:30-4:00	Late Registration (classes are in session)
Feb. 25	M	8:00-12:30/ 1:30-4:00	Drop and Add (classes are in session)
Mar. 22	F		Open House - NLC
Mar. 25	M		Feast of the Annunciation: Holiday
Mar. 27	W		Easter Mass
Mar. 27	W	9:00 p.m.	Western Easter Vacation Begins
Apr. 1	M	9:00 p.m.	Western Easter Vacation Ends
Apr. 2	T	7:30 a.m.	Classes Resume
Apr. 12	F		Open House Main Campus
Apr. 19	F	4:00 p.m.	Deadline for Fall Semester 2012 Incomplete Grades
Apr. 22-June 14	M-F		Application for Work-Study Grant
Apr. 24	W		Open House - Shouf Campus
May 1	W		Labor Day: Holiday
May 2	Th	7:30 a.m.	Eastern Easter Vacation Begins
May 6	M	9:00 p.m.	Eastern Easter Vacation Ends
May 7	T	7:30 a.m.	Classes Resume
May 10	F		Founder's Day - Main Campus (classes are not in session)
May 13-24	M - F		Advising and Preregistration Period for Summer and Fall 2013
May 17	F		Founder's Day-NLC & Shouf Campus (classes are not in session)
June 4	T		Tuesday, Classes Do Not Meet: Monday, Classes Meet
June 11	T	4:00 p.m.	Deadline for Officially Withdrawing from a Course
June 11	T		Tuesday, Classes Do Not Meet: Monday, Classes Meet
June 12	W	4:00 p.m.	Wednesday, Classes Do Not Meet: Friday, Classes Meet
June 14	F		Classes End
June 17-26	M-W		Final Examinations Period
June 19	W		Reading Day

## Summer Session 2013

July 2	T	8:00a.m. - 2:00p.m.	Registration Period
July 3	W	7:30 a.m.	Classes Begin
July 4	Th	8:00a.m. - 2:00p.m.	Late Registration (classes are in session)
July 5	F	8:00a.m. - 2:00p.m.	Drop and Add (classes are in session)
July 5-6	F-Sat		Entrance Examinations for Fall Semester 2013
July 12	F	7:15 p.m.	Commencement: Conferring of Degrees
*Aug 8-10	Th-Sat		Al Fitr: Holiday
Aug. 13	T	2:00 p.m.	Deadline for Officially Withdrawing from a Course
Aug. 15	Th		Assumption Day: Holiday
Aug. 16	F		Classes End
Aug. 19-20	M-T		Final Examinations Period
Aug. 23-24	F-Sat		Entrance Examinations for Fall Semester 2013

***\*Tentative Dates***

## **UNIVERSITY PROFILE**

### **LOCATION AND CLIMATE**

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

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

The NDU Shouf Campus is housed within the premises of St. Abda Monastery in Deir El-Kamar. The Monastery, a historic place, is being restored, not to its former glory but to a standard that maintains its traditional and aesthetic appeal. (The campus is expected to accommodate a population of 3,000 or so students.). The visible benefits are evident everywhere. Today, rows of oak and pine trees surround the campus. The grassy evergreen slopes are well preserved. Visitors can easily admire the scenic beauty of the place. Beyond the University campus, the surrounding vicinity of Deir El-Kamar harmonizes gracefully with the monastery premises. This historic city is located in the central area of the Shouf region. It is 35 km from Beirut and is just over 900 m above sea level. In general, the region enjoys a moderate climate except for the winter months, when the temperature may drop to 7°C or below.

## **IDENTITY, MISSION, VISION, AND VALUES**

### **Identity**

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

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

### **Mission Statement**

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

### **Vision**

NDU's vision is to:

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

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

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

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

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

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

### **Values**

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

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

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

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

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

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

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

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

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

## **HISTORICAL OVERVIEW AND HERITAGE**

### **Historical Overview**

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

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

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

In 1990, NDU established an Off Campus Program in North Lebanon, which in 1999, moved to a new campus located in Barsa, Koura, now known as NLC. The campus lies on

a 50,000 square meters donated by the village of Barsa. The first building of the Barsa Campus, totaling 10,000 square meters of floor space, was completed in June 1999.

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

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

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

## **Heritage**

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

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

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

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

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

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

### **Directors of LCHE**

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

### **Presidents of NDU**

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

## **CAMPUS MINISTRY**

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

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

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

# **ACADEMIC SUPPORT SERVICES**

## **ACADEMIC ADVISORY SERVICES**

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

## **THE LIBRARIES**

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

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

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

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

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

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

## **NDU Libraries Mission Statement**

The NDU Libraries strive to provide quality services by acquiring, organizing, preserving, and providing access to a variety of information resources. The libraries, thereby, support the University's mission to foster excellence in scholarship and lifelong learning, and to educate students to be future leaders who can exercise reason based upon knowledge.

## **DIVISION OF COMPUTING SERVICES**

### **Vision**

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

### **Goals**

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

### **Goal for Faculty**

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

### **Goal for Students**

Ensure that students have the necessary skills to take advantage of NDU's technological environment.

### **Goal for Staff**

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

### **Equipment and Facilities**

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

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

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

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

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

Special classrooms are linked to the backbone network via communication lines and have local resources to allow the instructor an indoor on-line demonstration with illustrative materials projected during class hours. Students are required to put into practice the

theoretical concepts and gain working knowledge during regular laboratory sessions scheduled individually for each course.

## **FAAD ACADEMIC SUPPORT FACILITIES**

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

### **MAC Computer Laboratory**

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

### **Photography Laboratory**

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

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

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

### **Metal and Wood Workshop**

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

### **Smart Rooms**

The three Smart Rooms are fully equipped with computer hardware and software, LCD projector, and projection panel.

### **Architecture Computer Workshop**

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

### **Design Computer Workshop**

A fully equipped computer workshop has been developed in proximity to the studios for Graphic Design and Fashion design students.

. The workshop is equipped with smart room facilities, including 19 G4 Mackintosh computers. Each computer contains the latest versions of graphic software.

### **Fashion Design Studio**

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

## **WRITING CENTER**

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

## **DIVISION OF AUDIO VISUAL ARTS**

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

The facilities include:

- Radio/TV Studio;
- Acting Studio;
- Computer/Music Lab;
- Theater;
- Issam Fares Conference Hall;
- Pierre Abou Khater Auditorium;
- Friends Hall;
- Exhibition Hall;
- Exam Halls;
- NDU Choir Recording Unit.

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

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

### **Smart Rooms**

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

### **DVD Library**

The DVD Library includes more than 1,500 DVDs (fiction films, documentaries, series, and others). All members of the NDU community may check out these films.

## **ENGINEERING LABORATORIES**

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

The Department of Civil and Environmental Engineering offers seven laboratory courses to cover the main topics in the fields of concrete and pavement design, environmental

engineering, mechanics of materials, soil mechanics, hydraulics, field surveying, and engineering graphics.

The lab equipment is continuously upgraded and updated to ensure that our students are exposed to the most recent and advanced systems. The department also secures highly accurate and professional testing facilities such as spectrophotometry, strain gauging, triaxial testing, open and closed channel flow measurements, and total station application. Most of the lab facilities are connected to a data acquisition system. In addition, field equipment are available for in-situ testing, such as soil investigation, groundwater and surface water testing, and concrete quality control. Professional commercial testing as well as community services are also performed on a regular basis in the above areas.

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

State-of-the-art laboratory equipments are being used in the Mechanical Engineering Department for training purposes. The list includes: Large wind tunnel for aerodynamics testing, energy testing (solar systems, combustion, etc.), turbomachines testing (centrifugal pumps, fans, Pelton wheel, Francis turbine, etc.), air-conditioning testing (heating, cooling, refrigeration, etc.), Mechanical vibration testing and mechanical components and systems. A full workshop made of a set of machine-tools, including a CNC machine is used for student training and regular machining needs.

## **SCIENCE LABORATORIES**

### **Biology Lab**

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

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

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

## **Chemistry Lab**

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

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

In addition, an analytical unit houses a number of modern equipment such as UHPLC, GC/GCMS, FTIR, AA, etc., gas chromatograph, UV-visible spectrophotometers, digestion-distillation unit for nitrogen determination, solvent extraction apparatus, digital densimeter, electronic refractometer, *pH* meters, ion-selective electrodes, etc.

## **Geology Lab**

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

## **Physics Lab**

The Physics Laboratory at NDU is a state-of-the-art teaching laboratory, offering computer controlled data acquisition and analysis as well as interesting experiments covering a wide range of topics in physics. It also boasts astronomy equipment, allowing for a range of scientific observations of celestial objects, including spectroscopy of stars and photometric observations of a multitude of objects. It includes a mobile 14-inch telescope and anticipates the future completion of the Moussa and Farid Raphael Observatory, which will be equipped with a 60-cm telescope, made possible by a generous donation from His Excellency Ambassador Gilbert Chaghoury.

## **STUDENT AFFAIRS OFFICE (SAO)**

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

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

## **UNDERGRADUATE FINANCIAL AID**

### **Objectives**

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

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

### **Work-Study Grants (WSG)**

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

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

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

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

### **Eligibility**

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

- demonstrate financial need;
- have completed 12 credits at NDU (remedial credits not included);
- have demonstrated academic potential (cumulative GPA, minimum 2.3/4.0);
- be enrolled as a full-time student with a minimum of 12 credits each semester and a minimum of 9 credits during the last semester at NDU. Only Interior and Graphic

Design students are eligible for WSG in their last academic year, since they are required to take 10 credits in their last two semesters of enrollment. This must be confirmed by the Chairperson of the Visual Arts Department.

### **Conditions**

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

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

### **Procedures**

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

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

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

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

### **Student Employment**

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

### **Grants**

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

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

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

- join a sports team at NDU;
- complete 12 credits at NDU (remedial credits are not included);

- be enrolled in 12 credits each semester, and in at least 9 credits during the last semester;
- maintain a minimum cumulative GPA of 2.00.

## **b. Sibling Grant**

### **Conditions**

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

### **Eligibility**

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

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

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

### **Procedure**

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

### **Undergraduate Scholarship**

The student shall benefit from the program according to the following scale:

Cumulative GPA from 3.40/4.00 to 3.65/4.00	-----	25% Scholarship;
Cumulative GPA from 3.66/4.00 to 3.79/4.00	-----	50% Scholarship;
Cumulative GPA from 3.80/4.00 to 4.00/4.00	-----	75% Scholarship.

### **Eligibility**

To be eligible the student must:

- have completed 12 credits at NDU (remedial credits are not included);
- be enrolled in 12 credits (remedial credits are not included) each semester and in a minimum of 9 during the last semester;
- have demonstrated academic excellence by maintaining a high cumulative GPA (3.40/4.00 and above).

## Procedure

If the student fulfills the above criteria, he/she does not have to apply, but will automatically benefit from the discount on his/her tuition fees.

## SOCIAL SECURITY OFFICE

### Returning Students

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

a. benefit from any of those governmental health plans:

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

must:

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

b. benefit from

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

must:

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

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

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

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

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

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

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

Thus, students who are registered at the National Social Security Funds (NSSF) as NDU students and who did not report any change of status, are not required to pass by the SAO. Their coverage by NDU will be automatically renewed for a fee of LBP 90,000 payable along with their tuition fee at the bank.

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

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

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

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

### **New students**

New students who:

- a.** do not benefit from any governmental health plan  
must:

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

- b.** benefit from any governmental health plan  
must:

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

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

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

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

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

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

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

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

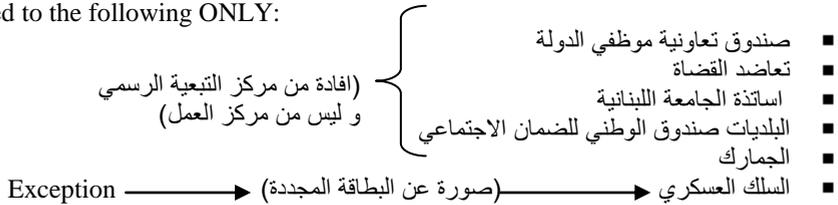
Students can pick up their appropriate Forms from the Social Security Office – SAO or from the Internet ([www.ndu.edu.lb](http://www.ndu.edu.lb)).

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

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

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

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



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

## HEALTH SERVICES

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

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

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

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

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

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

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

Serious cases are sent to the nearest hospital.

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

### **Counseling Services**

The well-being of individuals is not limited to physical health but includes physical, mental, and emotional health. At NDU, counselors are available to serve and help NDU students. This service is rendered with care, respect, and confidentiality.

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

- overall stress and anxiety;
- crisis intervention for individuals facing traumatic stress;
- problems related to eating disorders;
- concerns related to addiction (drugs, alcohol, etc.);
- personal issues;
- relationship problems;
- chronic illness;
- sadness and depression;
- difficulty adjusting to new situations;
- grief and bereavement counseling.

Find out more about this service at the Medical House or by contacting ext.: 2049 or 09/208809, or [infirmary@ndu.edu.lb](mailto:infirmary@ndu.edu.lb)

### **Insurance Policy**

NDU students who have an accident when practicing any kind of activity inside or outside the University premises are insured for up to US\$1,000. Students should pass by the Medical House during regular working hours in order to fill out the appropriate form.

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

This insurance service is in addition to the NSSF coverage. For more information please contact ext.: 2049 or 09/208809 or [infirmary@ndu.edu.lb](mailto:infirmary@ndu.edu.lb) or pass by the Medical House.

## **STUDENT LIFE OFFICE**

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

Dr. Elias Chemaly, M.D. (Tel. # 03.725559) is available from 11:00 until 13:00 hours at the Infirmary, SAO.

### **International Student Services**

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

### **Lost and Found**

The Lost and Found Office is operated from the Student Affairs Office. Articles found are to be turned in to the SAO. Persons looking for lost items may inquire at the office or call ext.: 2045. To claim an item, the person must clearly identify it. To help in recovering lost or stolen items, it is suggested that students put their names on their valuables. Items not claimed after sixty days will be considered abandoned.

## **STUDENT HOUSING**

The NDU Student Housing facility is an on-campus student service dormitory. Five-story housing facilities comprise of 417 bedrooms as well as a kitchen and lounge in every building. The housing facility offers safe, well-maintained, and reasonably rated rooms for foreign students who are eligible to join NDU or those who live some distance away from NDU.

### **Mission Statement**

The NDU Student Housing mission aims at providing and promoting a living environment that is conducive to learning and one that encourages students to use all the available housing resources needed to pursue their educational vocations at NDU whilst abiding by strict rules and regulations regarding academic life and values in an atmosphere of respect and integrity.

### **Reservations**

Applications for on-campus housing are made through the Student Housing Office-SAO. Students and their parents/guardians are asked to pass by the Student Housing Office, to be informed about the rules and regulations and visit the housing facility. Dorms' charges appear on the statement of fees issued to the student by the Business Office.

## **ATHLETIC SERVICES**

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

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

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

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

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

## **STUDENT ACTIVITIES OFFICE**

One way for students to be more involved in life on campus is through participation in extra curricular activities by being active members in clubs and societies. For a club to be recognized, its purpose must be consistent with the stated University Bylaws and must have a full-time faculty member as an advisor. The Student Activities Office also assists students and clubs in organizing public events on Campus.

The following student clubs and societies have been established for the academic year 2011-2012 to provide recreational and co-curricular activities:

### **Clubs and Societies**

- Accounting
- Advertising
- APSAS
- Architecture
- ASHRAE
- ASME
- Astronomy
- Chabab Loubnan
- Computer Science
- Debate
- Discovery
- Entrepreneurship Society
- Eureka
- EWB
- Hospitality, Tourism and Events
- Human Rights
- IEEE
- International Relations
- Marketing
- Music
- Nightlife
- Nutrition and Health
- Pastoral Work
- Photography
- Salvare
- Sartarabad
- SCE
- Skiing
- Smile
- Social

### **Community Service Office**

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

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

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

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

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

## **CAMPUS SERVICES**

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

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

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

Lost or stolen cards must be reported immediately to ID Card Services, SAO ext: 2306.

### **Campus Parking**

Parking permits are obtained from Parking Services, SAO at the beginning of every semester. Parking permits must be displayed correctly at all times (lower left side of the windshield). All vehicles are subject to University parking regulations while on campus. Any vehicle parked in violation of parking regulations is subject to being removed and impounded at the owner's expense. The University assumes no responsibility for damage or loss of private property. Students are required to abide by and respect the directions of the NDU security personnel. Ext: 2306.

# **SPONSORED RESEARCH AND DEVELOPMENT**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **NDU PRESS**

NDU Press comprises the following units:

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

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

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

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

The development responsibilities are to maintain strong relations with the NDU-USA Organization, established in February 2001 with three Chapters: Washington D.C., Detroit, and Connecticut.

The objectives of the *American Friends Association* are to:

1. Establish a strong cultural link with graduates, friends, former students, faculty, and staff of NDU residing in the USA.
2. Build relationships with the American/Lebanese communities.
3. Establish exchange programs with American universities and other institutions of higher education.
4. Seek the cooperation of public libraries, university libraries. and university press offices for exchanges of publications with NDU.
5. Create direct relations with American publishers especially for textbook orders and library references.
6. Provide financial assistance.

## **WASHINGTON, D.C., OFFICE**

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

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

## **UNIVERSITY INTERNATIONAL AFFAIRS OFFICE**

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

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

## **MEMORANDA OF COOPERATION AND/OR UNDERSTANDING**

Assumption University in Bangkok, Thailand  
Brigham Young University, Utah (Digitization of manuscripts)  
Central Connecticut State University

Centre International d'Etude de Sport  
Centro Libanès, Mexico City  
College of Mount Saint Vincent – Riverdale, NY  
Concordia University, Canada  
Corvinus University of Budapest  
El-Camino University  
El-Colegio de Mexico, A.C.  
ESC Bordeaux, France  
Italian Cultural Institute in Lebanon  
John Paul II Catholic University of Lublin – Poland  
Lebanese University  
Madonna University  
Madonna University (presidential scholarships for students of both institutions)  
Mexican Lebanese Cultural Institute  
Middlesex University, England  
Núcleo de Estudos Libaneses (NEL) of Universidade Federal de Santa Maria/Brasil (UFSM)  
Politecnico Di Milano  
Politecnico di Torino  
Salve Regina University, USA  
Secretariat General of Catholic Schools in Egypt  
St. Louis University, Missouri  
Swiss Hotel Management School, Switzerland

TAFE Commission of New South Wales  
 Tatar State University of Humanities and Education  
 Ukrainian Catholic University  
 Ulm University, Faculty of Engineering, Germany  
 Universidad Iberoamericana Ciudad de Mexico  
 Universidad Libre, Columbia  
 Universidad Nacional Autonoma de Mexico  
 Universita degli Studi di Firenze, Facolta di Architettura, Italy  
 Université Saint Joseph (USJ), Lebanon  
 University of Alcala, Spain  
 University of Bahrain  
 University of Cyprus  
 University of Dallas  
 University of Dayton, Ohio  
 University of Leicester  
 Université Catholique de Louvain  
 University of Malta  
 University of Michigan – Flint, Michigan, USA  
 University of Ottawa, Canada  
 University of Petra, Jordan  
 University Poitiers, France  
 University of the Arts – Bremen, Germany  
 University of Western Sydney  
 Vaxjo University, Faculty of Engineering, Sweden  
 Wayne State University, College of Engineering, USA

## **INTERNATIONAL MEMBERSHIPS**

- International Association of Universities (IAU), France
- Association of Catholic Colleges and Universities (ACCU), USA
- Association of International Educators (NAFSA), USA
- American Council on Education (ACE), USA
- Comunita delle Universita Mediterranee (CUM), Italy
- Fédération Internationale des Universités Catholiques (FIUC), France
- Fédération des Universités Catholiques Européennes (FUCE), France
- Association of Arab Universities (AARU), Jordan
- Euromed Permanent University Forum (EPUF), Spain
- International Association of University Presidents (IAUP), Thailand
- Réseau Méditerranéen des Ecoles d'Ingénieurs (RMEI), Italy
- Phoenician International Research Center

## **PUBLIC RELATIONS AND CULTURAL AFFAIRS OFFICE**

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

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

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

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

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

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

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

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

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

The Office coordinates the activities of the following entities namely:

### **PRESS OFFICE**

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

### **PLACEMENT OFFICE**

The Placement Office is an integral part of the Public Relations and Cultural Affairs Office. It is supervised by the Vice President for Cultural Affairs and Public Relations and entrusted to a placement officer.

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

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

### **INTERNSHIP OFFICE**

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

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

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

### **MUSEUM**

The Stone Wing Museum, inaugurated on March 9, 2005, is also supervised by the Vice President for Cultural Affairs and Public Relations.

The Stone Wing Museum includes three collections: the prehistoric stone tools collection (discovered in Kaoukaba by Laure and Frank Skeels in 1964), the minerals, rocks, precious and semi-precious stones collection, and the fossilized fish and plants collection.

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

The **Stone Wing** Museum is free and open to the public. The Curator entrusted is always ready to receive and guide visitors (students from schools and universities, researches, and interested national and nternational guests and enrich them with info about the museum and its various and valuable collections.

## EVENT ORGANIZING OFFICE

The Event Organizing Office is responsible for all events organized by the Public Relations Office such as exhibitions, fairs, festivals, conferences, fundraising, and social occasions.

The Office keeps the public and NDU friends informed and updated about all events and it assures the preparation and delivery of invitations.

The Office acts as a link with people and departments concerned and collaborates with them to make sure that everything is prepared and ready for the event. The Office prepares all needed items, such as posters, flyers, nametags, materials, notebooks, packages, gift bags, registration lists, seating cards. The Office also arranges for the stay of delegates during international conferences and events.

The Office is in charge of the annual calendar of cultural events at NDU. It schedules and fixes dates to avoid overlapping and to make sure that every event is given the appropriate attention.

The Event Organizing Office is always ready to assist and collaborate with any department or office at NDU and to share its expertise for the success of any event held at NDU.

## ALUMNI AFFAIRS OFFICE

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

The **Alumni Affairs Office** aims to:

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

The Alumni Affairs Office serves as a focal point for all alumni activities and communications. It assists in planning or sponsoring alumni activities such as Campus Tour, Alumni E-newsletter, Alumni Annual Awards, Alumni programs, Class reunions, Alumni Day, Alumni College, Alumni Gala Dinners, Regional visits, ect. The Office also maintains communication with all NDU Alumni through the Alumni webpage via NDU website which offers complete and timely information about NDU happenings and Alumni events, stories and programs.

Core Values: Partnership, Service, Innovation, Excellence

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

## NDU ALUMNI ASSOCIATION

It is an association established in 1992, by a group of graduates who wanted to remain connected to and involved with their alma mater. Its aim is reuniting all NDU graduates under a common goal: Commitment, Unity and Prosperity to both NDU and the welfare of its graduates. Through its cooperation with NDU Alumni Affairs Office, the association seeks to provide alumni with a lasting bond to the University.

## **DIVISION OF CONTINUING EDUCATION**

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

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

The following are the various programs offered by the DCE:

### **BUSINESS CERTIFICATES**

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

### **COMPUTER CERTIFICATES**

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

### **ENGLISH LANGUAGE**

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

### **OTHER PROGRAMS**

#### **Certification Programs**

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

#### **Executive Training Program**

LMI: Leadership Management International  
AIF: Applied Investment Finance

#### **Arts and Crafts**

Drawing and Painting  
Lace Embroidery  
Cooking and Decoration  
Ceramics

#### **University Preparatory Programs**

SAT I; SAT II; TOEFL; EET; GMAT

## ADMISSIONS OFFICE

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

## UNDERGRADUATE ADMISSION

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

The following documents must be submitted with each application form:

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

Freshman applicants must additionally submit:

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

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

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

<b>Semester</b>	<b>Application Deadline</b>	<b>Examination Dates</b>
Spring Semester, 2013	November 1-November 30, 2012	January 10 & 11, 2013
Fall Semester, 2013	May 2-May 31, 2013	July 5 & 6, 2013
Fall Semester, 2013	July 1 - July 31, 2013	August 23 & 24, 2013

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

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

## **FRESHMAN ADMISSION REQUIREMENTS**

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

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

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

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

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

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

## **TRANSFER ADMISSION REQUIREMENTS**

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

Only courses completed at NDU will be computed in the student's GPA. Transfer students to the Faculty of Architecture, Arts and Design (excluding the B.A. in Graphic Design) and Faculty of Engineering must complete at least 45 credits at NDU with a cumulative GPA of 2.0/4.0 and meet all other graduation requirements in order to earn a degree from the

University. Transfer students to all other faculties must complete at least 30 credits at NDU with a cumulative GPA of 2.0/4.0 and meet all other graduation requirements in order to earn a degree from the University.

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

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

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

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

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

### **ADMISSION REQUIREMENTS FOR AUDITORS**

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

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

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

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

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

### **ADMISSION REQUIREMENTS FOR SUMMER ARABIC PROGRAM**

Anyone who is interested in attending the Summer Arabic Program offered by NDU must submit an Undergraduate or Graduate Application Form along with the Application Form for the Summer Arabic Program. In addition, an official transcript of the most recent

academic year is required. A questionnaire of purpose is required by the program and must be completed and submitted along with a recommendation from an Arabic-language instructor, where applicable. A writing sample from an Arabic course, test or homework is also required. The non-refundable application fee is US\$30 (check or money order made to Notre Dame University-Louaize).

## ADMISSION REQUIREMENTS FOR UNIVERSITY EMPLOYEES

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

## ENGLISH PROFICIENCY REQUIREMENTS

All applicants must satisfy an acknowledged level of English proficiency in order to be admitted. NDU recognizes one of the following instruments to assess English proficiency:

- The English Entrance Test (EET) administered by NDU;
- The Test of English as Foreign Language **TOEFL** administered by Amideast;
- The Writing Section of SAT I.

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

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

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

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

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

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

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

## **FACULTY ADMISSION REQUIREMENTS**

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

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

The selection depends on the following assessment model:

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

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

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

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

The selection depends on the following assessment model:

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

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

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

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

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

### **Faculty of Engineering (FE)**

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

The selection depends on the following assessment model:

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

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

Students who hold the Lebanese Baccalaureate II in the Sociology and Economics strand or the Literature and Humanities strand cannot be accepted directly as new students in the Faculty of Engineering. However, they can transfer to any Engineering major after having completed the following requirements in other majors at NDU: a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a total GPA of 2.5 minimum in addition to all other University requirements for transfer between majors.

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

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

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

The selection depends on the following assessment model:

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

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

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

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

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

The selection depends on the following assessment model:

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

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

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

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

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

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

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

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

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

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

**Remedial Math Courses**

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

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

<b>Faculty</b>	<b>Majors</b>	<b>Possible Set of Remedial Math Courses</b>	<b>Minimum Passing Grade for Math Remedial Courses</b>
Natural and Applied Sciences	Business Computing, Biology, and Environmental Science	MAT 105	D
Natural and Applied Sciences	Other majors	MAT 112	D
Engineering	All majors	MAT 112	C

Business Administration And Economics	All majors	MAT 105	D
Architecture, Art and Design	Architecture	MAT 112	C
Faculty of Nursing and Health Sciences	Nutrition & Dietetics, Medical Lab Technology	MAT 105	D

# GRADUATE ADMISSION

## STATEMENT OF PURPOSE

Graduate Studies at NDU promote humanistic, ethical, and spiritual values in order to enhance intellectual inquiry and awareness of human integrity and solidarity. In addition, the graduate program seeks to develop the mental, physical and spiritual potential of its student body. NDU also seeks to enhance these values through liberal education and career preparation that caters to the needs of Lebanon and the region.

### Admission Procedures

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

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

Only complete files will be studied.

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

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

### Required Documents

Applicants whose undergraduate degree is from NDU must submit:

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

Applicants from NDU are not required to take the English Entrance Test. Applicants who must sit for the EET at NDU should abide by the examination dates as they are specified for undergraduate applicants in The Admissions Guide.

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

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

- Two letters of recommendation;
- The official GMAT examination score.

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

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

### **Other Requirements**

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

## **TYPES OF ADMISSION**

### **Regular Admission**

Regular Admission is granted to those applicants who have fulfilled all undergraduate admission requirements. The minimum required cumulative GPA is 3.0 out of 4.0.

### **Conditional Admission**

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

### **Prospective Applicants**

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

### **Transfer Applicants**

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

Normally, a maximum of 9 transfer credits from previous work completed at another accredited institution of higher education is permitted upon the discretion of the Faculty Evaluation Committee. The course content and quality must correspond to the NDU course

description as required for the requested major. The minimum score of each course must be “B” or its equivalent. Transfer credits are not computed in the Cumulative GPA but marked “Transfer”.

### **International Applicants**

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

### **Non-degree Applicants**

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

## **READMISSION**

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

# ACADEMIC RULES AND REGULATIONS (UNDERGRADUATE)

## STUDENT CLASSES

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

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

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

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

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

## FULL-TIME STUDENTS

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

## PART-TIME STUDENTS

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

## SPECIAL STUDENTS OR NON-DEGREE STUDENTS

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

## TRANSFER STUDENTS

Only, transfer applications for students at the Sophomore level or above are considered for acceptance. These students must have completed at least 12 credits with a cumulative GPA of 2.0/4.0 beyond their secondary school education. Courses on which students scored “C”

and above will be counted towards their degree, provided they are equivalent in quality to the courses given at NDU. Nonetheless, only courses taken at NDU will be computed in the GPA.

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

Freshman students are considered ineligible for transfer.

## **AUDITORS**

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

## **HOURS OF CLASSES**

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

## **ATTENDANCE POLICY**

Students should attend all classes. A pattern of absences may affect a student's grade substantially. The Class Instructor, in full coordination with the Department Chair, is the direct authority responsible for the implementation of the Attendance Policy. The SAO only validates absences related to University events, travel, or medical excuses upon need and only when requested by the Department Chair. The student is responsible for the material presented during his/her absence. The maximum number of absences for classes that meet on MWF is six and for those that meet the TTH and in Summer is four, (or two hours per credit course). Any student whose absences exceed the maximum limits shall automatically be unofficially withdrawn from the course, unless he or she withdraws.

## **EXAMINATIONS AND QUIZZES**

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

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

Final examinations shall count for a maximum of 40% of the final grade. Those exams should be comprehensive by nature. The remaining 60% account for quizzes, progress projects, tests, term papers and other requirements as specified by the respective

department. A minimum of 40% of the course evaluation should be known by students prior to the official withdrawal deadline.

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

### **FINAL EXAMINATION MAKE-UP**

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

### **GRADED FINAL EXAMINATION PAPER**

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

### **FINAL GRADES**

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

### **RECORD BOOK OR BLUE BOOK**

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

### **TRANSCRIPTS**

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

### **CHANGE OF GRADE**

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

Under justifiable circumstances, the student may petition the Faculty Dean concerned for a change of grade within 5 working days from the processing of the final grades of the course

by the Office of the Registrar. Only under **force majeure** would a student's case be considered beyond those five days.

To change a grade, the instructor of the course should fill in and sign an official change-of-grade form, which can be obtained from the Registrar's Office. All supporting documents including the instructor's record book should be attached to the form. Once the new grade is approved by the department's Chairperson, it is forwarded to the Faculty Dean for final action and then resubmitted to the Office of the Registrar.

## **CHANGE OF PROVISIONAL GRADE**

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

## **GRADES FOR REPEATED COURSES**

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

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

## **GRADES UPON CHANGE OF MAJOR**

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

## SYSTEM OF GRADES

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

Grade	Description	Quality Point Value	Percentage Equivalent
A <sup>+</sup>	Outstanding	4.0	97-100
A	Excellent	4.0	93 - 96
A <sup>-</sup>	Very Good	3.7	89 - 92
B <sup>+</sup>	Good	3.3	85 - 88
B	Good	3.0	80 - 84
B <sup>-</sup>	Good	2.7	77 - 79
C <sup>+</sup>	Satisfactory	2.3	73 - 76
C	Satisfactory	2.0	70 - 72
C <sup>-</sup>	Passing	1.7	66 - 69
D <sup>+</sup>	Passing	1.3	63 - 65
D	Lowest Passing	1.0	60 - 62
F	Failure	0.0	0 - 59
UW	Unofficial Withdrawal	0.0	

The grade “**UW**” is assigned by the instructor when a registered student has never attended a class or has ceased attending and has not submitted an official course withdrawal request to the Office of the Registrar. This grade is computed as an “**F**” grade in the GPA.

<b>W</b>	Official Withdrawal	The grade “ <b>W</b> ” indicates withdrawal without academic penalty. This grade is issued by the Office of the Registrar only to students submitting an official course withdrawal form by the scheduled deadline. The grade “ <b>W</b> ” is not computed in the student’s GPA and may not be changed to any other grade under any circumstances.
<b>PR</b>	Progress, Re-enroll	The grade “ <b>PR</b> ” is a provisional grade, and hence it is not computed in the student’s GPA. It is used to reflect progress on continuing research efforts for the senior study or the senior research or design project until it is completed. If this provisional grade is unresolved by the end of the following semester, the Office of the Registrar will automatically convert it to the grade of “ <b>F</b> ” and it will be computed in the student’s GPA.
<b>U</b>	Audit	The grade “ <b>U</b> ” indicates that the individual was an auditor or listener in the course. This does not have any quality point value, and hence it is not computed in the student’s GPA. Neither the credits nor a written statement can be given for a class audited, and no instructor is authorized to admit anyone as an auditor to any of his/her classes unless the individual has registered as such.

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

## GRADE-POINT AVERAGE

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

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

The GPA of the five courses would then be:

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

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

be transferred. Thus, the cumulative GPA is an average of all the credit hours attempted by the student at NDU.

## **ACADEMIC STANDING**

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

### **Good Academic Standing**

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

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

### **Academic Probation**

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

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

### **Academic Suspension**

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

Students placed on suspension may consider the following options:

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

**OR**

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

## Academic Dismissal

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

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

## ACADEMIC RECOGNITION

There are two kinds of academic recognition:

### 1. Dean's Honor List:

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

### 2. Graduation with Distinction:

An undergraduate student with high academic achievement will graduate with:

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

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

## ACADEMIC INTEGRITY

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

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

## **Penalties of Academic Dishonesty**

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

- Failure in an assignment or a course;
- Suspension from the University for the remainder of the semester. The student will receive from the Registrar, a notice forbidding him/her, for the specified semester to occupy any portion of the University premises, and denying him/her all University privileges, including class attendance. Suspension becomes effective immediately upon receipt of the notice. There is no refund of fees for the semester in which the action is taken, but any fees paid in advance for a subsequent semester are refunded. Following the expiration of the term of suspension, the student shall be enrolled under probation for one regular semester or Summer session;
- Suspension for additional period. The total duration of the suspension should not exceed one academic year;
- Dismissal from the University. The student will receive from the Registrar a written notice which permanently terminates his/her student status. The same policy will be followed regarding notification and the refund of fees as in the case of suspension.

## **Reporting Academic Dishonesty**

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

## **CHANGE OF MAJOR**

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

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

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

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

## **3. By University Action**

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

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

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

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

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

## **GRADUATION REQUIREMENTS**

### **Degree Requirements**

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

1. Completing all required credits for the degree.
2. Fulfilling satisfactorily all course requirements for the degree as well as remedial/intensive courses given upon admission.
3. Fulfilling all other admission requirements.
4. Maintaining at least a 2.0/4.0 cumulative GPA for the degree.
5. Satisfying the residency requirements for the degree.
6. Maintaining the required minimum cumulative GPA for the major and core courses required for the degree, as specified by the concerned Department.
7. Maintaining good academic discipline.
8. Settling all accounts with the University.

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

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

## **Second Degree Requirements**

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

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

## **TEACHING DIPLOMA REQUIREMENTS**

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

## **TEACHING CERTIFICATE REQUIREMENTS**

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

## **GRADUATION CHECK LIST**

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

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

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

## **CONFERRING OF DEGREES**

Degrees are conferred three times a year, at the end of Fall, Spring, or Summer session.

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

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

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

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

## **RESIDENCY REQUIREMENTS**

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

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

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

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

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

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

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

## **PARTICIPATION IN COMMENCEMENT EXERCISES**

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

## **COURSE DESIGNATION**

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

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

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

##### **Department of Architecture**

ARP	-	Architecture
MLU	-	Landscape Urbanism

##### **Department of Design**

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

##### **Department of Music**

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

##### **Fine Arts Programs**

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

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

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

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

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

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

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

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

## **Faculty of Engineering**

ENG	-	Engineering
-----	---	-------------

### **Department of Civil and Environmental Engineering**

CEN	-	Civil Engineering
-----	---	-------------------

### **Departments of Electrical and Computer and Communication Engineering**

EEN	-	Electrical Engineering
-----	---	------------------------

### **Department of Mechanical Engineering**

MEN	-	Mechanical Engineering
-----	---	------------------------

## **Faculty of Humanities**

### **Department of English, Translation and Education**

CHI	-	Chinese
EDU	-	Education
ENL	-	English
FRC	-	French
GEM	-	German
INT	-	Interpretation
ITL	-	Italian
LIR	-	Literature

LTN	-	Latin
PES	-	Physical Education and Sports
SPA	-	Spanish
SYR	-	Syriac
TRA	-	Translation

**Department of Mass Communication**

ADM	-	Advertising
COA	-	Communication
JOU	-	Journalism

**Department of Social and Behavioral Sciences**

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

**Faculty of Natural and Applied Sciences**

**Department of Computer Science**

CSC	-	Computer Science
GIS	-	Geographic Information Systems
MIS	-	Management Information Systems

**Department of Mathematics and Statistics**

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

**Department of Physics and Astronomy**

AST	-	Astronomy
PHS	-	Physics

**Department of Sciences**

BIO	-	Biology
CHM	-	Chemistry
ENS	-	Environmental Science
GEO	-	Geology

## Faculty of Nursing and Health Sciences

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

## Faculty of Political Science, Public Administration and Diplomacy

### Department of International Affairs and Diplomacy

IAF	-	International Affairs and Diplomacy
INL	-	International Law

### Department of Public Administration

CJS	-	Criminal Law
PAD	-	Public Administration

### Department of Political Science

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

## B. Digits of a Course Number

The following digits are used as follows:

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

### C. Course Number, Title and Credits

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

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

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

### D. Course Prerequisite and Corequisite

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

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

# UNDERGRADUATE REGISTRATION

## Academic Advising

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

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

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

## Registration Eligibility

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

## Registration

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

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

New students should register at the Advisor's Office.

## Registration by Abstentia

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

## **Late Registration**

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

## **Cross-Registration**

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

## **Improper Registration**

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

## **Changes in Registration**

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

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

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

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

## **Withdrawal From Courses**

1. In accordance with the University Refund Policy, students may officially withdraw from courses without academic penalty by the late registration day. In this case no grades will be inscribed on their record. They may also withdraw any time prior to the 14<sup>th</sup> week of the Fall or Spring semesters and before the 28<sup>th</sup> day of the Summer session. Then a grade of “**W**” will be inscribed on their records.
2. Withdrawal after the deadline will result in an “**F**” or “**UW**” on the dropped course. No withdrawal is allowed beyond this period unless the student petitions to the Dean concerned, due to urgent reasons. Once the petition is approved, the Registrar will then be instructed by the VP for Academic Affairs to assign the grade “**W**” on the dropped course(s).

## **Attendance after Withdrawing**

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

## **Student Reinstatement**

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

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

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

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

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

# **STUDENT ACADEMIC LOAD**

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

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

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

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

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

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

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

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

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

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

**Maximum Load for Students with Cross-Registration**

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

## TUITION AND FEES

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

### Tuition

Tuition/Credit Hour (Engineering or Architecture)	LBP	475,000
Tuition /Credit Hour (All Others)	LBP	405,000
Tuition/Intensive English	LBP	3,925,000
Tuition /Credit Hour (Auditing)	LBP	75% of credit tuition

### Fees

Admission Application	LBP	100,000
Entrance Examination	LBP.	75,000 per exam
Late Registration	LBP	100,000
Petition	LBP	5,000
Change of Major	LBP	100,000
Make-up Final Examination Fee/Incomplete	LBP	200,000
Transcript (Official Copy)	LBP	10,000
Transcript (Student Copy)	LBP	5,000
Library Fee/Book /Day (Late Returns)	LBP	2,500
Graduation	LBP	50,000
Medical Insurance	LBP	50,000
Academic Fees	LBP	150,000
Smart ID Card (when applicable)	LBP	30,000
NSSF Fees (when applicable)	LBP	202,500

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

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

### Refund Policy

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

- During drop/add period, 75% of the tuition is refunded;
- During the first week of classes, 50% of the tuition is refunded;
- Tuition is not refunded after the first week of classes;

- Refund policy does not apply during summer session. No refund of tuition is made for any withdrawal during summer session.

### **Financial Support for Re-enrolled courses**

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

## **UNDERGRADUATE ACADEMIC MINORS**

### **RATIONALE**

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

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

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

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

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

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

#### **Eligibility for Minors**

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

#### **Declaring Minors**

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

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

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

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

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

#### **Withdrawing from Minors**

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

### **Students on Probation**

Students on probation cannot declare minors.

### **Passing Grades and GPAs for Minors**

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

### **Overall GPA**

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

### **Minor Courses and Graduate Studies**

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

### **Graduation and Minors**

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

### **Recognition of Minors by the University**

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

### **Additional Requirements**

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

# **ACADEMIC RULES AND REGULATIONS (GRADUATE)**

## **CROSS-REGISTRATION**

Students enrolled at NDU may take courses at other recognized institutions of higher education.

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

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

### **Students enrolled at other recognized institutions of higher education may take courses at NDU.**

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

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

## **AUDITING**

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

## **TUTORIALS**

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

## **COURSE/PROGRAM CHANGES**

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

## **SUPERVISION**

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

## **COURSES AND GRADES**

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

### **Graduate Level Courses**

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

### **Remedial Courses**

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

## **PROBATION AND DISMISSAL**

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

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

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

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

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

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

## **COMPREHENSIVE EXAMINATION**

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

## **THESIS**

In partial fulfillment of the requirements for the master's degree, a student must submit a thesis, when applicable, based on results of original and independent research. Except in departments or programs in which the medium of instruction is not English, the thesis must be in English.

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

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

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

### **Thesis Committee**

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

### **Thesis Defense**

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

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

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

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

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

## Deadlines

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

## PROVISIONS FOR THE MASTER'S DEGREE

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

### Course Requirements

Two types of Master's degree programs are available:

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

### Language Requirements

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

### Residency Requirements

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

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

## GRADING SYSTEM

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

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

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

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

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

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

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

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

## **ATTENDANCE POLICY**

Classes are held from Monday to Friday. Graduate courses are offered in the afternoon as of 5:30 p.m..

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

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

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

## **ACADEMIC ADVISOR**

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

## **ACADEMIC HONESTY POLICY**

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

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

## **ACADEMIC STANDARDS**

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

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

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

## **WITHDRAWAL POLICIES**

### **Leave of Absence**

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

### **Withdrawal from courses**

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

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

### **APPLICATION FOR GRADUATION**

Students who expect to graduate must complete and submit the Application for Graduation to the Office of the Registrar. Degrees earned during any semester or summer will be awarded only at the following commencement exercises. Commencement is held once a year.

### **PARTICIPATION IN COMMENCEMENT EXERCISES**

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

### **SUMMER SESSION**

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

### **GRADUATE RESEARCH ASSISTANTSHIP POLICY**

#### **Preamble**

In accordance with the mission, vision, core values, and strategic goals of 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.

#### **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.

#### **Types of SRAA**

Students who qualify for a SRAA are of two types:

1. **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.
2. **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.

### **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.

### **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.

### **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.

### **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 body concerned 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.

### **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.

### **Compensation for a SRAA**

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

# **GRADUATE REGISTRATION**

## **REGISTRATION PROCESS**

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

### **Payment of Fees**

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

### **Consultation with Academic Advisors**

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

## **COURSE LOAD**

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

## **AUDITING**

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

## **DISCLOSURE OF STUDENTS' RECORDS**

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

## TUITION AND FEES

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

### Tuition

Tuition per Credit Hour	LBP	565,000
Tuition/Credit Hour (Remedial)	LBP	500,000
Auditing per Credit Hour per Semester	LBP	75% of credit tuition

### Fees

Admission Application	LBP	150,000
Entrance Examination (when applicable)	LBP	75,000
Late Registration	LBP	100,000
Petition	LBP	5,000
Change of Major	LBP	100,000
Make-up Final Examination Fee/Incomplete	LBP	200,000
Transcript (Official Copy)	LBP	10,000
Transcript (Student Copy)	LBP	5,000
Library Fee/Book /Day (Late Returns)	LBP	2,500
Graduation	LBP	50,000
Medical Insurance	LBP	50,000
Academic Fees	LBP	150,000
Smart ID Card (when applicable)	LBP	30,000
NSSF Fees (when applicable)	LBP	202,500

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

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

## REFUND POLICY

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

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

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

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

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

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

- SLU tuition fees will be paid directly by the student to Saint Louis University according to the deadlines specified by SLU.
- NDU tuition fees will be paid directly by the students to Notre Dame University-Louaize according to the deadlines specified by NDU.

### **Tuition**

Tuition per Credit Hour	LBP	580,000
-------------------------	-----	---------

# GER, FRESHMAN PROGRAM AND DEGREES

## GENERAL EDUCATION REQUIREMENTS (GER)

A set of 27–33 credits in interdisciplinary courses, called General Education Requirements (GER), as a foundation for a liberal arts and basic science education. These GER shall be distributed as follows:

### A. Communication Skills in English and Arabic 9 cr.

English (6 cr.)

ENL 213: Sophomore English Rhetoric

**And**

ENL 223: Communication Arts

**Or**

ENL 230: English in the Workplace

Arabic (3 cr.) One course from:

ARB 211: Appreciation for Arabic Literature

ARB 212: Advanced Arabic Grammar

ARB 224: Arabic Literature and Human Thought

ARB 231: Technical Arabic

ARB 317: Themes of Modern Arabic Literature in Lebanon (20th century)

### B. Philosophy and Religion 6 cr.

Religion (3 cr.)

REG 213: Catholicism

REG 212: Religion and Social Issues

REG 314: Marriage and Family in the Catholic Church

REG 313: The Maronites: Faith and Cultural Heritage

Philosophy + Ethics

PHL 211: Logic and the Scientific Method

PHL 311: Ethics and the Modern World

POS 345: Ethics and Leadership

ENS 205: Environment, Society and Ethics

### C. Cultural Studies and Social Sciences 6 cr.

Cultural Studies

HUT 305: Human Thought to 1500

HUT 306: Human Thought from 1500 to the Present

MUS 210: Music Appreciation

FAP 215: Art and Culture

ARP 215: Cultural Themes in Lebanese Ach.

COA 359: Media and Society

COA 315: World Cinema Survey

LIR 214: Introduction to Literary Genres

NTR 215: Foods and Nutrition of World Cultures

Social Sciences

PSL 201: Introduction to Psychology

SOL 201: Introduction to Sociology

SOL 301: Introduction to Anthropology

BAD 201: Fundamentals of Management

ECN 200: Survey of Economics

ECN 211: Principles of Micro Economics  
ECN 212: Principles of Macro Economics

**D. Citizenship**

**6 cr.**

Two courses from the following pool:

HIT 211: History of Lebanon and the Middle East  
POS 201: Introduction to Political Science  
POS 210: Government and Politics in Lebanon  
POS 240: Law and Society  
POS 319: Democracy and Human Rights  
POS 337: Dialogue of Civilizations  
IAF 301: Modern Political Ideologies

**E. Science and Technology**

**6 cr.**

Mathematics/Statistics/Computer Science (3 cr.)

CSC 201: Computer and Their Use  
MAT 201: Fundamentals of Mathematics  
MAT 202: Mathematics for Arts  
MAT 204: Mathematics for Business & Eco. I  
MAT 211: Discrete Mathematics  
STA 202: Statistics for Humanities  
STA 210: Statistics for Business & Eco.

Natural Sciences (3 cr.)

PHS 211: Principles of Physics  
PHS 207: Development of Science and Technology  
AST 201: Discovering Astronomy  
CHM 211: Principles of Chemistry  
ENS 201: Introduction to Environmental Science  
ENS 202: Environment and Sustainable Development  
ENS 206: Ecotourism  
BIO 202: Mystery of Life  
BIO 203: Discover Biology  
HEA 201: Health Awareness  
NTR 201: Basic Human Nutrition

## FRESHMAN PROGRAM

1. A student entering the Freshman Program at NDU as Freshman is required to complete a minimum of 30 credits. He/She has to follow either the Arts or the Science program.
2. The Freshman Program includes courses from the following areas: (Arts and Science)
  - Humanities and Social Sciences 9crs.  
(a minimum of 3crs. in each area)
  - Natural Sciences and Mathematics 6crs.  
(a minimum of 3 crs. in Natural Sciences)
3. Freshman students cannot be considered sophomore students unless they have completed 30 crs. of Freshman courses successfully.
4. In exceptional cases, the Equivalency Committee in the Lebanese Ministry of Education will give the permission to the freshman student who misses one course or 5 credits from the freshman requirements, to register in sophomore courses, on condition he/she registers for the missing freshman course and passes it successfully.
5. Freshman students cannot register in sophomore courses without having this prior authorization.
6. According to the regulations of the Lebanese Ministry of Education the above mentioned areas include the following subjects:
  - Humanities: Languages, Literature, Philosophy, History;
  - Social Sciences: Psychology, Sociology, Anthropology, Economics, Geography, Business Administration, Management, Political Studies;
  - Natural Sciences: Biology, Chemistry, Physics, Geology, Astronomy, Nutrition;
  - Mathematics;
  - Computer Science;
  - Arts: Art-Music-Drama (not to exceed 3 credits).

## DEGREES OFFERED

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

Bachelor of Architecture .....	182 credits
Bachelor of Arts in Interior Design .....	136 credits
Bachelor of Arts in Graphic Design.....	102 credits
Bachelor of Arts in Fashion Design.....	102 credits
Bachelor of Arts in Photography .....	102 credits
*Bachelor of Arts in Fine Arts.....	102 credits
*Bachelor of Arts in Performing Arts.....	102 credits
*Bachelor of Arts in Decorative Arts & Crafts.....	102 credits
*Bachelor of Arts in Choreography & Dance.....	102 credits
*Bachelor of Arts in Theater Arts .....	102 credits
Bachelor of Arts in Music and Musicology – Musicology.....	99 credits
Bachelor of Arts in Music and Musicology – Music Education.....	99 credits
Bachelor of Arts in Music and Musicology – Musimedialogy .....	99 credits
Bachelor of Arts in Music and Musicology – Arabic Musicology.....	99 credits
Bachelor of Arts in Music and Musicology – Jazz Music .....	99 credits
*Master of Arts in Fine Arts .....	36 credits
*Master of Architecture in Landscape Urbanism.....	36 credits
Master of Arts in Design.....	36 credits
Master of Arts in Music.....	36 credits

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

Bachelor of Business Administration - <i>Accounting</i> .....	106 credits
Bachelor of Business Administration - <i>Banking &amp; Finance</i> .....	106 credits
Bachelor of Business Administration - <i>Economics</i> .....	106 credits
Bachelor of Business Administration - <i>Int'l Business Management</i> .....	107 credits
Bachelor of Business Administration - <i>Marketing</i> .....	106 credits
Bachelor of Business Administration .....	106 credits

With the following emphasis:

<i>Distribution and Logistics Management</i> .....	106 credits
<i>Financial Engineering</i> .....	106 credits
<i>Health Care Management</i> .....	106 credits
<i>Human Resources Management</i> .....	106 credits
<i>Management</i> .....	106 credits

Bachelor of Hotel Management and Tourism.....	103 credits
---	-------------

With the following emphasis:

<i>Food &amp; Beverage</i> .....	104 credits
<i>Hospitality Management</i> .....	103 credits
<i>Travel &amp; Tourism Management</i> .....	103 credits
<i>Hospitality Evenst Management</i> .....	103 credits

Master of Business Administration (M.B.A.) .....	39 credits
--	------------

With the following emphasis:

<i>Finance &amp; Economics</i> .....	39 credits
<i>Human Resources Management</i> .....	39 credits
<i>Management &amp; Marketing</i> .....	39 credits
<i>Project &amp; Operations Management</i> .....	39 credits

### Faculty of Engineering (FE)

Bachelor of Engineering in Civil Engineering .....	150 credits
Bachelor of Engineering in Computer and Communication Engineering .....	150 credits

Bachelor of Engineering in Electrical Engineering .....	150 credits
Bachelor of Engineering in Mechanical Engineering .....	150 credits

**Faculty of Humanities (FH)**

Bachelor of Arts in Education .....	105 credits
With the following emphasis:	

<i>Early Childhood</i> .....	105 credits
<i>Learning Disabilities</i> .....	105 credits
<i>Education of the Gifted</i> .....	105 credits

Bachelor of Arts in Education - Basic Education....	99credits+ TD=120credits
---	--------------------------

Bachelor of Arts in Communication Arts .....	
--	--

With the following emphasis:

<i>Radio/TV</i> .....	103 credits
<i>Journalism</i> .....	102 credits

Bachelor of Arts in Advertising & Marketing .....	102 credits
---	-------------

Bachelor of Arts in Psychology .....	
--------------------------------------	--

With the following emphasis:

<i>Clinical</i> .....	97 credits
<i>Educational</i> .....	97 credits
<i>Industrial</i> .....	97 credits

*Bachelor of Arts in Arabic Language & Literature .....	103 credits
---	-------------

Bachelor of Arts in English Language.....	102 credits
---	-------------

Bachelor of Arts in Translation & Interpretation .....	108 credits
--	-------------

With the following emphasis:

<i>Translation</i> .....	108 credits
<i>Interpretation</i> .....	108 credits

Bachelor of Arts in Physical Education & Sport	99 credits + TD=120 credits
--	-----------------------------

Teaching Certificate .....	18 credits
----------------------------	------------

Teaching Diploma in Arabic Language and Literature.....	18 credits
---	------------

Teaching Diploma in Basic Education .....	21 credits
---	------------

Teaching Diploma in Biology .....	21 credits
-----------------------------------	------------

Teaching Diploma in Chemistry.....	21 credits
------------------------------------	------------

Teaching Diploma in Computer Science .....	21 credits
--	------------

Teaching Diploma in English Language .....	18 credits
--	------------

Teaching Diploma in Mathematics .....	21 credits
---------------------------------------	------------

Teaching Diploma in Physics .....	21 credits
-----------------------------------	------------

Teaching Diploma in Physical Education .....	21 credits
--	------------

Teaching Certificate in Arabic Language and Literature.....	18 credits
---	------------

Master of Arts in English Language & Literature .....	36 credits
---	------------

With the following emphasis:

<i>Applied Linguistics and TEFL</i> .....	36 credits
<i>Literature</i> .....	36 credits

*Master of Arts in Arabic Language & Literature .....	30 credits
---	------------

Master of Arts in Translation.....	36 credits
------------------------------------	------------

Master of Arts in Media Studies .....	39 credits
---------------------------------------	------------

With the following emphasis:

<i>Electronic Media</i> .....	39 credits
<i>Journalism</i> .....	39 credits
<i>Advertising</i> .....	39 credits

Master of Arts in Education.....	36 credits
----------------------------------	------------

With the following emphasis:

<i>School Leader's Options</i> .....	33 credits
Master of Arts in Psychology – Educational Psychology .....	36 credits

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

Bachelor of Science in Computer Science .....	94 credits
Bachelor of Science in Computer Science - <i>Information Technology</i> .....	94 credits
Bachelor of Science in Computer Science- <i>Computer Graphics and Animation</i> ..	94 credits
Bachelor of Science in Actuarial Science .....	94 credits
Bachelor of Science in Mathematics .....	94 credits
Bachelor of Science in Biology .....	92 credits
Bachelor of Science in Environmental Science .....	92 credits
Bachelor of Science in Chemistry .....	92 credits
Bachelor of Science in Business Computing .....	94 credits
Bachelor of Science in Business Computing- <i>Management Information Systems</i> .....	94 credits
Bachelor of Science in Geographic Information Systems .....	91 credits
*Bachelor of Science in Applied Statistics .....	90 credits
Bachelor of Science in Physics .....	95 credits
Master of Science in Biology .....	36 credits
Master of Science in Computer Science .....	30 credits
Master of Science in Mathematics .....	33 credits
Master of Science in Financial Mathematics .....	33 credits
Master of Science in Astrophysics .....	36 credits

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

Bachelor of Science in Medical Laboratory Technology .....	103 credits
Bachelor of Nursing .....	105 credits
Bachelor of Science in Nutrition and Dietetics .....	95 credits

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

Bachelor of Arts in Political Science .....	105 credits
With the following emphasis:	
<i>NGOs</i> .....	105 credits
Bachelor of Arts in Political Science - <i>American Studies</i> .....	105 credits
Bachelor of Arts in Political Science - <i>Euro-Mediterranean Studies</i> .....	105 credits
Bachelor of Arts in International Affairs & Diplomacy .....	105 credits
Bachelor of Arts in Public Administration .....	105 credits
Master of Arts in Political Science .....	36 credits
With the following emphasis:	
<i>NGOs</i> .....	36 credits
<i>Human Rights</i> .....	36 credits
Master of Arts in International Affairs & Diplomacy .....	36 credits
With the following emphasis:	
<i>International Law</i> .....	36 credits
Master of Arts in Public Administration .....	36 credits

\*These degree programs haven't had student enrollment over the last 3-4 years.



**FACULTY OF  
ARCHITECTURE, ART  
AND DESIGN  
(FAAD)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

El Asmar, Jean-Pierre, Ph.D.  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 311  
Tel: 09-218950/1/2 (Extension 2065), Direct line: 09-208608  
E-mail: jasmarr@ndu.edu.lb

Younes, Janane, Administrative Assistant  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 315  
Tel: 09-218950/1/2 (Extension 2073), Direct line: 09-208601  
E-mail: faad@ndu.edu.lb  
jyounes@ndu.edu.lb

### **Department of Architecture**

Gabriel, Nicolas, Doctorate, Chairperson  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 303  
Tel: 09-218950/1/2 (Extension 2033), Direct line: 09- 208616  
E-mail: ngabriel@ndu.edu.lb

Sarkis, Diane, Secretary  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 304  
Tel: 09-218950/1/2 (Extension 2066), Direct line : 09-208603  
E-mail: architecture@ndu.edu.lb  
dsarkis@ndu.edu.lb

### **Architecture Program Advisors**

Melki, Habib, M.Arch.  
Yellow Building, 3<sup>rd</sup> floor, Room HB 307  
Tel: 09-218950/1/2 (Extension 2072), Direct line: 09-208600  
E-mail: hmelki@ndu.edu.lb

Younes, Farid, Ph.D.  
Yellow Building, Room HB 203  
Tel: 09-218950/1/2 (Extension 2034), Direct line: 09-208617  
E-mail: fyounes@ndu.edu.lb

El-Hage, Gabriel, Doctorate  
Grey Building, Room E 304  
Tel: 09-218950/1/2 (Extension 2035), Direct line: 09-208611  
E-mail: gelhage@ndu.edu.lb

Zgheib, Hani, Doctorate  
Yellow Building, Room HB 230  
Tel: 09-218950/1/2 (Extension 2061), Direct line: 09-208627  
E-mail: hzgheib@ndu.edu.lb

Baroud, Dina. M.Arch  
Yellow Building, Room HB 225  
Tel: 09-218950/1/2 (Extension 2681), Direct line: 09-208623  
E-mail: dbaroud@ndu.edu.lb

Bou Jaoudeh Khoury, Karen, MBA.  
Yellow Building, Room HB 231  
Tel: 09-218950/1/2 (Extension 2357), Direct line: 09-208119  
E-mail: kaboujaoudeh@ndu.edu.lb

Bteich, Chady, M.Arch.  
Yellow Building, Room HB204  
Tel: 09-218950/1/2 (Extension 2318), Direct line: 09-208620  
E-mail: cbteich@ndu.edu.lb

Chartouni, Joseph, M.Arch.  
Yellow Building, Room HB 225  
Tel: 09-218950/1/2 (Extension 2681)  
E-mail: jchartouni@ndu.edu.lb

Jabbour, Layla, DESS.  
Yellow Building, Room HB 202  
Tel: 09-218950/1/2 (Extension 2068), Direct line: 09-208623  
E-mail: ljabbour@ndu.edu.lb

Mouawad, Paul, M.S.  
Yellow Building, HB 225  
Tel: 09-218950 (Extension 2681)  
E-mail: paul.mouawad@ndu.edu.lb

Samra, Kristine, DESS.  
Yellow Building, HB 228  
Tel: 09-218950 (Extension 2083)  
E-mail: ksamra@ndu.edu.lb

### **Department of Design**

Kortbawi, John, Post Graduate Diploma, Chairperson  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 301  
Tel: 09-218950/1/2 (Extension 2069), Direct line: 09-208614  
E-mail: jkortbawi@ndu.edu.lb

Dib, Adelle, Secretary  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 306  
Tel: 09-218950/1/2 (Extension 2037), Direct line: 09-208605  
E-mail: design@ndu.edu.lb  
ekfoury@ndu.edu.lb

### **Interior Design Program Advisors**

Haddad, Robert, MFA  
Yellow Building, HB 309  
Tel: 09-218950/1/2 (Extension 2071), Direct line: 09-208613  
E-mail: rhaddad@ndu.edu.lb

Bechara, André, M.A.  
Yellow Building, Room HB 309  
Tel: 09-218950/1/2 (Extension 2070), Direct line: 09-208609  
E-mail: abechara@ndu.edu.lb

Akl, Salim, DES  
Yellow Building, Room HB 215  
Tel: 09-218950/1/2 (Extension 2335)

E-mail: sakl@ndu.edu.lb

Chamoun, Marlyse, M.A.

Yellow Building, Room HB 210

Tel: 09-218950/1/2 (Extension 2075), Direct line: 09-208625

E-mail: mchamoun@ndu.edu.lb

Khalil, Marina, DES

Yellow Building, Room HB 228

Tel: 09-218950/1/2 (Extension 2320)

E-mail: mkhalil@ndu.edu.lb

### **Graphic Design Program Advisors**

Daghfal, Graziella, M.A.

Yellow Building, Room HB 205

Tel: 09-218950/1/2 (Extension 2223), Direct line: 09-208610

E-mail: daghfal@ndu.edu.lb

Matta, Nadim, M.A.

Yellow Building, Room HB 307

Tel: 09-218950/1/2 (Extension 2064), Direct line: 09-208618

E-mail: nmatta@ndu.edu.lb

Selwood-Choueiri, Linda, MS

Yellow Building, Room HB 235

Tel: 09-218950/1/2 (Extension 2067), Direct line: 09-208606

E-mail: lchoueiri@ndu.edu.lb

Zaccour, Danielle, DES

Yellow Building, Room HB 209

Tel: 09-218950/1/2 (Extension 2058), Direct line: 09-208619

E-mail: dzaccour@ndu.edu.lb

Nasr, Noel, MFA

Yellow Building, Room HB 236

Tel: 09-218950/1/2 (Extension 2055), Direct line: 09-208604

E-mail: nnasr@ndu.edu.lb

Soghman, Jacqueline, MFA

Yellow Building, Room HB 208

Tel: 09-218950/1/2 (Extension 2509), Direct line: 09-208626

E-mail: jkiwan@ndu.edu.lb

### **Fashion Design Program Advisor**

Selwood-Choueiri, Linda MS

Yellow Building, Room HB 235,

Tel: 09-218950/1/2 (Extension 2067), Direct line: 09-208606

E-mail: lchoueiri@ndu.edu.lb

### **Staff Assistants**

El-Haddad, Nicolas, Faculty Technician

Haddad, Liliane, Photography Lab Assistant.

Wheibe, Antoinette, Fashion Lab Assistant.

## **Department of Music**

Kesrouani, Elias (Fr.), Doctorate, Chairperson  
Yellow Building, 3<sup>rd</sup> Floor, Room HB 346  
Tel: 09-218950/1/2 (Extension 2190), Direct line : 09-208615  
E-mail: ekesrouani@ndu.edu.lb

Dib, Adelle, Secretary  
Yellow Building, 2<sup>nd</sup> Floor, Room HB 214  
Tel: 09-218950/1/2 (Extension. 2062), Direct line: 09-208607  
E-mail: music@ndu.edu.lb  
adib@ndu.edu.lb

## **Music Program Advisor**

Beyrouti, Lola, Doctorate  
Yellow Building, 2<sup>nd</sup> Floor, Room HB 238  
Tel: 09-218950/1/2 (Extension 2057), Direct line:.09-208624  
E-mail: lbeyrouthi@ndu.edu.lb

## **Department of Arts**

### **Coordinator and Program Advisor**

Zaccour, Danielle  
Yellow Building, 2<sup>nd</sup> Floor, Room HB 209  
Tel: 09-218-950/1/2 (Extension 2058), Direct line: 09-208619  
E-mail: dzaccour@ndu.edu.lb

## **FACULTY OF ARCHITECTURE, ART AND DESIGN (FAAD)**

---

<b>Professor:</b>	Kesrouani, Elias (Fr.)
<b>Associate Professors:</b>	El Asmar, Jean-Pierre; Haddad, Robert; Melki, Habib; Younes, Farid
<b>Assistant Professors:</b>	Beyrouti, Lola; Bechara, André ;Daghfal, Graziella; Kortbawi, John; El-Hage, Gabriel; Gabriel, Nicolas ; Matta, Nadim; Selwood-Choueiri, Linda; Zaccour, Danielle ; Zgheib, Hani
<b>Lecturers:</b>	Akl, Salim ; Baroud, Dina; Bou Jaoudeh Khoury, Karen; Bteich, Chadi; Chamoun, Marlyse; Chamoun, Claudine; Chartouni, Joseph; Jabbour, Layla; Khalil, Marina; Majdalani, Roula; Mouawad, Paul; Nasr, Noel; Samra, Kristine; Soghman, Jacqueline
<b>Lab Instructors:</b>	Akl, Charbel; Lawoun, Dolcy

---

# **FACULTY OF ARCHITECTURE, ART AND DESIGN (FAAD)**

## **OBJECTIVES**

On completion of their studies, the students are expected to:

- Be articulate, informed graduates who have knowledge and understanding of the arts and design in general and their chosen discipline in particular;
- Demonstrate the ability to think creatively, to conceptualize, plan and apply an inventive approach in resolving formal and technical issues;
- Have acquired a knowledge and understanding of materials, processes and technologies through involvement in theory and practice;
- Have developed the critical skills necessary to analyze and understand the cultural and social context of arts and design practice and an appreciation of cultural diversity;
- Demonstrate interpersonal skills and the ability to work independently or collaboratively within a group;
- Be able to effectively communicate ideas, information and argument in written, oral and visual forms;
- Have an awareness of the needs of the profession, the community and the economy and be responsive to a wide range of social and economic needs;
- Have an understanding of professional responsibility and accountability;
- Have acquired the specialist knowledge to enable effective contribution to commerce, industry or research;
- Maintain a commitment to continuing professional development and lifelong learning.

## **MISSION, VISION, AND VALUES**

### **Mission**

The Faculty of Architecture, Arts, and Design (FAAD) strives at promoting an academic milieu, for students from Lebanon and abroad, where design, arts, and architecture are the vectors of NDU's values. The range of programs offered by the various departments of FAAD is devised to foster an environment of intellectual inquisitiveness. Based on the American Liberal Arts system, FAAD will prepare its offspring (Musicians, Interior Designers, Graphic Designers, Fine Artists, Photographers, Fashion Designers, and Architects) to be the standard-bearers of NDU's moral, social, and academic values.

### **Vision**

The Faculty will strive to be the leading provider of professional programs in Arts and Design, and will deliver outstanding education/training programs and provide opportunities to develop high levels of creative ambitions and technical skills to enable students to play a dynamic role in continuing development. Students will learn to challenge conventional wisdom from an informed and constructive position and be encouraged to engage in self-directed approaches to the acquisition of knowledge and understanding. Supporting faculty members' involvement in research, professional practice, development of teaching and learning methodology are a must in order to establish a more scholarly and professional environment.

### **Values**

Educating our students to build their future does not solely rely on us providing them with the technical tools and learning material to pursue a career; on the contrary, we pride

ourselves in providing guidance to help individuals discover their own vision and thus become both professional and responsible.

On-campus interaction between NDU - FAAD faculty, staff, and students, is characterized by a mutual respect for long-held traditions as well as openness and acceptance of positive change and constructive criticism. One of our main values, is to foster a culturally diverse environment where everyone is treated according to their human values, regardless of religion, race, belief, or gender.

We encourage our students' active involvement in environmental educational and social issues and support them in their quest to make a genuine and lasting difference in their surroundings.

Our faith is part of our identity; this is why we rely on open communication and full cooperation to insure that every one's views and beliefs are respected at NDU in general and FAAD specifically. In order to maintain a healthy yet exciting learning environment while shaping principled individuals, we cherish these values as part of our educational identity and thus promote:

- Tolerance of all human beings regardless of background;
- Cooperation between all members of NDU to ensure personal and professional growth;
- Communication of views and beliefs within a positive and responsive environment;
- Diversity and cultural exchange devoid of prejudice and judgment.

## **FACULTY PROFILE**

The overall aim is to provide a comprehensive and flexible range of programs in response to the educational and professional needs of the local community, the region, national and international demand, and to secure the opportunity for personal and professional development in any of the following areas: Architecture, art, or design. In more specific terms:

- To help individuals develop their creative, intellectual, and technical abilities, and enhance their expertise to make an informed contribution to the cultural, technological, social, and economic needs of society in general;
- To foster fundamental learning and research skills coupled with an understanding of the historical, cultural, social, and commercial arena within which those engaged in architecture, arts, and design operate;
- To equip individuals for an array of career paths and changes in employment patterns, thus, promoting ingenuity, adaptability, and mobility;
- To enable students at all levels to deal flexibly with varied problems and tasks and technologies.

## ACADEMIC DEPARTMENTS AND PROGRAMS

The following departments and programs constitute the Faculty of Architecture, Art and Design:

- Department of Architecture
- Department of Design
- Department of Music
- Department of Arts

### Degrees

The Department of Architecture offers an undergraduate program leading to the degree of:

- Bachelor of Architecture (182 credits)  
and a graduate program leading to the degree of:
- Master of Architecture in Landscape Urbanism (36 credits)

The Department of Design offers undergraduate programs leading to the degrees of:

- B.A. in Graphic Design (102 credits)
- B.A. in Interior Design (136 credits)
- B.A. in Fashion Design (102 credits)
- B.A. in Photography (102 credits)

And a graduate program leading to the degree of:

- Master of Arts in Design (36 credits)

And Minors in the following fields:

- Minor in Graphic Design (18 credits)
- Minor in Photography (18 credits)

The Department of Music offers undergraduate programs leading to the degree of:

- B.A. in Music and Musicology
- Musicology emphasis (99 credits)
- Music Education emphasis (99 credits)
- Musimedialogy emphasis (99 credits)
- Arabic Musicology emphasis (99 credits)
- Jazz Music emphasis (99 credits)

And a graduate program leading to the degree of:

- Master of Arts in Music (36 credits)
- And a minor in Jazz (15 credits)

## **POLICIES AND PROCEDURES**

### **Admission Requirements:**

In addition to the University admission requirements, prospective candidates must complete any remedial course(s) the first year of enrollment. Students who fail to meet these requirements will not be allowed to proceed to their bachelor degree in the Faculty of Architecture, Art and Design.

### **General Education Requirements Courses (GER)**

The GER are distributed as follows:

**Communication Skills in English:** ENL 213 & ENL 223 or ENL 230

**Communication Skills in Arabic:** One course from ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

**Religion:** One course from REG 212, REG 213, REG 314, REG 313, REG 215

**Philosophy:** One course from PHL 211, PHL 311, POS 345, ENS 205

**Cultural Studies:** Two courses from HUT 305, HUT 306, PSL 201, SOL 201, SOL 301, SOL 313, MUS 210, FAP 215, BAD 201, ECN 200, ARP 215, COA 359, COA 315, NTR 215, ECN 211, ECN 212

**Citizenship:** One course from HIT 211, IAF 301, POS 201, POS 210, POS 240, POS 319, POS 337

**Science and Technology:** One course from AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, MAT 204, MAT 211, MIS 201, NTR 201, PHS 211, STA 202, STA 210, PHS 207

*CSC 201, CSC 202, MAT 201, and MAT 202 courses should not be taken by Architecture students*

## DEPARTMENT OF ARCHITECTURE

---

<b>Associate Professor:</b>	El-Asmar, Jean-Pierre; Melki, Habib; Younes, Farid
<b>Assistant Professor:</b>	El-Hage, Gabriel; Gabriel, Nicolas (Chair); Zgheib, Hani
<b>Lecturers:</b>	Baroud, Dina; Bteich, Chady; Bou Jaoudeh Khoury, Karen; Chartouni, Joseph; Jabbour, Layla Mouawad, Paul; Samra, Kristine

---

### The Degree of Bachelor of Architecture

#### Program Description

The BArch (Bachelor of Architecture) program, offered by the Department of Architecture of the FAAD, aims at:

- Providing the learner with the proper exposure to enhance reflective approach to design and foster students' critical thinking;
- Developing the intellectual and theoretical backgrounds of the students through the study of ancient, modern and contemporary history and theories of architecture;
- Increasing student's awareness with respect to environmental and social issues. This concern mainly focuses on the interrelated influence between the human being, the society, and architecture. Contributing in building-up an architectural epistemology;
- Preparing the learner for professional practice and post-graduate studies.

#### Graduation Requirements

To obtain the degree of bachelor of architecture, a student must complete a total of 182 credits with an overall GPA of at least 2.0/4.0 and a minimum cumulative GPA of 2.3/4.0 in the Core and Major requirements. In addition, all major courses must be successfully completed with a minimum grade of "C-". In addition, all Architectural Design courses (ARP 311, 322, 433, 444, 555, 556, 590, 591, and 593) must be successfully completed with a minimum grade of "C+".

Prior to enrolling into the ARP 590-Senior Study courses, student will have to fulfil the following requirements:

A minimum of 21 credits of their GERs must be completed prior to taking ARP 590.

Prerequisites: ARP 438, ARP 552, ARP 556, ARP 557, ARP 562

Students must have a minimum of 2.3 (C+) GPA in their cumulative major courses.

Courses CSC 201, MAT 201 and MAT 202 are not allowed for Architecture students.

These 182 credits are divided into:

#### Degree Requirements (182 credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>Core Requirements</b> FAP 211, GDP 212	<b>6 cr.</b>
<b>Major Requirements</b> ARP 221, ARP 222, ARP 223, ARP 224, ARP 225, ARP 226, ARP 233, ARP 301, ARP 311, ARP 313, ARP 316, ARP 317, ARP 322, ARP 324, ARP 325, ARP 327, ARP 328, ARP 424, ARP 425, ARP 433, ARP 434, ARP 435, ARP 438, ARP 444,	<b>143 cr.</b>

ARP 446, ARP 551, ARP 552, ARP 553, ARP 554, ARP 555, ARP 556, ARP 557, ARP 561, ARP 562, ARP 563, ARP 568, ARP 590, ARP 591, ARP 593

**Choose one course from the following Electives I:** ARP 564, ARP 565, ARP 566, ARP 567, ARP 568, ARP 569

**Choose two courses from the following Electives II:** ARP 422, ARP 423, ARP 439, ARP 581, ARP 582, ARP 583, ARP 584, ARP 585, ARP 586

## Free Electives

6 cr.

### Undergraduate Courses: Architecture

**ARP 213 Basic Technical Skills (2.2); 3 cr.** Using different art tools, devices, and materials. Preparing and presenting a portfolio.

**ARP 215 Cultural Themes in Lebanese Architecture (3.0); 3 cr.** Initiation to the Lebanese Art and Architecture pointing toward the conceptual determinants and constants omnipresent in the Lebanese Culture. A historical overview showing the morphological development through time.

**ARP 221 Architectural Sketching and Rendering (2.2); 3 cr.** The aim is to develop abilities in observation of the physical environment in a methodical and analytical manner. The skills are to be obtained through free-hand sketching and sketch-measuring using different media. *Prerequisite:* FAP 211.

**ARP 222 Principles of Architectural Design (2.2); 3 cr.** It is a continuation of GDP 212 with an emphasis on applying three dimensional design principles on architectural settings. The dynamics of motion, light, form, and space are also explored via readings and workshops. Another major topic of this course is the Spatial Analysis of natural and man-made environment and their graphical representation through Bubble diagrams, Site and Area analysis, photography, etc. *Prerequisite:* GDP 212 ARP 223.

**ARP 223 Descriptive Geometry (2.2); 3 cr.** Study of geometric projections in space. Emphasis on volumetric development, shade and shadow construction.

**ARP 224 Applied Architectural Design I (1.4); 3 cr.** The application of computer aided design (CAD) concepts in developing and communicating architectural ideas and projects. *Prerequisite:* ARP 311.

**ARP 225 Statics for Architecture (3.0); 3 cr.** Study of forces, moments and couples; free body diagrams; shear and bending moment diagram; centroids; moments of inertia; problems

involving beams, trusses, and frames. *Prerequisite:* MAT 112 if required

**ARP 226 Technical Drawing I (2.2); 3 cr.** The course is a studio based course. It aims at the development of students' graphic communication skills. Students will learn 2D as well as 3D techniques of drafting to describe objects of the man made and natural environment. The focus will be on survey of architecture, drafting to scale and rendering techniques, as well as professional sheet layout. *Prerequisites:* GDP 212, ARP 223

**ARP 233 3D Architectural Survey (1.2); 2 cr.** The objective of this course is to help students understand deeply and experiment why and how to construct architectural models of different scale and different kinds of materials. Students will plan and do research on the use, detail, budget, and techniques before starting construction.

**ARP 301 Technical Drawing II (2.2.); 3 cr.** A continuation of Technical Drawing I, with an emphasis on perspective as a powerful visualization tool for the Architect. The course covers the mechanical construction method same as One, Two and, Three vanishing points perspective. It also introduces the study of shadows (different light directions) and reflections in perspective. *Prerequisite:* ARP 226.

**ARP 311 Architectural Design I (3.4); 5 cr.** This course is the first in a sequential series of design courses. The main purpose of Architectural Design I is to acquaint student with basic Architectural problems, through the analysis of context and precedents. *Prerequisites:* ARP 221, ARP 222, ARP 226.

**ARP 313 History of Architecture I (3.0); 3 cr.** The main objectives of studying History of Architecture are the studying of the genesis of the aesthetic phenomena with respect to the human needs and understanding the development, the evolution, the impact of

different ideologies, the sequence and the innovations in Architecture through history pertaining to the "spirit of time". The History of Architecture I is a survey and analysis of the architectural production of antiquity: Prehistoric Architecture; Architecture of Egypt; Architecture of the Ancient Near East; Architecture of Greece; Architecture of the Hellenistic Kingdoms. *Corequisite:* ENL 213.

**ARP 316 Strength of Materials (3.0); 3 cr.** Study of materials' allowable constants; normal stresses due to axial loads and bending moments; shear stresses due to torque and shear; combined stresses; buckling of columns; discussion on real life examples. *Prerequisite:* ARP 225.

**ARP 317 Building Technology I (2.2); 3 cr.** A technical and cultural preparation, aiming at assisting the student in resolving technological problems in the design phase and an appropriate use of the different materials in building construction. *Corequisite:* ENL 213 and *Prerequisite:* ARP 226

**ARP 322 Architectural Design II (3.4); 5 cr.** A continuation of Architectural Design I. The understanding of environmental and residential design principles will be dealt with. Students are exposed to projects that will deal with tackling the appropriate methods in exploring and evaluating the different aspects of the design field. *Prerequisite:* ARP 311.

**ARP 324 History of Architecture II (3.0); 3 cr.** Continuation of History of Architecture I, the course covers the development of architecture from the 4th century BC to the 12th century AD. It covers the Architecture of Etruscans, Republican Rome and the Roman Empire; the Early Christian and the Byzantine Empire; the Early Mediaeval and Romanesque and the Architecture of Islam. *Prerequisite:* ARP 313.

**ARP 325 Applied Architectural Design II (1.4) 3 cr.** The application of 3D studio VIZ creating complex 3D representations, rendering and animation. *Prerequisite:* ARP224.

**ARP 327 Structural Analysis (3.0); 3 cr.** Analysis of structurally determinate and indeterminate structures; moving load structures, and approximate methods; modeling and analysis of structures; deflection of beams; discussion on real life examples. *Prerequisite:* ARP 316.

**ARP 328 Building Technology II (2.2); 3 cr.** The course closes with the learning and application of the technologies of building construction, aiming to assist students in the execution project. *Prerequisite:* ARP 317.

**ARP 422 Lighting Design and Electrical Systems (1.2); 2 cr.** Types of artificial light sources and the human eye. Production, measurement and control of light. Design of lighting systems. Electrical requirements and distribution in buildings and related execution problems. *Prerequisite:* ARP 328.

**ARP 423 Acoustics (1.2); 2 cr.** Analysis, design and detailing of acoustical factors influencing spaces and building design. *Prerequisite:* ARP 328.

**ARP 424 Bio-climatic Architecture (2.2); 3 cr.** Understanding of environmental aspects in Architectural Design and the focus on energy efficiency from the concept to the detailing stages concluded with market investigations that permit the evaluation and use of local materials. *Prerequisite:* ARP 322, ARP 328.

**ARP 425 Architectural Practice (1.2); 2 cr.** A supervised internship and lectures dealing with: business correspondence, building up the corporate image of the firm, dealing with tender bids and offers, duties, responsibilities, and fees of the different phases of a project. *Prerequisites:* ARP 328, ARP 552.

**ARP 433 Architectural Design III (3.6); 6 cr.** A continuation of Architectural Design II. This course deals with the contextual peculiarities of an existing structure (a traditional house, an industrial or / and an urban wasteland...etc.). It surveys, analyzes its morphological components, and proposes new destinations. *Prerequisite:* ARP 313, ARP 322, ARP 328

**ARP 434 Electrical and Mechanical Systems (2.2); 3 cr.** Preliminary analysis, estimation, and design consideration, of building electrical and mechanical systems, to assist students in the execution project. Electricity and lighting; water distribution; drainage; heating; ventilating; and air-conditioning (HVAC) are the systems included in this course. *Prerequisite:* ARP 328.

**ARP 435 History of Architecture III (3.0); 3 cr.** Continuation of History of Architecture II, from the 12th century to the mid-17th century. It covers the Gothic Architecture and The Renaissance Period. *Prerequisite:* ARP 324.

**ARP 438 Reinforced Concrete Design (3.0); 3 cr.** Behavior of reinforced concrete; ultimate strength design method; studying the concrete structural elements; design of beams for flexure and shear, one-way and introduction to two-way slabs, footings, and short columns. Analysis methods of concrete frames. Application design project of a multi-storey building. *Prerequisite:* ARP 327.

**ARP 439 Mechanical and Sanitary Systems (2.2); 3 cr.** The physiological and environmental aspects of heating, ventilation and air conditioning; comfort tables and charts. Estimating heating and cooling loads and the choice of appropriate systems. The choice and design of water distribution and plumbing systems. Problems encountered with such installations on site. *Prerequisite:* ARP 328.

**ARP 444 Architectural Design IV (3.6); 6 cr.** A continuation of the precedent Architectural Design courses, with an emphasis on the implementation of building codes and regulations on complex architectural settings in urban contexts. The chosen projects shall be more of a residential, public, and administrative nature. *Prerequisite:* ARP 224, ARP 433.

**ARP 446 History of Architecture IV (3.0); 3 cr.** Continuation of History of Architecture III, to cover the architecture from the mid-17th century to the mid 19th century. It covers The Baroque and the Rococo architecture. *Prerequisite:* ARP 435.

**ARP 551 Construction Detailing Studio I (2.2); 3 cr.** This course is meant to acquaint the student with the elaboration of professional construction document of architectural projects, and the adaptation of standard construction details to various architectural contexts. *Prerequisite:* ARP 322, ARP 328.

**ARP 552 Construction Detailing Studio II (2.2); 3 cr.** A continuation of Construction Detailing Studio I, with an emphasis on detail problem solving. Students are expected to develop further their architectural designs to reach the final stage of construction documents. *Prerequisite:* ARP 551.

**ARP 553 Specifications and Quantity Surveying (3.0); 3 cr.** Specifications and tender documents writing. The sources and the methods of classification for subsequent use. Practice projects. *Prerequisite:* ARP 551

**ARP 554 Surveying and Field Surveying (2.2); 3 cr.** Surveying and instrumentation; introduction to optical, photographic, mathematical, and geometrical principles relevant to photogrammetry and remote sensing; introduction to global positioning system. Field plane surveying; topographic mapping; location survey and route surveying. *Prerequisite:* ARP 439.

**ARP 555 Architectural Design V (3.6); 6 cr.** Continuation of Design IV dealing with more complex aspects of the built environment. It initiate students to the "scientific" research by admitting only obviousness (evidences) and theories in the different disciplines. *Prerequisite:* ARP 444, ARP 551.

**ARP 556 Architectural Design VI (3.6); 6 cr.** This course figures out the developing of the critical thinking and analyzing "objectively" of an Environmental Design issue; Sensibilization to the contextual demand of our society; Application of the different architectural paradigm and methodological conceptualization; The concretization into a well developed architectural expression. The Implementation of a realistic contextual site as well as basic determinant constraints (laws, environment, etc.). *Corequisite:* ARP 552, *Prerequisite:* ARP 555.

**ARP 557 Architectural Theories (3.0); 3 cr.** Survey of architectural theories as stated by architects, historians, and architectural critics. The main objectives of this course are to have a global view on the different schools of thought in architecture and to heighten the student's awareness of the various interpretations of the architectural paradigm as well as to the evolution of theories in architecture; *Prerequisite:* ARP 446.

**ARP 561 Urbanism I (3.0); 3 cr.** A survey of urban morphology in terms of characteristic phases of development with emphasis on environmental, cultural and economic factors governing urban growth. *Prerequisite:* ARP 444.

**ARP 562 Urbanism II (2.2); 3 cr.** A survey of different basic approaches to urban and city planning present and past. A comprehensive and critical survey of urban planning in Lebanon. *Prerequisite:* ARP 561.

**ARP 563 Building Rules & Regulations (3.0); 3 cr.** Professional code of ethics for the practice of the profession. The moral and legal responsibilities of the architect towards the

executed project and concerned parties. A survey of construction building codes and a study of the Lebanese construction laws. (taught in Arabic).

**ARP 564 Restoration of Monuments (2.2); 3 cr.** The purpose of this course is to prepare the students for restoration projects, having professional characteristics, on a building which will be freely chosen by themselves. *Prerequisites:* ARP 226, ARP 435.

**ARP 565 Landscape Architecture (2.2); 3 cr.** Theory and principles of design and problem solving processes as applied to fundamentals of design form in the landscape. *Prerequisites:* ARP 226, ARP 446.

**ARP 566 Basic Industrial Design (2.2); 3 cr.** Introduction to the theories, methods and practices of industrial design with primary emphasis on basic visual language and visual encoding practices. *Prerequisite:* ARP 226.

**ARP 567 Archaeology (2.2); 3 cr.** Studying the cultural heritage and rediscovering human experience since its origin to the present. It focuses on the archaeology of Lebanon: Its history, artifact recording or ethnographic data, composition and description. *Prerequisites:* ARP 226, ARP 435.

**ARP 568 Social Architecture (3.0); 3 cr.** The course aims at initiating students to the research in sociology; to give a comprehensive overview of the contribution of the behavioral sciences to architectural theory; to present generalizations on what the built environment affords people and a set of concepts for understanding the relationship between architecture and human behavior. *Prerequisite:* ARP 446.

**ARP 569 Project Planning and Management (3.0); 3 cr.** This course focuses on providing an overall understanding of the project development. The course tackles: Theoretical frameworks and tools; quantitative methods and process used in analyzing project investment decisions; case studies. Project scope definition, phasing, scheduling, and control method. *Prerequisite:* ARP 552.

**ARP 581 Seminar I (2.0); 2 cr.** Lectures and conferences held by visiting instructors. *Prerequisite:* ARP 433

**ARP 582 Seminar II (2.0); 2 cr.** Lectures and conferences held by visiting instructors. *Prerequisite:* ARP 433

**ARP 583 Design Theory (2.0); 2 cr.** Some recent examples include virtual and dynamic environments. The architecture of professional architects housing and modernity, 20th Century Design. *Prerequisite:* ARP 433

**ARP 584 Topics in Oriental Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of oriental architects and buildings. *Prerequisite:* ARP 433

**ARP 585 Topics in Japanese Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of Japanese architects and buildings. *Prerequisite:* ARP 433

**ARP 586 Topics in Lebanese Architecture (2.0); 2 cr.** Analysis of theoretical, culture and historical determinants as they may be applied to a select array of Lebanese architects and buildings *Prerequisite:* ARP 433.

**ARP 590 Senior Study (2.0); 2 cr.** An introduction to the senior design courses that allows students to choose and justify their final senior project. *Prerequisites:* ARP 552, ARP 556, ARP 557, ARP 438, ARP 562.

**ARP 591 Senior Project I (4.4); 6 cr.** The course involves a research that includes a theoretical and philosophical thought defining the problematic or situational aspect of the theme and the aim; specifying the hypothesis/concepts and justifying the *raison d'être* of the project. In respect to the theoretical thought, the conceptualization and "operationalization" of the hypothesis into concepts, dimensions and indicators, leads to the embryonic aspect of the proposed project. *Prerequisite:* ARP 590.

**ARP 593 Senior Project II (3.6); 6cr.** This Final senior course proposes a complete and comprehensive development of the project in which the relevance to the thesis presented in Senior Project-I should be demonstrated graphically. A complete set of drawings models, photographs, and recordings must be finalized by the student under the supervision of an advisor and collaborators. *Prerequisite:* ARP 591.

## DEPARTMENT OF DESIGN

---

<b>Associate Professor:</b>	Haddad, Robert
<b>Assistant Professors:</b>	Bechara, André ; Daghfal, Graziella; Kortbawi, John (Chair); Matta, Nadim; Selwood-Choueiri, Linda; Zaccour, Danielle
<b>Lecturers:</b>	Akl, Salim; Chamoun, Marlyse ; Chamoun, Claudine ; Khalil, Marina ; Majdalani, Roula ; Nasr, Noel ; Soghman, Jacqueline

---

### Goals

The Department of Design provides an undergraduate degree which stresses the educational needs of a professional designer in a comprehensive and flexible manner.

The Department of Design actively contributes to the University as well as to local, national, and international industries through its scholarly and creative activities, educational programs, and service efforts.

The B.A. programs offered by the Department of Design will enable students to:

- Communicate as professional designers with clients, audience and industries, utilizing various forms of messages while maintaining personal and professional integrity;
- Critically assess designs through research and reflection while respecting both moral and ethical issues in cultural and social contexts of local, regional or global environments;
- Embrace the dynamic design process that reflects creativity in producing innovative and effective solutions;
- Understand and respond to a client's needs by following a design process which analyzes a problem, proposes a hypothesis and synthesizes relevant findings before designing possible solutions;
- Demonstrate flexibility while applying various theories from historical movements or schools of thought to support the generation of conceptual and contextual solutions.

### Degrees

The Department of Design is currently offering four undergraduate degrees:

- Bachelor of Arts in Graphic Design
- Bachelor of Arts in Interior Design
- Bachelor of Arts in Fashion Design
- Bachelor of Arts in Photography

The Department of Design offers a graduate degree:

- Master of Arts in Design
- And Minors in:
- Photography
  - Graphic Design

---

## **The Degree of Bachelor of Arts in Graphic Design**

### **Program Description**

Graphic Design is a creative and analytical process that integrates design and technology to communicate ideas and information from a client to an audience. The primary goal of the Graphic Design curriculum is to educate students to become innovators and leaders in print and screen related areas of professional practice.

Furthermore, the Graphic Design program encourages exploration through problem solving methodologies, innovative investigations, and creative research in all forms of communication. The program is dedicated to excellence in teaching, academic and creative research and professional practice.

The B.A. program aims to educate graphic designers through focusing on creative and intellectual thinking, awareness of individual, social and cultural issues in a global context, the integration of new technology and the concern for ethical implications and the natural environment.

The Bachelor of Arts Degree in Graphic Design is a 3-year full-time program of 102 credits. The students will choose from three concentration areas: Typographic Design, Multimedia Design, or Information Design.

### **Graduation Requirements:**

To receive the degree of Bachelor of Arts in Graphic Design, a student must complete a total of 102 credits with an overall GPA of at least 2.0/4.0 and a minimum cumulative GPA of 2.3/4.0 in all Core and Major Courses. All major courses with a grade of less than “C-” must be repeated. The 102 credits necessary for graduation are divided as follows:

#### **Degree Requirements (102 credits)**

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
<b>Core Requirements</b> FAP 211, GDP 212, FAP 221	<b>9 cr.</b>
<b>Major Requirements</b> GDP 217, GDP 222, GDP 223, GDP 227, GDP 315, GDP 321, GDP 322, GDP 323, GDP 317, GDP 324, GDP 412, GDP 413, GDP 415, GDP 423, GDP 361 GDP 362, GDP 463, GDP 464, GDP 465.	<b>57 cr.</b>
<b>Free Electives</b>	<b>6 cr</b>

## **Minor in Graphic Design (18 credits)**

The focus is on Typography in Graphic Design, students will develop a critical eye, and demonstrate proficiency in applying “*type*” to express clear and legible communication for different media. Students are qualified to manage a design project, and prepare and supervise for final production hereby enabling them to have additional work possibilities.

The Minor can be taken by all except Graphic Design students; the only prerequisite is prior knowledge of Photoshop .

The courses are carefully chosen from the major to order for the students to arrive at a sufficient level of skills that allow them to actually produce design projects in print; therefore there are no electives.

In order to challenge the students, two courses with strong conceptual and creative process’ are included: GDP 321 Visual Communication and GDP 415 Branding for Graphic Design.

## **Career Opportunities**

Students can work in the fields of Advertising Agencies, Design Studios, and Production Houses, as Visual Communicators.

---

## **Undergraduate Courses: Graphic Design**

**GDP 212 Design Principles I (2.2); 3 cr.** Various design elements are introduced such as line, shape, plane, texture, color, style and composition. The students are encouraged to be creative and develop individual style.

**GDP 217 Conceptual Communication in Digital Media (2.2); 3 cr.** Students will learn the process of generating creative ideas, and apply principles of design to conceptual communication. In parallel, students are introduced to the fundamental tools to produce vector and raster-based graphics through the use of latest software for graphic production. Projects and assignments will focus on the exploration of concepts, and implementation through digital media. *Corequisite:* GDP 212.

**GDP 222 Design Principles II (2.2); 3 cr.** Relations between 3-D structure and space are explored analytically and synthetically. Students will investigate a given subject; learn to follow a problem-solving process in order to reach a functional and defendable design solution. *Prerequisite:* GDP 212.

**GDP 223 Fundamentals of Typography (2.2); 3 cr.** Students will learn how to classify type according to its history and development, type measurements, series of exercises exploring: space, hierarchy, order, kerning, tracking, type size and weight. Furthermore, the students will explore the use of type and space together with the development of grids through the application of design to a variety of formats. *Prerequisite:* GDP 217 or FDP 214.

**GDP 227 Digital Media I (2.2); 3 cr.** This course is designed to help graphic designers master professional studio techniques including photo-montage, photo retouching and special photographic effects. It also covers the fundamental software tools and techniques to produce publications and prepare the end product for printing process. *Prerequisite:* GDP 217 or FDP 214

**GDP 315 Color & Illustration for Graphic Designers (2.2); 3 cr.** An introduction to color using traditional tools and materials. The course will cover perceptual understanding of color and the use of color as a communication medium. It will also include the fundamentals in illustration which draws upon use of existing materials, illustration on location, abstract subject matter to assist the student in bringing an idea to life. A range of media will be introduced such as pencil, paints and pastels. *Prerequisite:* GDP 227.

**GDP 317 Digital Media II (2.2); 3 cr.** This course concentrates on training design students to produce graphic solutions for online environment. Terminology, theory, structure, html basics and appropriate software tools for web design will be covered enabling the students to design Websites. Students will also be exposed to understand the process of conveying a message in motion and it interacts within the website. *Prerequisite:* GDP 227.

**GDP 321 Visual Communication (2.2); 3 cr.** Students will learn how to approach conceptual problem solving through the use of visual

rhetoric and the science of semiotics. The course will also focus on signs and symbols, ideograms, sequential design, publication, and information design whilst taking into consideration the potential audience. *Prerequisites:* GDP 223, GDP 227

**GDP 322 Applied Typographic Design (2.2); 3 cr.** Students will explore projects of greater complexity; learn how to analyze substantial data, appreciate the design functions of relating ideas and develop logical structural systems to organize information for legible and clear communication. Students will be able to transform manuscripts into printed publications i.e. book design, newspaper, magazine, and instruction manual. They will have to follow a design process to assess typographical text application, expression, hierarchy, sequential design, layout and page systems including production. *Prerequisite:* GDP 223, GDP 227.

**GDP 323 History of Graphic Design & Contemporary Issues (3.0); 3 cr.** The course exposes the students to the genesis and development of graphic design in the 20th century. The students investigate the theory and practice of graphic design under the two main philosophies of the 20th century: modernism and postmodernism. The course aims to develop the student's ability to comprehend theoretically and visually the graphic design movements and pioneers as a source of inspiration and reference for their conceptual and innovative process.

**GDP 324 Photography for Graphic Designers I (2.2); 3 cr.** Students will be exposed to critical thinking and will learn the history of photography including the different photography movements. Students will learn the principles and use of black and white photography, and its application in documentary photography and Photojournalism. The student will learn the concept of photo editing as it applies to printed matters. *Prerequisite:* GDP 227.

**GDP 361 Type Design and Experimental Typography (2.2); 3 cr.** Students will learn the principles of designing fonts ready for print and screen. They transfer the manually developed typeface into true type font using professional software. Furthermore, this course will provide the opportunity to experiment with type and research various methods and techniques to serve a pragmatic purpose to express ideas using type. The students will also learn how to develop a visual identity system and how to combine

type with signs and symbols. *Prerequisite:* GDP 317, GDP 322.

**GDP 362 Interactive Design and Motion Graphics (2.2); 3 cr.** The course introduces the student to website history and digital interface, website structures and grids, website management and design principles using type, image, color scheme, hierarchy, sequential design, visual identity, animation and sound. Furthermore, Students will create visual projects for screen and TV through the understanding and application of type and image. They will learn how to plan movie concept through sketching and storyboarding and will gain knowledge on how to develop graphic sound tracks to be synchronized with motions. They will also learn the principles of generating short movies and the techniques of editing them. Through assigned projects, students are responsible to follow a design process in order to deliver a specific message using motion graphics. *Prerequisite:* GDP 317, GDP 322.

**GDP 412 Packaging (2.2); 3 cr.** Packaging is an important factor in retail environments and a key element in marketing strategies. This course focuses on the technical knowledge needed to execute a design, to prepare die-cuts, molds, paper section and boards, colors, quality and quantity. Size consideration, shapes and practicality will also be covered. Field trips are required in this course. *Prerequisite:* GDP 322.

**GDP 413 Print Management and Production (2.2); 3 cr.** Covers print methods and print techniques including color separation, film preparation, plate processing and the actual production process. It will also include the choice of papers, printing onto various surfaces, paper engineering and management and finishing processes and binding. *Prerequisites:* GDP 321, GDP 322.

**GDP 415 Branding for Design (2.2); 3 cr.** Students will create the visual corporate identities of products, build the brand marketing strategy, analyze and define the unique selling proposal, and communicate its value. The student s will learn how to make professional presentations including documentation of the process. *Prerequisites:* GDP 321, GDP 322.

**GDP 423 Professional Practice & Portfolio Preparation (2.2); 3 cr.** Overview of the business aspects of design: Translation of jobs into properly written documents, meetings with clients and presentation of work, design and

production processes, understanding the brief, debriefing, coding, encoding, budgets, estimating design, fees, and official contracts. During the semester, students will have to cover hours for the internship. This course also assists students in the development of their professional visual identity and portfolio. *Prerequisite:* GDP 413.

**GDP 463 Environmental Graphics and Arabic Type Design (2.2); 3 cr.** This course will introduce the students to the history of Arabic typography. Students will learn to identify the different Arabic type styles and their classifications, as well as applying a creative design process to produce Arabic typeface. Students are also introduced to ways of analyzing and creating meaning in graphic and typographic design solutions for indoor and outdoor environment. In the context of theory and practice, the students will develop way-finding systems, semiotics, and information presentation for the public. They will become aware of issues pertaining to the identification, categorization and structure of raw and complex information from different fields. *Prerequisite:* GDP 361.

**GDP 464 3D in Motion (2.2); 3 cr.** Students will learn how to communicate effectively using type, image and sound progressively with more

and more complex needs for motion graphics. Students will know how to inform while underpinning the media constraints. In parallel, they will learn how to create interface design and promotional broadcasting graphic movies using different software platforms and advanced tools tracking 2D and 3D animations. Furthermore, the students are introduced to the principles of 3D animation; learn how to sketch, illustrate and design characters as well as developing contemporary design solutions with new approaches of type, image, and characters for screen using appropriate tools and techniques to develop 3D motion graphics for multimedia. Students will investigate and formulate their senior project proposal. *Prerequisite:* GDP 362.

**GDP 465 Senior Studio (2.2); 3 cr.** Students will research, develop and design their individual senior project under instructor guidance. Articles, discussions, seminars and lectures will take place during class sessions in support of the development of the senior projects. The senior project and related process will be presented in front of a professional jury. The senior project proposal can take the form of a screen and / or print based solution. *Prerequisite:* GDP 463, GDP 464.

---

## The Degree of Bachelor of Arts in Interior Design

### Program Description

Our Interior Design program consists of a sequential undergraduate design studios that form the core of the professional interior design major. Basic architectural and design principles of form-making are the initial focus that soon shift to issues of people and space.

The program helps students develop critical thinking, creative design and evaluation of how interior design meets the needs of people, which is the essence of their professional curriculum. Within the instructional settings of the upper design studios, students learn about the dynamic interactions between people and space in the commercial, institutional, hospitality, healthcare and retail facilities. Graduates develop competency in specific interior design subject areas as they learn how to creatively make the world a better place for people. The program provides opportunities for the students to achieve excellence in the design of interior environments also to engage in research and develop a specialization in a related field and possible topics for advanced studies in furniture design, environmental design, historic preservation, visualization and interior applications for computers, design research and theory as well as design education.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Interior Design, a student must complete a total of 136 credits with a minimum cumulative GPA of 2.3/4.0 in all Core and Major

Courses. All major courses with a grade of less than C- must be repeated. The 136 credits necessary for graduation are divided as follows:

### Degree Requirements (136 credits)

**General Education Requirements** **30 cr.**

**Core Requirements** **6 cr.**  
FAP 211, GDP 212

**Major Requirements** **94 cr.**  
IDP 210, IDP 211, IDP 212, IDP 214, IDP 215, IDP 222, IDP 223, IDP 224, IDP 225, IDP 226, IDP 227, IDP 311, IDP 312, IDP 313, IDP 314, IDP 321, IDP 322, IDP 323, IDP 324, IDP 326, IDP 327, IDP 328, IDP 411, IDP 412, IDP 413, IDP 421, IDP 422, IDP 423, IDP 424

**Free Electives** **6 cr**

### Undergraduate Courses: Interior Design

**IDP 210 Basic Skills for Interior Design (2.2); 3 cr.** This course helps the student develop the necessary skills and techniques required to communicate visually his interior design ideas effectively and professionally. This course will give the student the ability to draw and sketch, assess, evaluate and understand existing structures, also learn to survey sites and collect data and take them to the drawing board. Topics include: Design briefs and specifications; comprehensive drawing files: presentation techniques, layouts and renderings; technical drawing files: Scaled drawing, plans, elevations, sections, etc.

**IDP 211 History of Interiors and Furniture I (3.0); 3 cr.** A study of ancient architecture, interiors and furniture from the beginning of human civilization to the modern civilization.

**IDP 212 Fundamentals of Interior I (2.2); 3 cr.** Essentials of planning an interior architectural environment in relationship with spatial organization. *Prerequisite:* IDP 215.

**IDP 214 Materials and Methods of Construction (2.2); 3 cr.** This course combines case studies with lectures, readings and discussions on concepts of design technology. *Corequisite:* IDP 212.

**IDP 215 Descriptive Geometry for Int. Design. (2.2); 3 cr.** Study of the different interrelated geometric fields and three dimensional forms in the interior environment. Emphasis on the formation of volumetric

development, light sources, shades, shadows and their constructions. *Prerequisite:* IDP 210.

**IDP 222 Fundamentals of Interior II (2.2); 3 cr.** Study of structural setting in any architectural space leading to constraints in the design process. *Prerequisite:* IDP 212.

**IDP 223 Drawing for Interior Design (2.2); 3 cr.** This is an intense studio course developing free hand drawing skills, scaled perspective appropriate for the presentation of interior design projects. This course also develops a wide range of rendering skills and techniques applicable in traditional and computer media. *Prerequisite:* FAP 211.

**IDP 224 Colors in Interiors (2.2); 3 cr.** This course will teach the student to achieve the right choices of colors in different interior spaces and environments, and they will also learn to develop the opulent designer's eye when required to balance color schemes and combinations. Topics included: Color theories, color psychology, color science, color characteristics and notation. *Corequisite:* IDP 226.

**IDP 225 Materials and Finishes (1.4); 3 cr.** This course offers an introduction to construction detailing for interiors, focusing on architectural millwork. *Corequisite:* IDP 222.

**IDP 226 Textiles for Interiors (2.2); 3 cr.** Effects of fibers, yarns, fabrics and finishes on appearance and performance. Study of the construction of textile products used in interiors. *Prerequisite:* IDP 222.

**IDP 227 Human Factors for Int. Des. (2.2); 3 cr.** This course investigates human factors as an essential ingredient in the design process. Physical and psychological human factors will be examined in an attempt to better understand The spatial relationship between humans and their environment. Topics include: Proximics, cognitive mapping, imageability, human sensory and ergonomics. *Corequisite:* IDP 222.

**IDP 311 History of Modern Contemporary Interiors (3.0); 3 cr.** This course is an overview of the 20th century art, culture, interior and furniture. *Prerequisite:* IDP 211.

**IDP 312 Interior Design Project I (2.2); 3 cr.** This course covers the creative triggering of the design problem solving process through schematics. It also investigates human factors as an essential ingredient in the design process. *Prerequisite:* IDP 222.

**IDP 313 Applied Interior Design I (2.2); 3 cr.** This course explores the pragmatics of computer hardware and software as integral tools to contemporary design. *Prerequisite:* IDP 210.

**IDP 314 Interior Detailing and Construction I (2.2); 3 cr.** The course introduces the students to the various material finishes used in interior design. *Corequisite:* IDP 312.

**IDP 321 Environmental Graphic Design (2.2); 3 cr.** This course studies the presentation of information in the designed environment. *Prerequisite:* IDP 322.

**IDP 322 Interior Design Project II (2.4); 4 cr.** The student is challenged to work on a major construction displaying creativity and ability to remodel this space according to new functions. *Prerequisite:* IDP 312.

**IDP 323 Applied Interior Design II (2.2); 3 cr.** This course develops a more professional and creative approach to design while broadening the student's technical base. *Prerequisite:* IDP 313.

**IDP 324 Interior Detailing and Construction II (2.2); 3 cr.** Review, discussion and analysis of interior construction systems used in commercial and institutional structures. *Prerequisite:* IDP 314.

**IDP 326 Concepts of Historic Preservation (2.2); 3 cr.** Projects consist of a search for new remodeling techniques, constructing and preserving historic buildings and monuments. *Prerequisite:* IDP 322.

**IDP 327 Furniture Design (2.2); 3 cr.** This course exposes the student to the design industry starting from the drawing board and ending with a full scale furniture model. The student will learn to implement the step by step hands on model making of furniture pieces that he created, the student will be using the ergonomic knowledge that he learned in the human factors course. Topics included: Ergonomic design for the global industry. Designing for the Industry. Model making, Specimen building and mass production. *Prerequisite:* IDP 227.

**IDP 328 Lighting Design in Interiors (2.2); 3 cr.** This course takes a practical approach to lighting, and the student will learn about the different types of lighting such as ambient, task and decorative. The student will also learn the fundamentals of lighting design in relation to residential and contract interiors. The subjects tackled in this course will give the student enough knowledge to incorporate lighting in the total interior design scheme. Topics covered: Natural, artificial lighting, quality of light. Technicalities: Switches and wiring. Finally, electrical plans and specifications. *Corequisite:* IDP 322.

**IDP 411 Quantity Surveying for Interior Designers (2.2); 3 cr.** Emphasis on the principals of construction. *Corequisite:* IDP 412.

**IDP 412 Interior Design Studio I (3.6); 6 cr.** This course covers all aspects of professional presentation of a complete construction drawing-file to secure accurate executions. *Prerequisite:* IDP 322.

**IDP 413 Applied Interior Design III (2.2); 3 cr.** This course shows students how to create computer animation and 3-rendered materials within an interior space. *Corequisite:* IDP 412.

**IDP 421 Business Practice for Interior Designers (3.0); 3 cr.** Focuses on the legal aspects of design and contract documents for interior architecture. *Corequisite:* IDP 422.

**IDP 422 Interior Design Studio II (3.6); 6 cr.** This course is structured to challenge the student to deal specifically with contract interiors. *Prerequisite:* IDP 412.

**IDP 423 Integrated Building Systems (HVAC and Plumbing) (2.2); 3 cr.** This course provides a structured opportunity to study and integrate all components of architectural technology into a comprehensive whole. *Corequisite:* IDP 412.

**IDP 424 Interior Design Management (3.0); 3 cr.** This course exposes the student to the main management principles in interior design with the understanding that this profession is an integral part of the the construction industry. The student will learn the different management techniques and skills that an interior designer

needs to practice in his business formation starting with maning his office ending up with a contract and passing by all the processes that require a business like attitude. Finally, the student will learn the design-built team working approach. *Corequisite:* IDP 422.

---

## The Degree of Bachelor of Arts in Fashion Design

### Program Description

Lebanon has already established itself in the international fashion design industry and as a result there is a potential for a prosperous local market in need of competent fashion designers. The graduates will be able to produce traditional as well as innovative and contemporary design concepts suitable for the national, regional and international market. The program combines advanced design concepts supported by current technology in order to produce creative and original, individual prototypes for haute couture or industrial production.

### Career Opportunities

Fashion Design graduates will be ready to work in the fashion industry as creators of new collections, textile designs, managers, journalists, patternmakers, and in various fields of fashion commerce.

### Graduation Requirements

To receive the degree of Bachelor of Arts in Fashion Design, a student must complete a total of 102 credits with an overall GPA of at least 2.0/4.0 and a minimum cumulative GPA of 2.3/4.0 in all Core and Major Courses. All major courses with a grade of less than "C-" must be repeated. The 102 credits necessary for graduation are divided as follows:

#### Degree Requirements (102 credits)

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
<b>Core Requirements</b> FAP 211, GDP 212	<b>6 cr.</b>
<b>Major Requirements</b> GDP 222, FTP 214, FTP 212, FTP 224, FTP 222, FTP 229, FTP 314, FTP 315, FTP 318, FTP 319, FTP 326, FTP 325, FTP 328, FTP 329, FTP 415, FTP 418, FTP 419, FTP 423, FTP 425, FTP 428.	<b>60 cr.</b>
<b>Free Electives</b>	<b>6 cr</b>

---

## Undergraduate Courses: Fashion Design

**FTP 212 Fashion Illustration I (2.2); 3cr.** Students will learn to develop and illustrate fashion figures and garment details through analysis of the fashion canon, the figure research and the study of lines and proportions; resulting in fashion design sketches and illustrations. The emphasis is on the ability to express ideas visually and in a personal style. *Corequisite:* FAP 211.

**FTP 214 Textile Technology (2.2); 3 cr.** This course is an overview of the textiles in fashion design including printing techniques. Advanced surface treatments are investigated. Students are encouraged to experiment and apply original designs as inspiration for creation of textiles.

**FTP 222 Fashion Illustration II (2.2); 3 cr.** The students will explore the different techniques for illustrating fashion, analyzing the structural rhythm and movements of various poses, by combining media and advanced rendering techniques; including software used in the fashion industry; leading to new fashion design creations. *Prerequisite:* FTP 212.

**FTP 224 History of Fashion Design (3.0); 3cr.** This course traces the history of fashion tradition from antiquity until 1890, including the ancient civilizations of Egypt, Mesopotamia, Greece, Rome, and continuing with the Renaissance, the French Revolution until the Art Nouveau Period.

**FTP 229 Fashion Design I (2.2); 3 cr.** The students will learn to develop design fashions, in parallel they will sketch figures and garment details through analysis of photographs and research, resulting in fashion design sketches. The ability to design through creative exploration is an integrated part of the course. Techniques for rendering the characteristics of various fabric textures, weights and patterns will be explored. *Prerequisite:* FTP 212.

**FTP 314 Contemporary Issues of Fashion Design (3.0); 3 cr.** The students will investigate the relationship between fashion design and the contemporary issues of the 20th and 21st century, beginning with the Art Nouveau period, the 'between the two Wars' period, the New York era, innovations of the 20th century to end with the contemporary era. *Prerequisite:* ENL 213.

**FTP 315 Fashion Studio I (1.4); 3 cr.** Students work on creating their own concepts for designs and finished garments, strengthening their

understanding of cutting, construction and tailoring techniques. *Prerequisites:* FTP 222, GDP 222

**FTP 318 Patternmaking I (2.2); 3 cr.** Students will study the use of the pattern for various sectors while developing basic concepts as well as original designs according to professional standard through hands-on practice. *Prerequisite:* FTP 229.

**FTP 319 Fashion Design II (2.2); 3 cr.** The students will continue to develop creative concepts in fashion design illustrations and presentation boards through exposure to softwares used in the fashion industry. This process is explored both manually and digitally. *Prerequisite:* FTP 229.

**FTP 326 Fashion Trends and New Concepts (2.2); 3 cr.** Students will explore the concepts and trends that add glamour to fashion design, through various resources, such as the "Tendance" of the professional fore-casting services. Students will focus on the details such as accessories in new dimensions and materials; thus enhancing their creative potential. *Prerequisite:* FTP 314.

**FTP 325 Fashion Studio II (1.4); 3 cr.** Students will develop skills and techniques necessary to produce garments of various sectors, including professional processes and assembly procedures. *Prerequisite:* FTP 315.

**FTP 328 Patternmaking II (2.2); 3 cr.** The students will learn to create advanced patterns using computer and appropriate software as a tool for production, in order to efficiently reflect and execute their creative and original ideas. *Prerequisite:* FTP 318, *Corequisite:* FTP 325.

**FTP 329 Fashion Design III (2.2); 3 cr.** Creative thinking in both process and product will encourage the students to create trade sketches and storyboards of their fashion designs. The aim is to develop cohesiveness in a collection based on individual concepts with diverse applications, and to present the designs in fashion portfolios. *Prerequisite:* FTP 319. *Corequisite:* FTP 325.

**FTP 415 Fashion Studio III (1.4); 3 cr.** The students will continue to employ industrial standards for tailoring garments, including advanced construction processes and assembly

procedures to ensure a high quality garment.  
*Prerequisite:* FTP 325

**FTP 418 Patternmaking III (2.2); 3 cr.** The students master the translation of any volume or idea regardless of material or purpose. Students will further construct, in tandem manually and digitally, advanced patternmaking for final execution. *Prerequisites:* FTP 328, FTP 315

**FTP 419 Fashion Design IV (2.2); 3 cr.** Creative and advanced design methodology will ensure unique and professional development of a collection with personal style and effective communication of sketches, fashion design, storyboards and portfolios for their senior collection. *Prerequisite:* FTP 329.

**FTP 423 Professional Practice & Marketing (2.2); 3 cr.** The students will be exposed to the professional aspects of Fashion Design: Management of inventory, decision making, planning, licensing, plus strategies to enhance

market strength. The process of learning happens through daily journaling, written reports and a presentation of their internship experience. It is the student's responsibility to find an internship and to notify the instructor for approval. Furthermore, the students will design, prepare and present a professional portfolio of their individual collections including the senior project. *Prerequisites:* FTP 415, FTP 419.

**FTP 425 Fashion Studio VI (1.4); 3 cr.** Students will apply professional standards to the execution of their senior collection and its process will be presented in front of a jury in order to develop high quality prototypes. *Prerequisite:* FTP 415

**FTP 428 Patternmaking IV (2.2); 3 cr.** The concepts developed through design and research will inform the patternmaking for a collection as their senior project resulting in professional execution. *Prerequisite:* FTP 418, FTP 415

---

## The Degree of Bachelor of Arts in Photography

### Program Description

Photography is by far the most used medium amongst all the creative disciplines. From fine arts, design, multimedia, artistically, and commercially, the photograph has proven its strength and ability in delivering various sustainable messages in an innovative and challenging process.

The design department understands photography as a multidisciplinary medium devoted to research and experimentation. The photography program encourages the exploration and development of the individual style in a project based system where initiative, research, and analytical thinking underlie each task.

The B.A. in photography offers the students the opportunity to learn photography combined with animation, multimedia, video and other related fields. Students are invited to combine traditional and contemporary methods to create photography, including still and moving images as well as image and text.

Graduates will develop a strong learning while tackling all the areas of the photographic industry enabling them to pursue a promising career in their chosen field of interest.

### Career Opportunities

Students graduating in Photography will have the opportunity to work as freelancers, covering the creative and artistic needs of the market such as advertising, editorial, fashion and documentary. They can also work as creative directors, image consultants, and photojournalists. In parallel to their commercial work, graduates will be capable of setting up their own exhibitions and publishing their work.

**Degree Requirements (102 credits)**

<b>General Education Requirements (GER):</b>	<b>30 cr.</b>
<b>Core Requirements</b> FAP 211, GDP 212, GDP 222	<b>9 cr.</b>
<b>Major Requirements</b> PDP 216, PDP 221, PDP 223, PDP 227, PDP 311, PDP 312, PDP 313, PDP 317, PDP 321, PDP 323, PDP 327, PDP 411, PDP 412, PDP 413, PDP 414, PDP 415, PDP 421, PDP 422, PDP 423.	<b>57 cr.</b>
<b>Free Electives</b>	<b>6 cr</b>

---

## Minor in Photography (18 credits)

This Minor is ideal for students who believe in the alchemy of the still image and its creative and inspiring process. Out of all the visual communication media, photography stands out for its power in freezing time and capturing the essence of the real. Used in every discipline, it manages to travel through the eye to reach the mind and engrave its codes in the heart. New digital technologies and traditional techniques are merged here to offer pioneering creative methods in this challenging field.

Students who choose this Minor will acquire solid analytical, intellectual and technical skills necessary for the development of a consistent photographic body of work .

It is the hope that such a Minor can enrich the lives of the students by introducing a creative medium and sufficient skill to produce work.

### Career Opportunities

Students can work as freelancers responding to the creative and artistic needs of the market such as advertising, editorials, fashion, and documentaries.

---

## Undergraduate Courses: Photography

**PDP 201 Basic Photography (2.2); 3 cr.** An introduction to the camera, dark room, film, and processing. Students will learn about basic techniques of exposure, lighting and laboratory.

**PDP 216 Introductory Photography (2.2); 3 cr.** Students will develop a strong basis for the creation of the image while exploring digital and analog techniques that will enable them to express their own ideas visually. They will explore several photographic topics and represent them through various concepts and techniques.

**PDP 221 Portraiture (2.2); 3 cr.** Students will develop individual ideas through an understanding of the photographic portrait, including past and present representation of the self and the other. An interpretation of the facial representations and body language is expressed through analog and digital techniques. *Prerequisite:* PDP 216.

**PDP 223 History of photography (2.2); 3 cr.** This course gives an overview of the history of photography starting from the pioneers' era in the beginning of the 19<sup>th</sup> century until mid of the 20<sup>th</sup> century. It will cover the influence of science and technology in the creation of the image, as well as the challenge between painters and photographers. *Prerequisite:* PDP 216.

**PDP 227 Grain to Pixel (2.2); 3 cr.** Students will learn how to handle and manipulate digital images for diverse outcomes. They will be introduced to professional software for image retouching, montages, collage and special effects. *Prerequisite:* PDP 216.

**PDP 311 Branding in Photography (2.2); 3 cr.** Students learn to analyze a brand and target a given audience. They will be exposed to the process of how to deconstruct the commercial image, through the development of a brief; research, concept to image creation. Through photography students will learn to communicate successfully the image identity of a brand. *Prerequisite:* PDP 227.

**PDP 312 Glamour and Fashion (2.2); 3 cr.** Creativity and originality in the production of the fashion image and the ability to transmit the stylistic concept is an integrated part of this course. Students will learn to manage the team necessary for glamour shooting, whether in the studio, outdoors or during catwalk. *Prerequisite:* PDP 227.

**PDP 313 Contemporary Photography (2.2); 3 cr.** This course will cover photography from the beginning of the 20<sup>th</sup> century until present day. It will introduce critical and cultural theories pertaining to the contemporary image, including multimedia and the digital era. *Prerequisite:* PDP 227.

**PDP 317 Line to Pixel (2.2); 3 cr.** Students will master the manipulation of digital images in a variety of media. They will be introduced to different software in relation to design and publications, enabling the students to produce professional printed matter. *Prerequisite:* PDP 216.

**PDP 321 Photojournalism and Documentary (2.2); 3 cr.** Students will be aware of the

responsibility and integrity of the photographer in capturing the moment and producing striking photographs. They will analyze the photograph in relation to various media while addressing ethical and social issues objectively and grasp a deeper insight of the ambiguity of the message. *Prerequisite:* PDP 317.

**PDP 322 Photography and Culture (2.2) 3 cr.** Students will investigate the way images are read, used and understood in different cultures in an international scope. They will research, identify and define the different obstacles that may limit or transform the meaning of a photograph in a global context.

**PDP 323 Time and Space (2.2); 3 cr.** Students will analyze the cultural meaning of a certain space or place and the signs held within its image. The architectural elements and methods for visual investigation will be explored through the quality and quantity of light in conveying different moods. *Prerequisite:* PDP 317.

**PDP 327 Web Image (3.0); 3 cr.** Students will learn the structure of websites, for clients and for self promotion, that reflect the genre of their work while understanding and analyzing creative website used by professional photographers. *Prerequisite:* PDP 317.

**PDP 411 Image and Type (2.2); 3 cr.** Students will understand and analyze different typefaces and the relation between a specific image and expressive typefaces, as well as the different messages that type and image can convey. They will experiment with their own photographs and produce design solutions for various publications. *Prerequisites:* PDP 321, PDP 327.

**PDP 412 Experimental photography (2.2); 3 cr.** This course will offer a survey of the contemporary experimental photography; emphasizing past and present methods. Students will create original and unique images through exploration and application of alternative techniques. *Prerequisite:* PDP 327.

**PDP 413 Senior project I (2.2); 3 cr.** Students will investigate and formulate their senior project proposal. They will determine subject matter and concepts, after researching and analyzing the disciplines in which their own practice is located. Dissertations will be submitted and approved by a jury of academics

and professionals. *Prerequisites:* PDP 327, PDP 411.

**PDP 414 Movie production (2.2); 3 cr.** This course aims to acquaint the student with multi-camera usage in a studio setting and on location, combining photography and moving image towards movie production. The common language of the contemporary moving and still image is explored through the concept of storyboarding, directing and digital editing techniques. *Prerequisite:* PDP 327.

**PDP 415 Photography and Animation (2.2); 3cr.** Students will experiment different processes and techniques to produce an animation, including stop-motion using related software. Students will develop concepts and ideas through sketching and storyboarding enabling them to produce animation and synchronized sound tracks. *Prerequisite:* PDP 327.

**PDP 416 Photo and printing techniques (2.2); 3cr.** This course combines darkroom and digital techniques. Aesthetic and conceptual problems will be addressed through assignments and critiques. Emphasis is on individual directions and approaches. It includes image combination, processing and printing techniques. *Prerequisites:* PDP 325

**PDP 421 Promotion and Publication (2.2); 3cr.** Students will be exposed to the process of promoting their own work, through exhibitions, installations, and publications, locally and internationally. They will be responsible to manage and organize professionally all the preparation needed for a successful promotion. *Prerequisite:* PDP 413

**PDP 422 Professional practice and portfolio (2.2); 3cr.** This course aims to acquaint the student to develop their professional portfolio for self promotion. In parallel students will be exposed to the legal issues related to the copyright of the image and the way to protect their rights as professional photographers. *Prerequisite:* PDP 413.

**PDP 423 Senior Project II (2.2); 3cr.** Students will develop their set objectives and produce their senior project in photography under instructor guidance. Articles, discussions, seminars, lectures and fieldtrips will take place supporting of the development of the senior projects. The senior project and related process will be presented in front of a professional jury. *Prerequisite:* PDP 415, PDP 413

---

## **The Degree of Master of Arts in Design**

The Master of Art in Design program is designed for students of Visual Arts and Design who wish to engage in a further period of study as a continuum to their Bachelor studies. It is also designed for experienced students who wish to raise their intellectual and professional experience in a field of study, following a period of work in industry or in the professions associated with design.

The post-graduate status of the Master Program derives from the emphasis given to the relationship between theoretical concepts and practical realization of a problem; theory and practice at an informed and exploratory level.

The post-graduate status also derives from a teaching approach, which lays considerable emphasis upon the managerial and professional aspects of project research and development designed to raise the standards of the successful implementation of the subjects in the professional, applied context of society and industry.

Finally, the post-graduate status of the course allows the student to disengage from the daily pursuit of tasks in their field, which are normally carried out under constraints which limit their exploration of the subject in a holistic sense. Instead, the students are enabled to look deeply into the context of their work, the history and theory, the practice and achievement of specialists in this and other countries on an international, global scale.

The impacts of traditional, new and developing technologies are studied. Graduates of the course can keep abreast of current trends by providing themselves with the intellectual network and contacts necessary to remain fully informed throughout their future professional lives; a benefit to themselves, and their employers.

Master students are able to follow their intellectual and creative discoveries to a depth and distance which will give the opportunity to create pilot schemes and projects which can be developed in the true scientific manner of trial and error: Testing, revision, and proposals for further development. Thus, building a body of knowledge on their subject provides the basis for further pioneering and exploratory work, creatively and technically.

The Program Aims:

- To extend and further develop the intellectual, professional and technical skills of graduates and of mid-career practicing designers;
- To explore the social and cultural context within which the processes of designing take place;
- To support the individual in developing high-level research ability and to explore the interrelationship of theory and practice.

### **Admission Requirements**

The Master of Art in Design is set for students from the several disciplines that are embraced by the term visual arts and designs, who wish to engage in a period of study beyond the Bachelor level, and who wish to raise their intellectual and/or professional experience associated with visual arts and/or design.

Students with Bachelor degrees from other disciplines are invited into the program after they have fulfilled undergraduate requirements of the University admission policy.

In addition to the University admission requirements for graduate students, the candidate must submit a portfolio of work for assessment and schedule an interview with M.A. course faculty.

In order to be accepted into the program, the student must take a minimum of 6 credits per semester as a part-time candidate and 9 credits as a full-time candidate.

### **Transfer**

Although transfer is not generalized, some credits from major universities can be transferable upon admission by the Graduate Committee. A transferred course must be passed at the grade of 80 according to the NDU grading Bylaws.

In addition, applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

### **Graduation Requirements**

Students seeking the degree of Master of Design must meet the University graduation requirements and complete 36 credits with a cumulative average of at least 3.0/4.0

### **Degree Requirements (36 Credits)**

#### **Major Courses**

**36 cr.**

MAD 615, MAD 616, MAD 617, MAD 625, MAD 626, MAD 627, MAD 635, MAD 636, MAD 645.

---

### **Graduate Courses: Master of Arts in Design**

**MAD 615 Design Research Methodologies (2.2); 3 cr.** A survey of current design thinking and research methodologies to aid the student in the development of projects in response to a critical content framework. The course is intended to offer the student support and direction in the formation of the critical thinking that will inform their written and visual solutions. Includes lectures, readings, and discussion of contemporary issues in design in social and cultural contexts.

**MAD 616 Contemporary Issues in Design (2.2); 3 cr.** A seminar in which topics of current relevance to design practice and critical thinking will be explored and analyzed. The course content will change each semester to remain up to date within the profession.

**MAD 617 Design Studio I (2.8); 6cr.** Design projects in response to the critical content of Contemporary Issues in Design. Includes the role of designed objects in contemporary culture and the effect on society, including interaction with potential audiences. *Co-requisite* and/or *Prerequisite*: MAD 616.

**MAD 625 Design Research Development (2.2); 3 cr.** Development of conceptual and analytical skills for the self-initiated design research, which will culminate in a written proposal. *Prerequisite*: MAD 615.

**MAD 626 Cultural Issues in Design (2.2); 3 cr.** A seminar that will consider the relevance of

culture to design particularly in the Lebanese context. An introduction to recent theories in various disciplines concerning cultural understanding of design. The course content will change each semester to remain up to date within the profession. *Prerequisite*: MAD 616.

**MAD 627 Design Studio II (2.8); 6 cr.** A visual application of the topics and ideas covered in Cultural Issues in Design. The course is a platform for experimentation and exploration of concepts from the seminars. It focuses on the role of design objects as cultural artifacts and their reflection of social diversity on both designers and audience. It includes creation, reproduction, distribution and reception of messages. *Co-requisite* and/or *Prerequisite*: MAD 626.

**MAD 635 Thesis I (2.2); 3 cr.** This course will support and assist the student in the development and preparation of their research into a comprehensive written document that will complement the visual work to be undertaken in Thesis II. The two components will interrelate to support the theories, hypothesis and conclusions. *Prerequisite*: MAD 627.

**MAD 636 Special Topic (2.2); 3 cr.** This course is given by an invited instructor to explore topics of current interest. *Prerequisite*: MAD 627.

**MAD 645 Thesis II (4.4); 6 cr.** The course provides further guidance during the development of the thesis. The final outcome

answers the research study developed in Thesis I.  
*Prerequisite:* MAD 635.

## DEPARTMENT OF MUSIC

---

**Professor:** Kesrwani, Elias (Fr, Chair)

**Assistant Professor:** Beyrouti, Lola

**Lab Instructor:** Lawoun, Dolcy

---

### The Degree of Bachelor of Arts in Music and Musicology

#### Program Description

The B.A. program is designed to help students develop competence and expertise in the areas of music history, theory, and analysis.

In addition, students will further acquire professional skills in voice and instrument playing.

#### Admission Requirements

Prior to admission, applicants will be subject to a practical evaluation, which covers instrument, voice, and musical background.

#### Graduation Requirements

To receive the degree of Bachelor of Arts in Music, a student must complete a total of 99 credits with a minimum cumulative GPA of 2.3/4.0 in all Core and Major Courses. Any major course with a grade of less than "C-" must be repeated. The 99 credits necessary for graduation are divided as follows:

#### Degree Requirements (99 credits)

**General Education Requirements** **30 cr.**

**Major Requirements** **39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463.

**Concentration** **24 cr.**

MUM 354, MUS 214, MUS 244, MUS 384, MUS 444, MUS 454, MUS 455, MUS 475.

**Free Electives** **6 cr.**

## **The Degree of Bachelor of Arts in Music and Musicology - Music Education**

A concentration in music education provides students with qualifications to serve in educational settings.

### **Degree Requirements (99 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463.

**Concentration** **24 cr.**

EDU 313, EDU 355, MUE 335, MUE 446, MUE 476, STA 201, MUE 479, MUE 474.

**Free Electives** **6 cr.**

## **The Degree of Bachelor of Arts in Music- Musimedialogy**

An avant-garde perspective combining music to all fields of media needed for music. Students will master the art of relaying music information via radio, TV, journalism, and the telecommunication systems.

### **Degree Requirements (99 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **39 cr.**

MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 454, MUS 462, MUS 463.

**Concentration** **24 cr.**

JOU 310, MUM 350, MUM 437, MUM 448, MUM 457, MUM 474, MUM 245, MUS 444.

**Free Electives** **6 cr.**

## **The Degree of Bachelor of Arts in Music and Musicology - Arabic Musicology**

بكالوريوس في الموسيقى والعلوم الموسيقية العربية (تُعطى في اللغة العربية)

A concentration in the different schools of Arabic Music, from Al-Kindi and Al-Farabi to the modern era. Students will be proficient in at least one oriental instrument.

### **Degree Requirements (99 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **39 cr.**

MUA 222, MUA 254, MUS 211, MUS 221, MUS 222, MUS 223, MUS 228, MUS 229, MUS 232, MUS 233, MUS 243, MUS 244, MUS 331, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463

**Concentration** **24 cr.**

MUA 227, MUA 234, MUA 324, MUA 332, MUA 334, MUA 343, MUA 344, MUA 353, MUA 363, MUA 424, MUA 463, MUA 477.

**Free Electives** **6 cr.**

## **The Degree of Bachelor of Arts in Music and Musicology - Jazz Music**

Jazz music was the musical phenomenon that combined American, African, and Indian music and heritage. Developed in the American Continent, it spread around the world. It became evident that such a rich form of music was able to touch a great number of music lovers and scholars at an international level. It is a musical art with its own language, rhythms, harmony, which excelled in its creative improvisation. Our students will become knowledgeable with the masters of such art including composers, performers, and schools.

### **Degree Requirements (99 credits)**

**General Education Requirements** **30 cr.**

**Major Requirements** **39 cr.**

MUA 222, MUS 211, MUS 221, MUS 222, MUS 223, MUS 224, MUS 232, MUS 233, MUS 234, MUS 243, MUS 324, MUS 331, MUS 334, MUS 341, MUS 342, MUS 343, MUS 352, MUS 353, MUS 382, MUS 441, MUS 451, MUS 452, MUS 453, MUS 462, MUS 463.

**Concentration** **24 cr.**

MUJ 342, MUJ 352, MUJ 311, MUJ 322, MUJ 411, MUJ 422, MUJ 324, MUJ 325, MUJ 434, MUJ 435, MUJ 474, MUJ 475, MUJ 345, MUJ 485, MUJ 486, MUJ 494, MUJ 495.

**Free Electives** **6 cr.**

---

## Minor in Jazz (15 credits)

Selection and preparation of courses for the Minor in Jazz Music at the Department of Musicology at NDU is based on the observation that the contemporary application of jazz music seems more attractive to the younger generations. The number of students inquiring about jazz music exceeds the number of students inquiring about other minors in Music. This minor will educate students about the background theory and the applied instrumental needed to qualify for job opportunities in entertainment, teaching, festivals, directing, etc.

NDU will be the first university offering this Minor in Jazz Music and creating opportunities for students to add to their education an added knowledge in the subject and in accordance with the mission of the University and its commitment to the philosophy and standards of the American model of liberal arts education.

Our goal is to attract students from other Faculties to learn jazz music language and appreciate the cultural richness of this field. Theory and application will be combined to provide the knowledge and creativity in becoming aware of this music.

Proposal: The NDU minor in Jazz Music comprises **15 credits**. The candidate could be an amateur musician practicing a musical instrument. occasionally Students with a good academic standing of a GPA of 2.0/4 or above may enroll in this minor. They can count only 6 credits that they have taken from the list of the Jazz Music minor requirements while pursuing another major.

### The Courses required for a Minor in Jazz

MUS 222 Theory of Music I	1 cr.
MUJ 311 Jazz Sight Singing, Ear Training and Rhythmic Analysis I	1 cr.
MUJ 324 History and Analysis of Jazz Music I	2 cr.
MUJ 342 Jazz Theory I	2 cr.
MUJ 474 Jazz Ensemble I	1 cr.
MUJ 485 Jazz Arranging I	2 cr.

#### Pool 1: Two courses from the following

MUJ 352 Jazz Theory II (theory)	2 cr.
MUJ 355 American Ethnic Music (theory)	2 cr.
MUJ 464 Gospel Chorus (practice)	2 cr.
MUJ 486 Jazz Arranging II (practice)	2 cr.

#### Pool 2: Two courses from the following

MUS 232 Theory of Music II (theory)	1 cr.
MUJ 322 Jazz Sight Singing, Ear Training and R. A. II (practice)	1 cr.
MUJ475 Jazz Ensemble II (practice)	1 cr.
	15 cr.

---

## Undergraduate Courses: Musicology

**MUS 201 Music Archeology (3.0); 3 cr.** Music instruments and inscriptions of the early time.

**MUS 210 Music Appreciation (3.0); 3cr.** A brief survey of the music history in various cultures and ages aiming at introducing students to knowing and appreciating the art of music in its different forms, and instruments. The course relies heavily on listening to music through visual aids relaying the sound to the instrument.

**MUS 211 Applied Music Instrumental or Vocal I (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument or voice. *Prerequisite:* Knowledge of 20% of the Latin program or its equivalent.

**MUS 214 Introduction to Musicology (3.0); 3 cr.** A survey of musicology, its philosophy and objectives, Relating musicology to auxiliary disciplines.

**MUS 221 Applied Music Instrumental or Vocal II (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 211.

**MUS 222 Theory of Music I (1.0); 1 cr.** Last and general survey of Theory of Music aiming to fill up any lack in theory supposed to be achieved.

**MUS 223 Sight Singing and Ear Training I (1.0); 1 cr.** Ear training and sight singing exercises in the keys of C major, A minor, F major, D minor, G major, and E minor.

**MUS 224 History and Analysis of Western Music: Medieval – Baroque Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Medieval, Renaissance, and Baroque periods.

**MUS 228 History and Analysis of Western Music A: Medieval – Baroque - Classical Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Medieval, Baroque and Classical periods. The instructor focuses on explaining the basic concept of the Medieval, Baroque and Classical philosophies relating the art of music to other fine arts of the same period. The process of music languages teaching focuses on reading the scores, playing it on instruments and listening to it recorded.

**MUS 229 History and Analysis of Western Music B: Romantic – Post Romantic – 20<sup>th</sup> Century and Contemporary Music (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Romantic, Post Romantic and 20<sup>th</sup> century periods. The instructor focuses on explaining the basic concept of the Romantic, Post Romantic and 20<sup>th</sup> century philosophies relating the art of music to other fine arts of the same period. The process of music languages teaching focuses on reading the scores, playing it on instruments and listening to it recorded.

**MUS 232 Theory of Music II (1.0); 1 cr.** The modes (other than the major and minor modes), chords (up to five tone chords), modulation, phrases and the different kinds of cadences, transposition, ornaments and abbreviations, and the contemporary notation. In brief: open horizon on harmony. *Prerequisite:* MUS 222.

**MUS 233 Sight Singing and Ear Training II (1.0); 1 cr.** Sight singing and ear training exercises in keys with up to four alterations. Introduction to the eighth and 16th notes and

syncopation, and the cut-time time signature. *Prerequisite:* MUS 223.

**MUS 234 History and Analysis of Western Music: Classical Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of the Classical period.

**MUS 243 Lebanese Music (3.0); 3 cr.** Traditional and popular Lebanese music: forms, metrics, modes rhythms and instruments from early time to the 20th century.

**MUS 244 Ethnomusicology (3.0); 3 cr.** Introduction to music of different cultures and times.

**MUS 245 Musical Forms (3.0); 3 cr.** Genres, styles, forms, structures of music throughout history.

**MUS 324 History and Analysis of Western Music: Romantic and Post-Romantic Period (3.0); 3 cr.** Survey of composers, pieces, languages and styles of Romantic, and Post-Romantic periods.

**MUS 331 Applied Music Instrumental or Vocal III (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 221.

**MUS 334 History and Analysis of Western Music: 20<sup>th</sup> Century and Contemporary Music (3.0); 3 cr.** Survey of composers, pieces, and styles of 20<sup>th</sup> century and contemporary periods.

**MUS 341 Applied Music Instrumental or Vocal IV (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 331.

**MUS 342 Harmony I (1.0); 1 cr.** Three tone chords, cadences, and modulation. Harmonizing short pieces and the dominant seventh chords. *Prerequisite:* MUS 232.

**MUS 343 Sight Singing, Rhythmic Chanting, and Ear Training III (1.0); 1cr.** Sight singing and ear training exercises in keys with up to 6 alterations in the key signature. Introduction to composite measures, and more in depth applications of syncopation. *Prerequisite:* MUS 233

**MUS 344 Religious Music (Gregorian, Byzantine, and Syriac) (3.0); 3 cr.** Survey of Gregorian, Byzantine, and Aramaic chants and their modes.

**MUS 352 Harmony II (1.0); 1 cr.** 9th, 11th, and 13th chords, diminished seventh chords, and altered chords. *Prerequisite:* MUS 342.

**MUS 353 Sight Singing, Rhythmic Chanting, and Ear Training IV (1.0); 1 cr.** Sight singing and ear training exercises in the key of F with advanced rhythms. *Prerequisite:* MUS 343.

**MUS 382 Methodology (research methods) of Music (3.0); 3 cr.** Introduction to musical sources, principles of research, research styles, citations, and formatting. Art of writing theses and scientific works.

**MUS 384 Research Seminar (3.0); 3cr.** Presentation of a research project under the supervision of the teacher. *Prerequisite:* MUS 382.

**MUS 441 Applied Music Instrumental or Vocal V (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument. *Prerequisite:* MUS 341.

**MUS 444 Philology of Music (3.0); 3 cr.** Musical intelligence, development of musical principles, intervals, and scales. *Prerequisite:* MUS 352.

**MUS 451 Applied Music Instrumental or Vocal VI (1.0); 1 cr.** Private lessons with the teacher on the student's major instrument:

Knowledge of 50% of the Latin program or its equivalent. *Prerequisite:* MUS 441.

**MUS 452 Harmony III (1.0); 1 cr.** Retardation, pedal points, passing tones, neighboring tones, anticipation, the appoggiatura, and escape notes. *Prerequisite:* MUS 352.

**MUS 453 Sight Singing, Rhythmic Chanting, and Ear Training V (1.0); 1 cr.** Sight singing and ear training exercises in simple keys with advanced rhythms. *Prerequisite:* MUS 353.

**MUS 454 Instrumentation (3.0); 3 cr.** Study of instrumentation and arranging different music to different ensembles. *Prerequisite:* MUS 452.

**MUS 455 Orchestration (3.0); 3 cr.** Art of orchestra composing based on the evolution of instruments and music Schools.

**MUS 462 Counterpoint and Fugue (1.0); 1 cr.** Writing music for more than one voice in the modal styles of the organum, Motet... to fugue. *Prerequisite:* MUS 352.

**MUS 463 Sight Singing, Rhythmic Chanting, and Ear Training VI (1.0); 1 cr.** Sight singing and ear training exercises in all tonalities, and the C-clef. *Prerequisite:* MUS 453.

**MUS 475 Acoustics of Music (3.0); 3 cr.** Principles of sounds. Science of sound and the process of hearing. The study of hall acoustics.

---

### Undergraduate Courses: Music Education

**MUE 335 Music Education (3.0); 3 cr.** A survey of the various musical education methods, such as the Orff, Dalcroze, Kodaly, Suzuki, and other methods.

**MUE 446 Teaching Music at the Elementary Level (3.0); 3 cr.** Writing lesson plans appropriate to the elementary level and applying them. Learning teaching methods suitable for the age group (6-11).

**MUE 474 Child Theater Music (3.0); 3 cr.** This course is divided into two parts: one theoretical and the other practical. This course requires music majoring students to study and apply the learned material to create and develop

theatrical events for children in neighbouring schools.

**MUE 476 Teaching Music at Secondary Level (3.0); 3 cr.** Writing lesson plans appropriate to the secondary level and applying them. Learning teaching methods suitable for the age group (12-17).

**MUE 479 Lebanese Folk Educational Music (3.0); 3 cr.** This course centers upon a variety of music folk education covering a wide span beginning with the childhood to adulthood. Special emphasis will be on exploring the local folk musical trends and traditions which would drive the educator to focus on local modalities: rhythms and forms.

---

### Undergraduate Courses: Musimedialogy

**MUM 347 Computer and Music (3.0); 3 cr.** Introduction to different musical notation and MIDI programs.

**MUM 350 Audio-Video Music Workshop (3.0); 3cr.** The art of using Audio-Video equipment within the context of musical

software for composition such as “Nuendo, VSTs” and other listening and working tools. This course adds an extra dimension to this Audio-Video art, serving as well as composing and producing an audio work, conceiving and realizing music for video in its broadest meaning, from advertising music to purely music composing. Students will be exposed to new tools, ways and skills of composing during the course.

**MUM 354 Organology of music (3.0); 3 cr.** Music Prototype Instruments manufacture and evolution through history: Strings, winds..., ear, and vocal cords.

**MUM 437 Music Management (3.0); 3 cr.** Business aspects of the arts; selecting suitable musical acts for performances, providing the venue, selecting the program, promoting the act, and selling the tickets, rules and P.R. required for musician relation with consumer public and producers. Music Managements studys the procedures and techniques applied to administer and manage areas in the musical industry such as choirs, classes, concerts, production, festivals, musical events, management of talented artists

through the public marketing of the final production.

**MUM 447 Survey of Art Schools (1.0); 1 cr.** A course surveying the Art schools aiming at preparing the Musical Criticism.

**MUM 448 Musical Criticism (3.0); 3 cr.** Writing musical critiques, reviews, and previews, of musical events.

**MUM 457 Radio and Television Music Casting (3.0); 3 cr.** Performing critiques, reviews, and previews of musical events, live or taped on the radio or the television. Students are required to maintain 2 free hours, one before and the other after the lecturing time of the course.

**MUM 474 Music Law (3.0); 3cr.** The course focuses on the national, regional and international laws protecting the rights of composition, production, distribution, and marketing locally and internationally. Students will be acquainted with the various international organizations protecting intellectual property such as SACEM, WTO and others.

### Undergraduate Courses: Arabic Musicology

**MUA 218 Arabic Prosody (2.0); 2 cr.** ( علم لأوزان الشعر العربية وإيقاعاتها، موسيقى الشعر (العروض)

**MUA 222 Arabic Music Theory I (3.0); 3 cr.** (Theory, Maqamat, rhythms and forms).

**MUA 227 Arabic Music Theory II (3.0); 3 cr.** تحليل معمقة للنظريات الموسيقية العربية: (نظريات الموسيقى العربية، المقامات المركبة والإيقاعات المركبة).

*Prerequisite:*MUA 222

**MUA 228 History and Analysis of Western Music A (3.0); 3 cr.** The course is a condensation of two courses MUS 224 and MUS 234.

**MUA 229 History and Analysis of Western Music B (3.0); 3 cr.** The course is a condensation of two courses MUS 324 and MUS 334.

**MUA 234 History and Analysis of Arabic Music II (2.0); 2 cr.** Al-Kindy - Andalusian music

**MUA 254 History of Arabic music I. (3.0); 3 cr.** A general survey of the history of of Arabic music from the beginning to the contemporary era.

**MUA 318 Qoran Chanting(2.0); 2 cr.** (الانشاد القرآني)

**MUA 324 History and Analysis of Arabic Music III (3.0); 3cr.** Al-Farabi.

**MUA 332 Arabic Music Theory III (2.0); 2cr.** تحليل مؤلفات عربية كلاسيكية واستخراج النظريات الموسيقية العربية: المقامات المركبة والإيقاعات المركبة منها

**MUA 334 History and Analysis of Arabic Music IV (2.0); 2 cr.** Ibn Sina, Al-Ikhawan Al-Safa, Ibn Rushd.

**MUA 343 Oriental Sight Singing 1 (1.0); 1 cr.** صولفيج شرقي ١

**MUA 353 Oriental Sight Singing 2 (1.0); 1 cr.** صولفيج شرقي ٢. *Prerequisite:* MUA 343.

**MUA 363 Oriental Sight Singing & Ear Training 3 (1.0); 1cr.** صولفيج شرقي ٣. *Prerequisite:* MUA 353.

**MUA 374 Arabic Instrumental Ensemble (2.0); 2cr.** This course offers the student the possibility to apply within an ensemble the Arabic Music Instrument he plays or the Arabic Chanting he studied, notwithstanding that the difference between playing instrument and singing alone would not provide the student the

same knowledge and experience compared to the same application in a group.

**MUA 424 History and Analysis of Arabic Music V (2.0); 2cr.** Cairo Congress of Arabic Music 1932-1934 Michael Moushaqa and contemporary theorists.

**MUA 444 History and Analysis of Arabic Music VI (3.0); 3 cr.** Arab Renaissance-Modern Arabic Music.

**MUA 463 Oriental Sight Singing & Ear Training 4 (1.0); 1 cr.** (صولفيج شرقي ٤)  
*Prerequisite:* MUA 363.

**MUA 477 Andalusian Music (3.0); 3 cr.**  
الوزن الشعري للموشحات الأندلسية والموسيقى الناتجة عنه ( في الحقبة الأندلسية ؛ ومميزات هذه الموسيقى من حيث النغم والشكل والإيقاع وانتقالها من الأندلس الى المغرب العربي ثم ...الى حلب ومصر).

---

### Undergraduate Courses: Jazz Music

**MUJ 311 Jazz Sight Singing, Ear Training and Rhythmic Analysis I (1.0); 1cr.** The course deals with the basic sight singing so that students would begin to grasp the specificities of elementary level of Jazz melody and rhythm. Practicing by voice and instrument are an integral part of this course.

**MUJ 322 Jazz Sight Singing, Ear Training and Rhythmic Analysis II (1.0); 1cr.** The course provides students with an intermediate level of learning the specificities of Jazz melody and rhythm based mainly on major and minor.  
*Prerequisite:* MUJ 311

**MUJ 324 History and Analysis of Jazz Music I, (2.0); 2cr.** The course provides a historical and analytical overview of the Jazz roots and development. It focuses on the works of the master Jazz composers, starting with Oliver till Hawkins.

**MUJ 325 History and Analysis of Jazz Music II, (2.0); 2cr.** The course provides an advanced analysis of the works and performance of the Jazz master composers and performers during the thirties.

**MUJ 342 Jazz Theory I, (1.0); 1cr.** Theory of Jazz Music is divided into two credit courses to be taught in the span of two academic semesters: MUJ 342 and MUJ 352. This course provides in addition to the classical theory of music, the specific foundations of Jazz Theory and harmony. MUJ 342 begins with basic Jazz Theory, the Major Scale and the II-V-I Progression, Chord, Major Scale Harmony, Melodic Minor Scale Harmony, Diminished Scale Harmony, Whole Tone Scale Harmony, to how to practice Scales and Slash Chords. The course will be taken in conjunction with other four semesters courses dealing with Sight Singing and Ear Training.

**MUJ 345 Afro-Cuban Music & Percussion (2.0); 2cr.** The course explores from a historical perspective the various styles of Afro-Cuban Music and Percussion along its dual relationship to the Jazz language. The percussion instruments are all studied and explored in group setting. Afro-Cuban religious ceremonial rhythms, in addition to drum set applications, are also covered. The course also focuses in depth upon the analysis and knowledge of the inner workings of clove and basic techniques on the major battery of Afro-Cuban percussion (congas, bongo, timbales) in addition to minor battery (maracas, guiro, shakers, cowbells, etc.).

**MUJ 352 Jazz Theory II, (1.0); 1cr.** In continuity with Jazz Theory I, this course includes improvisation from Scales to Music, the Bebop Scales, playing "Outside", Pentatonic Scales, the Blues, "Rhythm" changes, melodic construction, choir voicing and voice leading. The course aims at exposing students to other important and related topics to include basic music analysis, the blues, standard Jazz forms and typical chord substitutions. *Prerequisite:* MUJ 342.

**MUJ 355 American Ethnic Music (2.0); 2cr.** American Ethnic Music role is considered as the basis (raw material) for creation and development of the Jazz music in addition to contributions offered by African and Asian ethnic music. This American music culture has been a faithful mirror of the pluralistic ethnic American socio-cultural composition.

**MUJ 356 African & Far-East Ethnic Music (2.0); 2cr.** The course studies in depth the basic connecting relations between the African music: melody, modalities and rhythms recognized as the inspirational source of jazz, developed by the Afro-American symbiosis of the people and cultures. The same applies to the Far- Eastern cultural contributions

**MUJ 411 Jazz Sight Singing, Ear Training and Rhythmic Analysis III (1.0); 1cr.** The course offers the students a higher level of learning the sight singing and ear training of Jazz music applied to accidental and ethnic modalities that Jazz had developed. *Prerequisite:* MUJ 322.

**MUJ 422 Jazz Sight Singing, Ear Training and Rhythmic Analysis IV (1.0); 1cr.** This is an advanced level in learning sight singing and ear training of Jazz music. It focuses on reaching and analyzing complex melodies and rhythms. *Prerequisite:* MUJ 411.

**MUJ 434 History and Analysis of Jazz Music III, (2.0); 2cr.** The course focuses on the development of the Jazz music during the fifties and sixties with special emphasis on the works of the masters of this period.

**MUJ 435 History and Analysis of Jazz Music IV, (2.0); 2cr.** Students will be exposed to the evolution of the Jazz language, styles and forms as presently performed.

**MUJ 464 Gospel Chorus (2.0); 2cr.** The course is designed for all students interested in singing gospel music: styles, ranging from traditional to contemporary schools. A special emphasis will be on phrasing, stamina and singing techniques.

**MUJ 474 Jazz Ensemble I (1.0); 1 cr.** The course offers the students the opportunity to prepare him/herself, accompanied by the instructor, to master, and qualify as a competent member of the Jazz ensemble. The course encompasses the elementary forms of the big band.

**MUJ 475 Jazz Ensemble II (1.0); 1cr.** This course is an advanced level of Jazz ensemble. The main objective centers upon giving the student the necessary experience from playing in a band and spending longer time into applying the practical side of learning. It develops sight reading skills and creativity in the student so that he/she might be able to perform arrangements and compositions as well as playing in bands. (Students who register for this course should understand that each teaching hour tends from two to three hours in practice).

**MUJ 485 Jazz Arranging I (2.0); 2cr.** The course provides the student with the basic techniques and methods to arrange existing Jazz melodies for small groups.

**MUJ 486 Jazz Arranging II (2.0); 2cr.** In this advanced level the student will master the techniques regarding voicing, instrument sonorities, capabilities and other extended forms. It focuses on large group. *Prerequisite:* MUJ 485.

**MUJ 494 Advanced Re-harmonization I (1.0); 1cr.** This course provides the students with an overview of the variety of techniques for re-harmonization. *Prerequisite:* Theory of Music II or equivalent.

**MUJ 495 Advanced Re-harmonization II (1.0); 1cr.** The course will focus in-depth on materials stressing the pedal point and the creation of chromatic voicing to enable students develop a personalized relationship with the harmony. *Prerequisite:* MUJ 494

---

## **The Degree of Master of Arts in Music**

Graduate study in Musicology covers approaches such as historical and ethnomusicological investigation as well as hermeneutics, semiotics, and criticism. Students are expected to become familiar with a wide range of areas: methods, philosophies, and techniques of historical research methods for analysis of music and ethnomusicological research.

Students enrolled in the program are expected to familiarize themselves with the current state of musicological research and thinking through independent study as well as in consultation with faculty members. Students are also expected to take an active part in the working musicological community at large, through participation in regional, national, and international meetings and concomitant informal contacts with students and faculty at other institutions.

The program aims:

- To develop and sharpen the skills each student needs to realize his or her future specialization intentions;
- To expand each student's conception of what is possible in construing music performance or research through speculation and experimentation;
- To develop a larger and sharper sense of the context in which the students work, and on which it depends by continued study and research.

### **Admission Requirements**

Applicants will normally hold a Bachelor degree in Music or an equivalent qualification. They need to submit an extended piece of writing on a musical subject in order to provide evidence of writing skills and intellectual ability appropriate for musicological study at master's level. An English test is required except for students majoring in Arabic music. Selection is based on information submitted by the applicant, and by interview when necessary.

### **Transfer**

Although transfer is not generalized, some credits from major universities can be transferable upon admission by the Committee. A transferred course must be passed at the grade of 80 according to the NDU grading and University Bylaws.

In addition, applicants for the graduate program may be granted a maximum of nine transfer credits of graduate studies taken at another accredited institution of higher education provided that the transfer course(s) correspond to the NDU course requirements.

### **Graduation Requirements**

To receive the degree of Master of Arts in Music, a student must complete a total of 36 credits with a minimum cumulative GPA of 3.0/4.0 in all Major Courses.

### **Structure and Time-table**

The program is delivered over four semesters. All students, whether full- or part-time, initially complete the program requirements, and attend the research method course. Classes are normally timetabled in the afternoons.

The program moves from general methodological concerns towards greater specialisations.

1. Research methodology.
2. Academic study. All students are required to take courses in Musical Thought, languages and aesthetics.
3. Dissertation. Here students embark on a programme of independent study, supervised by a dissertation advisor.

## Degree Requirements (36 Credits)

### Major Courses

36 cr.

MUS 615, MUS 616, MUS 617, MUS 625, MUS 626, MUS 627, MUS 636, MUS 637, MUS 638, MUS 639, MUS 699.

---

### Graduate Courses: Music

#### **MUS 615 Methodology of Research (3.0); 3cr.**

The students learn the art of writing the M.A. thesis. In this course, students will use a variety of methods, skills, and sources, including, but not limited to, qualitative and quantitative information, i.e. documentation techniques. Students will need to focus on the application side of methodological techniques and international theory displaying the ability to analyze, discover, and evaluate, and using the actual archives, musicological tools and technology, and other source or reference material.

#### **MUS 616 Seminar in Musicology I (3.0); 3cr.**

Original work in areas of current musicological significance will be presented to and reviewed by the seminar as the occasion arises. Emphasis is given to student projects, but work in progress by any member of the seminar may be discussed or a topic of particular controversy examined.

#### **MUS 617 Seminar in Musicology II (3.0); 3cr.**

A Student may choose a free subject related to his/her one musical interest that he/she may specialize in for his/her PhD.

#### **MUS 625 Seminar in Ethnomusicology I (3.0); 3cr. Research Methods in Ethnomusicology: Musical Ethnography,**

an introduction to the theories and methods of ethnomusicological fieldwork, including changing conceptions of the research site, ethical concerns, interview techniques, the ethnography of musical performance, and data analysis and interpretation. Individual research project required.

#### **MUS 626 Seminar in Ethnomusicology II (3.0); 3cr. Ethnomusicology: Theory and Structure of oriental or occidental Classical Music.**

Students analyze rhythmic and melodic structures of musical genres and forms, examine relative explanatory tools and assess alternate theories of Music material.

**MUS 627 Art Criticism (3.0); 3cr.** This course studies the methods used by various schools of art criticism throughout history with special

emphasis on helping students see how technology and the diversity of languages in modernity have influenced contemporary methods of art criticism.

#### **MUS 636 Aesthetic Philosophy (3.0); 3cr.**

This course investigates the fundamental nature or soul of art and aesthetic experience. Students explore and scrutinize the artistic theories and aesthetic principles that are presupposed in both Western and Eastern art. This course provides students with both a personal appreciation of aesthetics, as well as a basic ability to apply this appreciation to art criticism.

#### **MUS 637 Modern Music: 1900 – 1960 (3.0);**

**3cr.** A survey of major works from occidental music, spanning the first six decades of the 20th century. Divided into three periods: 1900 to World War I; WWI to WWII; and 1945 to the early 1960s. The following composers receive greatest attention: Schoenberg, Berg, Webern, Ravel, Stravinsky, Prokofiev, Shostakovich, Ives, Britten, Messiaen, Stockhausen, and Carter. By studying the great masters of modern music, the student would learn how to discern their creations in order to produce and apply his/her own particular musical language using new elements of his/her own cultural content.

#### **MUS 638 Serial Music (3.0); 3cr.**

A critical examination primarily of twelve-tone serialism. Particular emphasis is given to the relations embodied in the twelve-tone set and its transformations, associated invariants, combinatorial, derivation, and aggregate structure, with reference to representative compositional realizations. The dimensions and the levels of structure that do not necessarily manifest set relations are also examined.

#### **MUS 639 The Music Industry (3.0); 3cr.**

The course will assist the student to invent and invest in music. It prepares the student for a more fruitful interaction with the present techniques and music technology by managing the world of sound from the microphone to the commercial music items.

**MUS 699 Thesis (6.0); 6cr.** A dissertation of around 15,000 words on an agreed subject is required.

---

### Undergraduate Courses: Fine Arts

**FAP 101 Introduction to Music and Art (3.0); 3 cr.** Introduces students to techniques and representative works in the music and arts of various periods.

**FAP 201 Intro to Painting (2.2); 3 cr.** Introduces the student to different materials of painting, construction, composition and paint handling.

**FAP 203 Intro to Ceramics (2.2); 3 cr.** This course will allow the students to build forms from clay using basic handbuilding techniques and the potter's wheel.

**FAP 211 Drawing I (2.2); 3 cr.** Eye and hand coordination are developed through the use of different drawing techniques.

**FAP 214 Performing Arts and Music (2.2); 3 cr.** Designed to enhance student's creativity in discovering the fields of theater, dance and music.

**FAP 215 Art & Culture (1.2); 3 cr.** The course focuses on how artworks reflect the culture, the societies, and the times. Students will learn to see, analyze, and understand the works of art in relation to the relevant context. This course will be organized thematically and will explore modern issues from historical, cultural and social perspectives.

**FAP 221 Drawing II (2.2); 3 cr.** Drawing is encouraged through observation and application. The human figure is considered in relation to the environment. *Prerequisite:* FAP 211.

**FDP 201 Basic Design (2.2); 3 cr.** Introduces students to basics of visual expression and organization. *Prerequisite:* Sophomore Standing.

**FDP 214 Design for Advertising (2.2); 3 cr.** This course is designed for the communication art students. It emphasizes both the functional and the aesthetic aspects of design. *Prerequisite:* FDP 201.

### Undergraduate Courses: Photography

**PDP 201 Basic Photography (2.3);3cr.** An introduction to the camera, dark room, film, and processing. Students will learn about

basic techniques of exposure, lighting, and laboratory.

**FACULTY OF BUSINESS  
ADMINISTRATION AND  
ECONOMICS (FBAE)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

Menassa, Elie, D.B.A.

Green Building, 2<sup>nd</sup> Floor, Room B 330

Tel: 09-218950/1/2 (Extension 2488), Direct line: 09-208300

E-mail: emenassa@ndu.edu.lb

Cattan, Ghada, Administrative Assistant

Green Building, 2<sup>nd</sup> Floor, Room B 334

Tel: 09-218950/1/2 (Extension 2492), Direct line: 09-208301

E-mail: gcattan@ndu.edu.lb

Khoueiri, Roy, Doctorat, Assistant Dean

Green Building, 2<sup>nd</sup> Floor, Room B 352

Tel: 09-218950/1/2 (Extension 2228), Direct line: 09-208330

E-mail: khoueiri@ndu.edu.lb

Rashed, Maya, Administrative Assistant

Green Building, 2<sup>nd</sup> Floor, Room B 351

Tel: 09-218950/1/2 (Extension 2466), Direct line: 09-208331

E-mail: mrashed@ndu.edu.lb

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

Hamadeh, Mohamad, Ph.D, Chairperson

Green Building, 2<sup>nd</sup> Floor, Room B 336

Tel: 09-218950/1/2 (Extension 2489), Direct line: 09-208305

E-mail: mhamade@ndu.edu.lb

Moubarak, Kamale, Secretary

Green Building, 2<sup>nd</sup> Floor, Room B 337

Tel: 09-218950/1/2 (Extension 2493), Direct line: 09-208306

E-mail: kmoubarak@ndu.edu.lb

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

Menassa, Joyce, M.S., Chairperson

Green Building, 2<sup>nd</sup> Floor, Room B 347

Tel: 09-218950/1/2 (Extension 2434), Direct line: 09-208316

E-mail: jmenassa@ndu.edu.lb

Kanaan, Grace, Secretary

Green Building, 2<sup>nd</sup> Floor, Room B 339

Tel: 09-218950/1/2 (Extension 249), Direct line: 09-208307

E-mail: gkanaan@ndu.edu.lb

## **Department of Hotel Management and Tourism**

Beyrouthy, Ghassan, M.B.A., Chairperson  
Green Building, 2<sup>nd</sup> Floor, Room B 341  
Tel: 09-218950/1/2 (Extension 2517), Direct line: 09-208303  
E-mail: gbeyrouthy@ndu.edu.lb

Akiki, Dunia, Secretary  
Green Building, 2<sup>nd</sup> Floor, Room B 340  
Tel: 09-218950/1/2 (Extension 2484), Direct line: 09-208304  
E-mail: dakiki@ndu.edu.lb

## **Academic Advisors**

### **Student Advisors of the Graduate Program:**

Finance and Economics:  
Hamadi, Hassan, Ph.D.

Human Resources, Project and Operations Management:  
Hashem, Elham, Ph.D.

Management and Marketing:  
Zgheib, Youssef, Ph.D.

### **Student Advisors of the Department of Accounting, Finance and Economics:**

Accounting:  
Frayha, Norma, M.B.A.

Banking and Finance:  
Bassil, Charbel, Ph.D., Bitar Nicholas, Ph.D., Hobeika Louis, Ph.D., Hovivian, Hrair,  
M.S., Khalil, Toni, M.B.A., Shaffu, Raja, M.B.A.

Economics:  
Kanbar, Nancy, Ph.D.

Financial Engineering:  
Abi Saleh, Richard, Master

### **Student Advisors of the Department of Management and Marketing:**

Business Management: Akhras Caroline, Doctorate in Education, Harb Atef, Ph.D.

International Business Management: Barakat Edgard, M.B.A., Karam Salim, M.B.A.

Marketing: Menassa Joyce, MS, Zakhour Kamal, M.B.A.

Human Resource Management: Sleilati Esther, Doctorate of Business Administration

Distribution and Logistic Management: Barakat Edgard

Health Care Management: Harb Atef

### **Student Advisors of the Department of Hotel Management and Tourism:**

Assaf Carole, M.B.A., Beyrouthy Ghassan, M.B.A., Sakr Omar, M.B.A., Zgheib Youssef,  
Ph.D.

## **FACULTY PROFILE**

The primary objectives of the Faculty are:

- To serve the community by providing programs of study that are professionally oriented, comprehensive, relevant to today's business world, and of high standard;
- To prepare well-rounded business graduates who are equipped with analytical, quantitative, managerial, and human skills to make sound and responsible decisions;
- To develop business graduates who are aware of the connection between business-management decisions and political, social, economic, legal, ethical, technological, and environmental factors;
- To develop business graduates who are able to identify management and organizational problems, isolate critical factors, generate feasible alternatives and, after critical thinking and analysis, come up with the most appropriate solution.

## **MISSION, VISION, AND VALUES**

### **Mission**

Consistent with the University mission, the Faculty of Business Administration and Economics at NDU strives for excellence in teaching, research, and community involvement. We instill in our students the necessary knowledge, skills, and moral values to become ethical and socially responsible professionals within the framework of a liberal arts system of higher education. The Faculty collaborates with local, regional, and international stakeholders for mutually beneficial exchange of knowledge and expertise. We also promote fair advancement opportunities for faculty and staff, and we endeavor to provide our students with a stimulating educational environment.

### **Vision**

To be identified as a premier business school to work and study at, offering life-transforming experiences that are directly relevant to the local and regional market place.

### **Values**

Consistent with those of the University, the FBAE is inspired by the following values:

- Openness and faith;
- Performance and accountability;
- Freedom and enquiry;
- Empowerment and engagement;
- Life-transforming experiences.

## **ACADEMIC DEPARTMENTS AND DEGREE PROGRAMS**

The Faculty of Business Administration and Economics has a graduate division and three undergraduate departments, offering a Master of Business Administration, a Bachelor of Business Administration, and a Bachelor of Hotel Management and Tourism.

## Graduate Division

The Graduate Division offers a program leading to the degree of Master of Business Administration.

The program is designed to provide advanced business and management studies for students who have shown distinct academic ability and for practicing managers who aim at higher achievement in their present position.

Students may attend on full-time or part-time basis. All the courses are offered starting 5:30 p.m.

Although the graduate program is designed as a terminal degree program, graduates are well prepared to pursue higher degrees in business and economics.

### Mission

Consistent with the Faculty mission, the M.B.A. program at NDU aims at providing aspiring candidates, of various professional and educational backgrounds, with a set of theoretical knowledge and technical skills allowing them to make informed business decisions in a socially responsible manner. The program equips them with the competencies necessary to advance in their careers or pursue further education, as well as being active players in local, regional, and international markets.

### Admission Procedures and Requirements

For admission procedures to the graduate degree program, see the appropriate page numbers in this catalog.

The M.B.A. applicant must submit a file containing the following documents:

- The application form;
- Two recent photographs;
- Official transcript from his university of origin and the overall GPA;
- The official GMAT exam score;
- Recommendation letters from former professors;
- The CV showing work experience (if any);
- Employment Letters specifying present position and years of service.

**Applicants from institutions where English is not the language of instruction, a minimum score of 600 in the English Entrance Test is required.**

### Eligibility for Admission

A composite score, consisting of weighted criteria, will be used to determine the eligibility of graduate applicants. Applicants to the M.B.A. program could be:

- Admitted  
Admitted on probation; Applicants may be required to take up to four preparatory courses in which a grade of “C” or below was scored during his/her undergraduate studies
- Admitted as special; applicants are required to take four preparatory courses  
Non- B.B.A. holders are assigned up to four preparatory courses

**A minimum grade of “B” should be scored in each preparatory course. The grades of these courses are not included in the GPA. Only upon successful completion, candidates can join the regular M.B.A. program. Moreover, students admitted on probation or admitted as special should obtain a minimum cumulative GPA of 3.0/4.0**

upon completing 12 credits of graduate courses, otherwise he/she will be dismissed from the program.**Registration Procedure**

For registration procedure to the graduate program, see corresponding pages in this catalog.

### **Course Load**

The maximum course load is 12 credits per semester.

### **Academic Advisor**

Each graduate student shall be assigned an academic advisor to assist him/her in the preparation of the plan of study and in selecting a supervisor for his/her thesis or research project. However, it is the student's ultimate responsibility to ensure that all graduation requirements are met.

### **Graduation Requirements**

Students seeking the degree of Master of Business Administration must complete a total of 39 credits with an overall average of at least 3.0/4.0.

### **Academic Rules and Regulations**

*For complete and detailed information regarding academic rules and regulations of the graduate degree program, students should refer to corresponding pages in this catalog. .*

It is the responsibility of the graduate student to read and observe the academic rules and regulations set by the University and the Faculty. Ignorance of a rule or a regulation is not a justification for not applying that rule.

### **Repeating Graduate Courses**

A graduate course may be repeated only once. In the calculation of the student's cumulative GPA, only the last grade is considered.

### **Dismissal from the Graduate Program**

A graduate student will be dismissed from the program for one of the following reasons:

- Failure to remove probation within two consecutive semesters after being placed on probation;
- Getting two "F"s or three grades below "B";
- Failing the research project or the thesis defense twice.

## **UNDERGRADUATE DEGREES**

### **I- Bachelor of Business Administration**

The Department of Accounting, Finance and Economics and the Department of Management and Marketing offer programs leading to the degrees of Bachelor of Business Administration

### **Mission of the Department of Accounting, Finance and Economics, and the Department of Management and Marketing**

Consistent with the Faculty mission, the Bachelor degree of Business Administration in all of its related tracks adopts an inter-disciplinary perspective to prepare students for real world challenges at the national and international levels. Through dynamic and continuous improvement of curricula, the program aims to prepare students for different career opportunities and further academic studies and professional certifications. Moreover, our graduates will be endowed with high ethical standards to act in a socially responsible manner.

**Admission Procedures and Requirements**

For admission procedures and requirements to the undergraduate degree programs offered by the Faculty of Business Administration and Economics, refer to the Admissions Office, Undergraduate Admission section of the catalog.

**Registration Procedure**

For registration procedure for newly admitted and old students, late registration, course load, withdrawal from courses, and change of courses, see the appropriate page numbers in this catalog.

**Academic Rules and Regulations**

For complete and detailed information regarding academic rules and regulations for the undergraduate degree programs, students should refer to the appropriate page numbers in this catalog. The following additions and amendments pertain to the Faculty of Business Administration and Economics.

**Repeating Courses**

A student in the Faculty of Business Administration and Economics cannot register for a core or major course more than three times. At the third attempt, if the student still fails to get a passing grade, he/she should shift to another major or Faculty.

**Academic Probation**

A student in the Faculty of Business Administration and Economics will be placed on academic probation if at the end of a semester his/her overall GPA falls below 2.0/4.0.

**Dropping a Major**

A student in the Faculty of Business Administration and Economics who is on probation and fails at the end of a semester or summer session in two or more core and/or major courses, will be asked to change his/her major. Also, a student will be asked to change his/her major or Faculty if his/her GPA in the core and major courses drop below 2.0/4.0 for two consecutive semesters, provided he/she has completed 15 credits in the core and major courses.

**Readmission**

A business student who was asked to change his/her major or his/her Faculty of study due to poor performance in his/her major will not be readmitted in the same major or in the Faculty.

**Change of Major**

A change of major to the Faculty of Business Administration and Economics may be approved if the student meets the admission requirements and academic standards established by the Faculty. The student should follow the latest program of the new major.

### **Incomplete Grade**

This grade is used only when the student, for reasons beyond his/her control, is unable to finish the work of the course, and there is reasonable expectation that he/she will successfully complete course requirements. If this grade is not resolved by the end of the eighth week of the following semester, the Registrar's Office will convert the "I" to "F". Granting "I" needs the prior approval of the Dean of the Faculty.

### **General Education Requirements**

The general education requirements apply to all undergraduate programs.

The following list shows the General Education Requirements (GER) for all students in the Faculty of Business Administration and Economics entering Fall 2008 and thereafter.

#### **I. Communication Skills 9 cr.**

##### **English (6 cr.)**

ENL 213: Sophomore English Rhetoric

##### **And**

ENL 223: Communication Arts

##### **Or**

ENL 230: English in the workplace

##### **Arabic (3 cr.)**

ARB 211: Appreciation for Arabic Literature

ARB 212: Advanced Arabic Grammar

ARB 224 Arabic Literature and Human Thought

ARB 231: Technical Arabic

ARB 317 Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> century)

#### **II. Philosophy and Religion 6 cr.**

##### **Religion (3 cr.)**

REG 212: Religion and Social Issues

REG 213: Catholicism

REG 215: World Religions

REG 313: The Maronites: Faith and Cultural Heritage

REG 314: Marriage and Family in the Catholic Church

##### **Philosophy + Ethics (3 cr.)**

ENS 205: Environment, Society and Ethics

PHL 211: Logic and the Scientific Method

PHL 311: Ethics and the Modern World

POS 345: Ethics and Leadership

#### **III. Cultural Studies and Social Sciences 6 cr.**

##### **A – Cultural Studies (3cr.)**

HUT 305: Human Thought to 1500

HUT 306: Human Thought from 1500 to the present

MUS 210: Music Appreciation

FAP 215: Art and Culture

COA 359: Media and Society

COA 315: World Cinema Survey

NTR 215: Foods and Nutrition of World Cultures

ARP 215: Cultural Themes in Lebanese Architectural

**B – Social Sciences (3cr.)**

PSL 201: Intro to Psychology

SOL 201: Intro to Sociology

SOL 301: Introduction to Anthropology

SOL 313: Family Violence and Child Abuse

\*BAD 201: Fundamentals of Management

**Error! Bookmark not defined.**ECN 200: Survey of Economics

**Error! Bookmark not defined.**ECN 211: Principles of Microeconomics

**Error! Bookmark not defined.**ECN 212: Principles of Macroeconomics

**IV. Citizenship**

**3 cr.**

**Choose one course (3 cr) of the following:**

HIT 211: History of Lebanon & the Middle East

POS 201: Introduction to Political Science

POS 210: Government and Politics in Lebanon

POS 240: Law and Society

IAF 301: Modern Political Ideologies

COA 350: Current Issues

POS 319: Democracy and Human Rights

POS 337: Dialogue of Civilizations

**V. Science and Technology**

**6 cr.**

**Choose one course of the following**

**Mathematics/ Statistics/Computer Science (3cr.)**

CSC 201: Computer and their use

CSC 202: Computers for Visual Arts

MAT 201: Fundamentals of Mathematics

MAT 204: Mathematics for Business and Economics I

MIS 201: Introduction to Management Information Systems

**Natural Sciences (3cr.)**

PHS 211: Principles of Physics

PHS 207: Development of Science and Technology

AST 201: Discovering Astronomy

CHM 211: Principles of Chemistry

ENS 201: Introduction to Environmental Science

ENS 202: Environment and Sustainable Development

ENS 206: Ecotourism

GIS 211: Principles of Geographic Information Systems

BIO 201: Your Body in Action

BIO 202: Mystery of Life

BIO 203: Discover Biology

HEA 201: Health Awareness

HEA 204: Contemporary Health Issues

NTR 201: Basic Human Nutrition

---

\* Not for Business students

## **Undergraduate Degree Curricula**

### **Bachelor of Business Administration (B.B.A.)**

All candidates for the degrees offered by the Department of Accounting, Finance and Economics and the Department of Management and Marketing must satisfy the following curricula:

#### **A- Required Common Core courses**

All candidates for the B.B.A. degree, irrespective of their area of concentration, must complete the following required common courses. These courses are designed to provide business students with basic management skills - quantitative, behavioral, and technical - which every manager should possess in order to meet the demanding requirements of modern business organizations and to be able to face new challenges. The courses are:

ACO 201 Principles of Accounting I<sup>1</sup>

ACO 202 Principles of Accounting II<sup>1</sup>

ACO 311 Managerial Accounting<sup>2</sup>(not required for majors in the Marketing & Mgt

BAD 201 Fundamentals of Management

BAD 311 Business Law (not required for Financial Engineering Emphasis)

BAD 323 Software Tools for Bus. Application

BAD 453 e-Business

BAF 311 Principles of Financial Management I<sup>1</sup>

ECN 211 Principles of Microeconomics<sup>1</sup>

ECN 212 Principles or Macroeconomics

ECN 333 Managerial Economics

MRK 201 Fundamentals of Marketing

STA 206 Applied Statistics for Bus. and Eco. I

STA 207 Applied Statistics for Bus. and Eco. II

MAT 205 Math for Business and Economics II

ACO 201, ACO 202, ECN 211, and BAF 311 require a minimum passing grade of C.

#### **B- Major Requirements**

Those B.B.A. candidates should complete certain concentration courses specified by their respective departments. Together with the common required courses, these courses provide some depth in one particular area of business. For the courses required for each concentration, see the concerned degree requirements.

#### **C- Free Electives**

Business students except students following Healthcare Management and Financial Engineering emphasis must choose six to seven credits offered by any Faculty.

#### **Internship Program**

Internship provides an opportunity for business majors to test and utilize theories learned in the classroom. It gives valuable on-the-job experience, and facilitates finding employment. The internship should be related to the students' majors, and should consist of a specific project. Seniors are placed in the offices of cooperating firms under the supervision of staff of the firm. The student earns 1 credit. To earn this credit, the intern should work for 120 to 150 hours (depending on the concentration). He/she should keep a record for hours worked signed by his/her direct supervisor. He/she should present periodic reports and at the end of the internship, he/she should write a 10-page report on the internship, verified by the authorized supervisor. It is preferable to have the internship in the summer.

Additional details are available with the internship advisors.

## **II. Bachelor of Hotel Management and Tourism**

The Department of Hotel Management and Tourism offers a program leading to the degree of Bachelor of Hotel Management and Tourism.

### **Mission**

Consistent with the Faculty mission, the Bachelor Program in Hospitality and Tourism Management at NDU contributes to the development of the Lebanese tourism industry and provides local, regional, and international markets with high caliber professionals of different areas of expertise. The Program aspires to embed in students an entrepreneurial spirit, sustainability principles as well as ethical and multicultural values.

### **B- Major Requirements**

All candidates for the Bachelor of Hotel Management and Tourism degree have to complete 17 3-credit courses as specified by the Department, 2 courses of Lab application, and an Internship to be preferably taken during the summer vacation. These courses provide the core Business, and Hospitality and Tourism operational skills needed prior to choosing a field of concentration.

### **C- Concentration Requirements**

Consists of six 3-credit courses and 1 Internship depending on the chosen concentration and the candidates preferred sub-specialization. These courses are to equip students with advance knowledge in their future professional field.

### **D- Electives**

In addition to the major requirements, candidates need to fulfill 3 credits as free electives according to their personal interests.

## GRADUATE PROGRAMS

Khoueiri, Roy (Assistant Dean)

### **The Degree of Master of Business Administration (M.B.A.)**

Candidates for the M.B.A. degree can pursue an M.B.A. with a concentration in the following areas: Finance and Economics, Management and Marketing, Human Resources Management, Project and Operations Management.

The M.B.A. Program consists of four parts:

#### **1. Preparatory Courses**

These courses provide a management base upon which students can build the courses required for a graduate degree.

These courses are in addition to the M.B.A. degree requirements.

The preparatory courses are:

ACO 500 Fundamentals of Financial Accounting

ECN 500 Fundamentals of Micro and Macro Economics

BAF 500 Fundamentals of Financial Management

BAM 500 Fundamentals of Management and Marketing

#### **2. Required Core Courses (18 cr. if research project or 21 cr. if thesis option):**

All candidates for the graduate degree, irrespective of their area of concentration, must complete the following six required common core courses. These courses develop an understanding of the modern business organizations and their functioning, in addition to a strong foundation in principles and theories of business, upon which students can build a variety of specializations within the degree program.

These core courses are considered as an integrated and coordinated basic set of tools for managerial decision making which can be applied in a broad range of professional settings in private and public sectors.

The Required Core Courses are:

BAF 602 Managerial Finance

ACO 602 Managerial Accounting

ECN 602 Managerial Economics

BAD 602 Business and Marketing Management

BRM 612 Business Research Methods

BAD 690 Thesis or BAD 680 Research Project

For the thesis option, the student should complete 33 semester hours of regular course work plus a 6-credit thesis. For the research project option, the student should complete 36 semester hours of regular course work plus a 3-credit research project (check with the graduate division for the steps to be followed).

#### **3. Concentration courses (18 cr. if research project or 15 cr. if thesis option)**

Degree candidates build further skills and depth of knowledge in their choice of concentration. See below the curriculum of each area of concentration. A student may choose 6 out of a list of courses if he/she chooses the research project option, or 5 of the concentration courses if he/she chooses the thesis option.

The Concentration Courses are:

**Finance and Economics**

BAF 604 Economics of Financial Markets  
BAF 606 Asset Pricing  
BAF 608 International Money and Finance  
BAF 610 Derivatives  
ECN 604 Applied Econometrics  
ECN 606 Urban Economics  
ECN 608 Political Economy  
ECN 610 Economic Development  
BL 604 International Business Law

**Project and Operations Management**

BAD 606 Leadership and Change Management  
BAD 612 Management Information Technology  
IBL 604 International Business Law Management  
MRK 608 Customer Relationship Management  
POM 604 Operations and Quality Management  
POM 606 Project Planning and Inventory Control  
POM 608 Logistics and Supply Chain Strategies  
POM 610 Global Logistics and Supply Chain Management  
POM 612 Transportation Strategy  
POM 620 Special Topics in Logistics and Supply Chain

**Management and Marketing**

BAD 604 Organizational Behavior  
BAD 606 Leadership and Change Management  
BAD 608 Entrepreneurship and Small Business Management  
BAD 610 Intercultural Management  
BAD 620 Special Topics in Management and Strategy/Marketing  
IBL 604 International Business Law  
MRK 604 Consumer Behavior and Rights  
MRK 606 Retail Management  
MRK 608 Customer Relationship Management  
MRK 610 Sales Force and Sales Promotion

**Human Resources Management**

IBL 604 International Business Law  
BAD 604 Organizational Behavior  
BAD 606 Leadership and Change Management  
BAD 610 Intercultural Management  
BAD 612 Management Information Technology  
HRM 604 Recruitment, Selection and Performance Management  
HRM 606 Labor Management Relations  
HRM 608 Strategic Human Resources Development  
HRM 620 Special Topics in Human Resources

**4. Faculty Elective Course (3 cr.)**

The faculty elective course should be selected from the other 3 areas of concentration.

---

## Preparatory Courses

**ACO 500 Fundamentals of Financial Accounting (3.0); 3 cr.** This course focuses on the basic financial accounting principles and more advanced procedures of accounting for sole proprietorships, partnerships and corporations. It explains the techniques of measuring, classifying, summarizing, reporting, and interpreting financial information. Accounting software is used.

**BAM 500 Fundamentals of Management and Marketing (3.0); 3 cr.** This course introduces the basic principles and theories of management and marketing. It discusses management objectives, organizational structures, material and human resource utilization, decision making, planning, organizing, marketing principles, marketing mix strategies, and consumer behavior.

**BAF 500 Fundamentals of Financial Management (3.0); 3 cr.** This course shows a

condensed version of financial management, including the role of the financial manager and the techniques for obtaining and using funds to maximize the value of the firm. Topics covered include discounted CF analysis, valuation methods, risk and return, financial analysis, financial planning and control, working capital management, cost of capital, capital structure, common stock, and long-term debt financing, and credit management.

**ECN 500 Fundamentals of Micro and Macro Economics (3.0); 3 cr.** This course covers the basic principles, theories, and policies in both Micro- and Macro- Economics. At the Micro level, it covers demand and supply analysis, consumer theory, production costs, and market structure. At the Macro level, it covers national income and output determination, money and banking, unemployment and inflation, and fiscal and monetary policies.

---

## Required Common Courses

**ACO 602 Managerial Accounting (3.0); 3 cr.** This course shows that the foundation of an effective decision-making process is quality information, and that management accounting is indispensable for managers to produce financial and operating information, regarding the economic condition of the organization. The course highlights management accountants as team players in decision-making and corporate management, rather than as bean counters confined to back offices.

**BAD 602 Business and Marketing Management (3.0); 3 cr.** This course examines the business environment and the strategic marketing decisions that top management faces. It presents the key concepts of planning, organizing, leading, and controlling, which are essential to efficient and effective business management; moreover, it covers market orientation, market analysis, marketing mix strategies, strategic marketing, marketing planning, and developing an integrated marketing plan, which are the basis of modern marketing.

**BAD 680 Research Project (3.0); 3 cr.** This course is an application of research methodology. Students may choose to take a research project related to their area of

concentration after the accomplishment of 30 credits.

**BAD 690 Thesis (6 cr.)** Students may choose to write a thesis (6 cr.) on a significant problem in business administration selected from their area of concentration, after completing 30 graduate credits.

**BAF 602 Managerial Finance (3.0); 3 cr.** This course provides a comprehensive and contemporary coverage of financial management. It focuses on shareholder wealth maximization and cash flow management, as well as on the international aspects of financial management. In addition, it covers financial analysis and financial decisions, capital budgeting decisions under risk, and capital structure theory. *Pre-requisite:* ACO 602.

**BRM 612 Business Research Methods (3.0); 3 cr.** This course develops an intensive and advanced study of the objectives and methodologies of research for business decisions and how to design and report experiments. Topics include techniques for defining problems; research design; research proposal; how to write a research paper; fundamentals of data manipulation; analysis and interpretation using the statistical package SPSS; multiple regression; time series and cross sectional

analysis; MANOVA; principal components analysis; factor analysis; and canonical correlation. **This course must be taken after completing 12 credits.**

**ECN 602 Managerial Economics (3.0); 3 cr.** This course applies economic theory and methodology to managerial decision-making problems within various organizational settings such as firms or government agencies. The

emphasis will be on demand analysis and estimation, production and cost analysis under different market conditions, and forecasting and decision-making under conditions of uncertainty. Students should have had some exposure to economics and basic algebra; knowledge of calculus is helpful although not necessary.

---

## Concentration Courses

**BAD 604 Organizational Behavior (3.0); 3 cr.** This course studies organizational behavior across all levels of organizational life: individual, interpersonal, group, organizational, and societal. Problems discussed and dealt with include motivation, communications, leadership, group dynamics, power, organizational structures and design, and various types of environmental constraints including competition, markets, and governmental regulations. Lecture, discussion, group problem solving and project reports are included in instructional methodology.

**BAD 606 Leadership and Change Management (3.0); 3 cr.** This course explores the reasons and contexts of the rise of the modern manager as creative individual business leader in organizations with innovative management structures, values, and motivation. The course also explores consumer's culture and expectations and the required strategies and organizational structures in the framework of a more competitive and fast-changing global business and economy environment. During continuous change and in turbulent times, the *management of change* requires the preparation of *new managers* equipped to deal with all possible scenarios that may arise.

**BAD 608 Entrepreneurship and Small Business Management (3.0); 3 cr.** This course focuses on the role of the *entrepreneur* in facing the challenges of starting and managing a successful enterprise (or re-vitalizing an established one) in an increasingly global, technologically innovative and competitive business environment. Students are expected to develop a complete business plan. The dynamic framework of the *family business's* entrepreneurial role, corporate governance, family culture, values, motivation, harmony and conflicts will also be discussed, evaluated, and integrated.

**BAD 610 Intercultural Management (3.0); 3 cr.** This course covers advanced strategies and tactics that international managers use to design, operate, control, and implement business activities in the modern world by emphasizing various functions of international business including distribution and logistics, production, global sourcing, export strategies and sales, strategies alliances and international human resources management. The course also examines the multinational organizational behavior and its implication for home and host countries. A variety of advanced topics will be investigated such as the analysis of organizational strategy, economic impact of multinationals, and differences across cultures.

**BAD 612 Management Information Technology (3.0); 3 cr.** Information systems are one of the major tools available to business managers for achieving operational excellence, developing new products and services, improving decision making, and achieving competitive advantage. The objective of this course is to prepare students for the real world of global business and information technology. Covering both, the technology and the management of information systems, this course explores how businesses use information systems to improve performance. The course also covers how information systems help in enhancing the different types of decisions that managers make.

**BAD 620 Special Topics in Management, Strategy, and/or Marketing (3.0); 3 cr.** This course examines selected topics in Management and Strategy with emphasis on real-world examples, case studies, and current issues.

**BAF 604 Economics of Financial Markets (3.0); 3 cr.** The module is one of the building blocks of the program. It familiarizes students with key concepts in the field of finance and

provides an introduction to the functioning of financial markets. The module follows by exploring money and capital markets and explaining different investment instruments traded therein. An important part of the course entertains the role of interest rates in debt markets and the no-arbitrage valuation of bonds. The module finishes with the introduction of financial derivatives. This includes understanding no-arbitrage pricing techniques for swaps, forwards and futures derived from debt markets, and for stock options from equity markets. *Pre-requisite:* BAF 602

**BAF 606 Asset Pricing (3.0); 3 cr.** The course provides an overview of the central topics in Asset Pricing and the Portfolio Theory, with a particular focus on the relationship between asset pricing and macroeconomic issues. *Pre-requisite:* BAF 602

**BAF 608 International Money and Finance (3.0); 3 cr.** This module is designed to extend and deepen students' understanding of key issues relating to finance in open economy contexts. Many of the issues covered, such as the impact of financial market integration on a country's monetary autonomy are of vital importance to policy makers and an advanced exposure to these issues will help prepare students for the challenges of careers in the financial industry as well as in government and multilateral bodies. *Pre-requisite:* BAF 602

**BAF 610 Derivatives (3.0); 3 cr.** This course focuses on options and / or futures, derivatives, and/ or risk management at an advanced level. It presents a detailed but flexible coverage of options, futures, forwards, swaps, and risk management - as well as a solid introduction to pricing, trading, and strategy - and offers an outstanding blend of institution material, theory, and practical applications. *Prerequisite:* BAF 602

**ECN 604 Applied Econometrics (3.0); 3 cr.** The course applies the most important econometrics techniques to data in Economics and Finance using computer packages. It covers applications to "Simultaneous Equation Models", "Time Series Analysis", "Panel Data", "Non-Linear Regression", "Vector Auto-regression", and Simulation Techniques. It presents too the most important forecasting methods to firms.

**ECN 606 Urban Economics (3.0); 3 cr.** The course studies the development and growth of

urban areas and examines specific urban issues such as pollution, housing, land use, telecommunication and public transportation. The course provides an economic framework to analyze the structure of economic activity within the urban and regional context, including the role of government. Topics include the determinants of industrial, commercial and residential location, as well as the economics of land markets.

**ECN 608 Political Economy (3.0); 3 cr.** The course studies the determinants of the size and form of distributive programs, the extent and type of public goods provision and the burden of taxation across alternative tax bases. It discusses several related areas including the origins of the state, comparative political systems, economic reforms, fiscal problems, rule of law, privatization, elections and the economy.

**ECN 610 Economic Development (3.0); 3 cr.** The course studies the major economic and non-economic determinants of development in developing countries and the theories and models of development. It discusses the economic underpinnings of the financial issues that affect developing countries. It discusses too issues related to agriculture, industrial development, health, nutrition, productivity, gender bias, education and technology adoption.

**HRM 604 Recruitment, Selection and Performance Management (3.0); 3 cr.** This course addresses human planning, recruitment policies and practices, pre-employment selections, interviewing and testing, developing training human resources, and personnel appraisal in terms of evaluating employee performance.

**HRM 606 Labor Management Relations (3.0); 3 cr.** This course discusses the relationships between unions, workers, management and government. Topics include collective bargaining, labor disputes resolution, strikes, arbitration, wages, employment security, and labor legislation.

**HRM 608 Strategic Human Resources Development (3.0); 3 cr.** This course covers part of the strategic management process of a given organization, since the organization is dependent on effectively utilizing and enhancing all of its sources to cope with current and future contingencies. It is about human resources development strategies, which can contribute to the overall directions of the organization.

**HRM 620 Special Topics in Human Resources (3.0); 3 cr.** This course examines selected topics on human resources, such as manpower planning, human resources information, action systems, organizational development, human resources and technological change, performance measurement and reward systems, labor and industrial relations.

**IBL 604 International Business Law (3.0); 3 cr.** The course examines the international framework of business transactions, including: the legal conditions for mergers and acquisitions, joint ventures, franchising, licensing, transport contracts, copyrights, patents, litigations, contracts performance, breach of contract and their extinction, bankruptcy, arbitration, letter of intent, conformity rules, confidentiality, and technology transfer.

**MRK 604 Consumer Behavior and Rights (3.0); 3 cr.** This course examines the many forms of consumer behavior, the principles explaining why consumers behave the way they do, the implications for marketing and advertising, and the methodologies and research techniques used for studying consumer behavior. It focuses on the main rights of the consumer and the different means to protect them.

**MRK 606 Retail Management (3.0); 3 cr.** This course provides a comprehensive approach to all aspects of retailing and the fundamental elements of retail management and retail organizations' activities, so that the student will have a solid platform on Total Retail Experience (TRE). The course also introduces and evaluates various retail strategies and tactics that help retailers create a competitive advantage over competitors. It adopts various tools focusing on customer delight and retention, such as Value Chains, CRM, and other tools.

**MRK 608 Customer Relationship Management (3.0); 3 cr.** This course displays an enterprise approach to understanding customer acquisition, customer retention, and customer value through building and maintaining long-term relationships with the right customers. The use of information technology enables organizations to build integrated databases and exchange relevant information with their current and potential customers. Students are introduced to CRM as a variety of systems that can be packaged together,

such as sales force automation, call center operations, service systems, and so forth.

**MRK 610 Sales Force and Sales Promotion (3.0); 3 cr.** The course shows how to enhance selling effectiveness, sales organization, and sales management decision problems. It presents the different stages of behavioural communication policy, and the techniques for measuring promotional results.

**POM 604 Operations and Quality Management (3.0); 3 cr.** This course covers operations strategy, product and process designs, the choice of technology, quality control systems, scheduling, supply chain management, production cycle, etc. The course deals with the management problems encountered in the context of both manufacturing and service enterprises. It also discusses the policy of *optimal inventory*. Focus will be on the problem of *Quality Management* that leads to *business excellence*, as reflected in customers' and employees' satisfaction, efficient processes, and high performance in the domestic and global markets.

**POM 606 Project Planning and Inventory Control (3.0); 3 cr.** This course deals with the tools of project planning, selection, implementation, and evaluation. It examines topics such as teamwork, budgeting, scheduling, resource allocation, task crushing, warehousing strategies, inventory management, and cost control. Examples will be drawn from product type companies, service companies and retailers by covering the majority of issues that are unique to each of these industries. A software package will be used.

**POM 608 Logistics and Supply Chain Strategies (3.0); 3 cr.** This course focuses on the value created by each and all firms involved in the procurement, production, distribution, and marketing of a given product from the raw material stage to the final consumer stage. The course approaches these issues through analytical integration of the contributions of procurement and operations management, logistics, and marketing. This analytical approach culminates in developing effective chain strategies. Concepts such as risk-pooling, integrated planning and inventory placement will also be discussed and utilized.

**POM 610 Global Logistics and Supply Chain Management (3.0); 3 cr.** This course aims at presenting the theories and applications of global

logistics and supply chain management encompassing both practical and strategic perspectives. It takes a global perspective, recognizing the trans-national nature of logistics activities in today's world. It also presents the dynamic and evolving role of supply chain management among multinational firms.

**POM 612 Transportation Strategy (3.0); 3 cr.** This course examines the five modes of transportation, costs and pricing in transportation, and how to choose the best model

and carrier for a shipment. Real-world examples and case studies are analyzed dealing with the current trends in various industries and markets.

**POM 620 Special Topics in Logistics and Supply Chain Management (3.0); 3 cr.** This course examines selected topics in logistics and Supply Chain Management with emphasis on real-world examples, case studies and current issues.

## **DEPARTMENT OF ACCOUNTING, FINANCE AND ECONOMICS**

---

<b>Professors :</b>	Hobeika, Louis; Yachoui, Elie
<b>Associate Professors:</b>	Hamadi, Hassan; Hamadeh, Mohamad(Chair); Khalil, Antoine; Khoueiri, Roy; Menassa, Elie; Naimy, Viviane
<b>Assistant Professors:</b>	Bassil, Charbel; Bitar, Nicolas; El Khoury, Rim Frayha, Norma; Hovivian, Hrair; Kanbar, Nancy
<b>Senior Lecturer:</b>	Shaffu, Raja
<b>Lecturer:</b>	Abi Saleh, Richard; Gharzouzi, George; Kaassamany, Talie

---

### **Designing a professional B.B.A. program at the Department of Finance, Accounting, Finance and Economics (DAFE)**

It is somewhat difficult to suggest a typical three-and-a-half-year program in Business, because each student's program should be specifically tailored to his or her needs and interest. This revised program in the DAFE lends itself easily to a certain degree of specialization, as is the recent trend with an increasing number of American universities. Students considering graduate work in business, computer, law or engineering will find the training received in any of the different B.B.A. degrees in the department to be quite valuable.

In Accounting, Finance, and Economics, the Department offers major Business/Economics elective courses for students who want to deepen and sharpen the focus of their major. In addition, students can pursue their course / job interest by working with their respective advisors on choosing faculty elective courses in the following areas: General Finance, Investment, Corporate Finance, Banking, Real Estate Finance, Financial Planning, Accounting Information Systems, General Accounting, Management Accounting and Control, Auditing, and Economics.

Graduate schools of business are now primarily looking for students' background that focuses on both writing and quantitative skills. Thus an appropriate business program would balance liberal arts and business contents, and the judicious use of mathematical concepts, methods, and techniques. The DAFE business curriculum provides such a program.

Not all courses listed in the suggested program below will necessarily be offered in any given semester, or year. New courses will be gradually offered when appropriate and when the human resources needs are secured.

In the required common courses, a new course, E-Business, is now added, a course which is a must for any business curriculum in these days. Also two Math courses for Business and Economics have been added because, as experience has shown, many of our incoming students are ill-prepared in Math.

## **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration – Finance, Accounting, Economics, Financial Engineering or Energy Economics Concentrations must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the common core and major requirements. These 106 credits are divided into: General Education Requirements, Common Core Requirements, Major Requirements, Faculty Electives, Free Electives. In addition, the passing grade for Principles of Accounting I and II, Principles of Microeconomics and Macroeconomics, and Principles of Financial Management I, is “C”. The passing grade for remedial Math courses is “C”. Students are strongly advised to plan their courses in advance for the entire program.

## **Admissions Requirements**

Applicants must pass the Lebanese Baccalaureate Part II (Any Strand) or its equivalent as identified by the Lebanese Ministry of Education. They are required to sit for an English Entrance Test (EET) or TOEFL. Mathematics Entrance Exam Test is required from all High School students. Upon the Entrance Exam results accepted students may be assigned MAT 001 and / or MAT 100 and / or MAT 105 by the Admissions Committee in light of their scores on the Math entrance exam.

## **General Description**

A degree in Bachelor of Business Administration in the Department of Accounting, Finance and Economics requires 106 credit hours. No minor or second major is required. A common body of knowledge is required of all students majoring in the Department of Accounting, Finance and Economics. Students are required to supplement the required courses with a number of Business and non-business elective courses. By carefully selecting these elective courses, students may develop a program of study that fits with their interests and career preparation needs. In order to maximize the benefits of their program, students are strongly encouraged to work closely with their assigned advisor in developing their program of study.

If students are unsure of career goals, as a Business Administration student you will have an opportunity to take a variety of business courses to see what type of work might appeal to you most.

## **Service Learning and Internships**

Faculty members at the Department of Accounting, Finance and Economics believe it is important to expose you to a variety of practical and theoretical aspects of business, then give you an opportunity to apply your newly gained knowledge in business situations.

For that reason, the Department along with the Student Affairs Office, sponsor student organizations. In addition the Department uses faculty help to place students in internships, and invites visiting executives and scholars to campus.

Being involved in organizations will allow students to plan, budget and share responsibilities for projects and events. You can learn to manage meetings, deal with conflict, motivate peers of different personalities, express opinions and follow through to the last detail. Student organizations also provide the opportunity to start networking with business professionals and to meet students with similar interests.

As students progress in their studies, they will participate in an internship. Internships give students an opportunity to apply classroom knowledge in a variety of part-time, business – related jobs. Students might be placed in an entry – level position in a bank, corporation or insurance company. Following graduation, some students find full-time positions with the companies that sponsor their internships.

**General Education Requirements**

**30 cr.**

**Required Common Core Courses**

**48 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, ACO 311, BAD 201, BAD 311, BAD 323, BAD 453,  
BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, MAT 205, STA 206,  
STA 207

---

<sup>1</sup> Passing grade is “C”

---

## The Degree of Bachelor of Business Administration–Banking and Finance

The major in Banking and Finance is designed to develop an understanding of the financial aspects of the contemporary economy, the operations of financial institutions and markets, and the financial management of business operations. The major develops analytical skills in the planning, management and control of financial resources to achieve the financial goals of the organization. Central to this task is the evaluation of the risk and return consequences of finance decisions. The major financial decisions studied are selection of assets, (equipment, buildings, inventories, securities, etc.) and among financing alternatives (selling stock, borrowing from a bank, issuing bonds, etc.)

Banking and Finance majors will become familiar with computer applications in finance, and will know how to access and utilize financial information; they are increasingly taking and passing the Chartered Financial Analysts (C.F.A.) examination and the Certified Financial Planner (C.F.P.) examination. The program in Finance and related fields provide the practical and theoretical background needed to succeed in the dynamic and fascinating world of domestic and international finance.

### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Required Common Core Courses** **45 cr.**

**Major Requirements (MR)** **25 cr.**

BAF 312, BAF 315, BAF 321, BAF 433, BAF 438, BAF 450, BAF 481

Choose two (2) Faculty Elective Courses from the following:

BAF 317, BAF 319, BAF 325, BAF 352, BAF 421, BAF 452, BAF 444, BAF 461, BAF 485, ACS 310, ECN 313, ACO 411, BAD 425, ECN 431, ECN 435.

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the University.

**Note:** In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.

The Finance major highlights six (6) areas where students, along with their respective advisors, can develop their business elective courses in a way to meet their potential job / career requirements. The following six areas are:

- Investments Management (IM);
- Corporate Finance (CF);
- Real Estate Finance (REF);
- Banking (B);
- Personal Financial Planning (PFP);
- General Finance (GF).

All Banking & Finance majors must complete an Internship course which provides field experience prior to graduation.

Investment Management (IM) has been revolutionized by rapid advances in computerization. Modern investment theory of portfolio selection, asset pricing models, pricing of options and other derivative securities, and views on the efficiency of security markets have contributed to major improvements in investment management practice.

Other Finance majors can choose the elective courses to meet the requirements of career such as Corporate Finance (CF) Corporate financial officers oversee the efficient allocation of funds within enterprises and borrow funds on the most favorable terms possible through banks, corporate commercial papers, bonds, or new stock issue. Corporate financial managers examine corporate policies toward dividends, debt leverage, and agency conflicts between firm stakeholders.

The Real Estate (RE) courses deal with the acquisition, ownership, and management of real assets such as shopping centers, office buildings, industrial parks, and housing. Majors acquire broad, multidisciplinary background designed to make them effective in controlling assets with significant wealth. Knowledge of financial management is initial to the success of any real estate activity – brokerage, development, property management or mortgage lending. Throughout the various areas of real estate and finance, there exists a natural interrelationship between the two disciplines. The Real Estate major prepares students for a broad range of international careers in consulting, trust and estate management, appraisal, brokerage, real estate development and government.

The banking industry has undergone massive transformations due to competition from non-bank financial institutions. The Banking (B) area of interest is established to provide the Banking community with timely Research and source of new employees who recognize the specialized needs of financial institutions and the banking industry.

NDU banking courses provide students with the necessary qualifications and preparation to meet the industry's new demands. NDU students, with their knowledge of more than one language, are ideally qualified for employment in international banking. Banking and Finance graduates assume increasingly responsible positions over time and move up the management ranks.

Financial services are one of the most rapidly growing and dynamic fields in finance. It includes Banking, Securities, Insurance, and Personal Financial Planning. Personal Financial Planning (PFP) is a new service industry, which has sprung from its insurance, securities and banking roots to become an important link between a variety of individuals and businesses and the broad spectrum of finance information. Students interested in working directly with people to organize their finances and plan for their financial futures should consider a major in Personal Financial Planning. Students need to know about all areas of business and finance, and they must be able to deal with quantitative measures and information, as well as understand sophisticated theoretical concepts.

In the General Finance (GF) field, students can choose courses among several courses. By carefully selecting these courses, students may develop a program of study that fits with their interests and career preparation needs. In order to maximize the benefit of their programs, students are strongly encouraged to work closely with their assigned advisor in developing their program of study.

## Minor in Finance (15 credits)

A Minor in Finance will provide students with a broad understanding of the principles and practices needed to make financial decisions in corporations. The student who graduates with a minor in Finance will be able to:

- Master the current methods for analyzing, interpreting, and reporting financial information;
- Estimate short-and-long terms financing needs;
- Prepare and analyze capital budgeting projects;
- Describe the different dimensions of international finance and trade;
- Think critically, analyze information, and solve problems related to complex financial crises;
- Use computers and financial software for financial analysis and presentation.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ACO 201	Principles of Accounting I	3	_____
BAF 311	Principles of Financial Management I	3	ACO 202, STA 206
BAF 312	Principles of Financial Management II	3	BAF 311
	<b>CHOOSE TWO OF THE FOLLOWING</b>		_____
BAF 321	Fundamentals of Investments	3	BAF 312, STA 207
BAF 315	Financial Institutions & Markets	3	BAF 311
BAF 352	Commercial & Investment Banking	3	BAF 312, BAF 315
BAF 421	Advanced Investment Finance	3	BAF 321
BAF 433	International Business Finance	3	BAF 311, ECN 212
BAF 438	Credit Analysis & Commercial Lending	3	BAF 312
BAF 450	Futures & Options	3	BAF 321
BAF 452	Financial Modeling	3	BAD 323, BAF 321
BAF 485	Advanced Corporate Finance	3	Senior Standing
Total		15 cr	

---

## Undergraduate Courses: Banking and Finance

**BAF 311 Principles of Financial Management I (3.0); 3 cr.** An introduction to the role of the financial manager and to the techniques for obtaining and using funds to maximize the value of the firm. Topics covered include: discounted cash-flow analysis; valuation methods; risk and rates of return; financial analysis and forecasting; financial planning and control; working-capital policy; cash and marketable securities management. The passing grade for this course is "C". *Prerequisites:* ACO 202, STA 206

**BAF 312 Principles of Financial Management II (3.0); 3 cr.** This course is the continuation of BAF 311. Topics covered include: capital budgeting techniques; project cash flows and risk; the cost of capital, capital structure and leverage; dividend policy; common stock financing; long term debt; short-term financing; inventory and credit management. *Prerequisite:* BAF 311.

**BAF 315 Financial Institutions and Markets (3.0); 3 cr.** An introduction to the objectives and roles of various financial institutions and markets. Topics covered include: various financial intermediaries and their function in the economy; determination of interest rate levels; financial markets; financial claims; distribution channels for financial products; performance analysis and foreign exchange. *Prerequisite:* BAF 311.

**BAF 317 Personal Financial Planning: Concepts and Principles (3.0); 3 cr.** Designed to serve the personal finance needs of students regardless of their major fields. Practical applications in personal and family financial problems planning, including credit money management, buying, borrowing, banking, insurance, savings, investments, taxation, estate planning and home ownership. Discusses the method integrating these disciplines into an overall financial plan tailored to individual needs. *Prerequisite:* BAF 311, Junior Standing.

**BAF 319 Estate Planning Techniques (3.0); 3 cr.** This course, which is complementary to Personal Financial Planning, concentrates on taxation and estate planning. These concepts are applied to special situations and techniques are described for minimizing taxes and achievement of client objectives. Planning for retirement plan distributions also is explored. Tax system is described covering both estate and gift taxes.

Further management of property and its disposition is described with use of such tools as of wills and wills substitute such as life insurance. This course also reviews various business structuring and the special issues associated with creation, retention or disposition of a business interest in a family's financial planning. *Prerequisite:* BAF 317.

**BAF 321 Fundamentals of Investments (3.0); 3 cr.** Principles and practices involved in the field of investment. Topics covered include: sources and determination of holding period; determination of security prices; capital asset pricing models; portfolio selection problems; investment companies. *Corequisites:* BAF 312.

**BAF 325 Real Estate Principles (3.0); 3cr.** Deals generally with urban real estate with emphasis on principles and practices of the real estate business. The course will include discussion of markets and methods of financing real property. An investment strategy will be developed. The real estate market in Lebanon will be emphasized. *Prerequisite:* BAF 312.

**BAF 352 Commercial and Investment Banking (3.0); 3 cr.** This course is designed to equip students with principles and tools which allow them to tackle realistic risk management problems associated with financial institutions. Another objective is to provide students with an understanding of the fundamental principles and concepts that underlie the Investment Banking process including market making, underwriting, and syndication. Also this course will examine recent trends in regulations and product innovation by both commercial and investment banks. This includes origination, underwriting, and distribution of new securities to the public. In addition formulation of objectives and policies of banks are discussed, including management of assets & liabilities, sources and uses of funds, administration of reports and loans and evaluation of bank performance. *Prerequisites:* BAF 312, BAF 315.

**BAF 421 Advanced Investment Finance (3.0); 3 cr.** An advanced level treatment of current theory and practice relating to contingent securities, speculative markets and portfolio management issues. Emphasis on recent innovations and developments in financial markets, including options, futures and portfolio insurance, etc. *Prerequisite:* BAF 321.

**BAF 433 International Business Finance (3.0); 3 cr.** Discussion of the environment and problems facing a financial manager in a multinational enterprise. Topics covered include: balance of payments; foreign exchange markets; transactions and operating exposure; financing of international trade; international financial markets; risk evaluation in foreign direct investments; international banking. *Prerequisites:* BAF 311, ECN 212.

**BAF 438 Credit Analysis and Commercial Lending (3.0); 3 cr.** Focuses on how organization of the commercial lending business contributes to bank profitability; covers the commercial lending process from the initial loan request through collection. Topics include loan interviewing and credit investigation, credit analysis, structuring and negotiation, documentation and closing, problem loans, and follow-up. Also examination of analytical techniques to assume the role of credit officer. *Prerequisite:* BAF 315 & BAF 321.

**BAF 444 International Banking (3.0); 3 cr.** Internationalization of banks to meet the global financial needs of multinational activities. Theory and practice of international banking; subjects include current international monetary and financial environment and typical problems of international banking from a management perspective. Interaction with international financial markets and financial centers. *Prerequisite:* BAF 312.

**BAF 450 Futures and Options (3.0); 3 cr.** Provides an introduction to financial futures such as currency futures, swaps and interest rate futures. Explores the markets on which they are traded. Also analyzes pricing of options and other derivative securities. Includes the leverage and risk aspects of options. *Prerequisite:* BAF 321.

**BAF 452 Financial Modeling (3.0); 3 cr.** This course is wrap-up of financial, statistical and computational concepts and techniques needed in the field of Financial Engineering and

Computational Finance. Topics include: Introduction to Financial programming in VB, overview of statistical techniques used in Finance (Regression, Time Series, Sampling, Data Analysis), and overview of financial concepts, such as financial price simulation, and cash flow maps. *Prerequisites:* BAD 323, BAF 321.

**BAF 461 Special Topics in Finance (1.0 - 3.0); 1-3 cr.** Various topics in Finance are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offerings, offered only when faculty are available and sufficient student interest exists. *Prerequisite:* Senior Standing.

**BAF 481 Finance Internship; (1.0) 1 cr.** Interns will have the opportunity to develop new and practical skills by working under the direction and supervision of an experienced practitioner. The internship will be done in cooperating and department approved firms. A minimum of 150 hours of internship is required. *Prerequisite:* Senior Standing.

**BAF 485 Advanced Corporate Finance (3.0); 3 cr.** This course is about corporate financial management from the stand point of the general manager. Integration of financial operations with other operations of a business unit, including working capital management, financial planning and financial control, capital budgeting, the theory of corporate finance. *Prerequisite:* Senior Standing

---

## **The Degree of Bachelor of Business Administration (B.B.A.)**

### **Financial Engineering Emphasis**

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

Financial Engineering is the application of the mathematical tools and computational methods commonly used in engineering to financial problems, especially the pricing and hedging of derivative instruments. It involves the development and creative application of financial theory and Financial instruments such as forwards, futures, swaps, options, and related products to structure solutions to complex financial problems and to exploit Financial opportunity.

Financial Engineering is not a tool, It is a profession that uses tools, of which derivatives are one. Importantly, the term “Analysis” means to “decompose in order to understand”. The term “Engineering” means “Build”.

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Common Requirements** **42 cr.**

ACO 201, ACO 202, ACO 311, BAD 201, BAD 323, BAD 453, BAF 311, ECN 211, ECN 212, ECN 333, MRK 201, MAT 205, STA 206, STA 207.

**Major Requirements** **34 cr.**

BAF 312, BAF 321, BAF 421, BAF 450, BAF 452, CSC 216, CSC 372, FEN 431, FEN 442, FEN 455, FEN 463, MAT 336.

**Note:** In rare cases graduating students may petition to substitute one Business course for another if the required Business course is not offered in any semester.

---

## Undergraduate Courses: Financial Engineering

**FEN 431 Fixed Income Securities (3.0); 3 cr.**

This course provides a quantitative approach to fixed income securities and bond portfolio management. Topics include: Bond valuation, duration, yield curve and term structure measurement and theory, mortgage backed securities, as well as interest rate models (Vasicek and Cox Ingersoll Ross). *Prerequisite:* Senior Standing.

**FEN 442 Financial Risk Management (3.0); 3 cr.**

This course explores various aspects of financial risk management, including credit risk, market risk, and operational risk. Emphasis is on quantitative measurement techniques, covering value at risk, dynamic portfolio distribution and extreme value analysis. *Prerequisite:* Senior Standing.

**FEN 455 Advanced Derivatives Models (3.0); 3 cr.**

This course focuses of efficient implementation of advanced derivative models aimed at pricing and hedging derivative

securities. Pseudo codes and algorithms will be studied and programming application developed using VB. Topics include: Black-scholes implementation, trees construction (binomial and trinomial trees), Monte Carlo application to option pricing and implied volatility, and advanced interest rate models, (Ho and Lee, Hulland White, Black-Derman, Toy, Heath-Jarrow-Morton). *Prerequisites:* BAF 450, CSC 216.

**FEN 463 Computational Finance and Simulation (3.0); 3 cr.**

This course provides the computational skills required in the field of Financial Engineering. Students will learn how to program financial models and develop simulations using VB. *Prerequisites:* CSC 372, BAD 323.

---

## The Degree of Bachelor of Business Administration–Accounting

The major in Accounting is designed to provide students with the opportunity to acquire the basic and advanced knowledge of accounting theory and practice in addition to the analytical skills and tools essential to a solid business education. Courses are designed to enable a student to understand the intellectual threads of modern accounting and its interrelationship to the various fields of business and management.

Accounting majors are increasingly taking and passing the Certified Public Accountant (C.P.A.) Certified Management Accountant (C.M.A.) and Certified International Audit (C.I.A.) examinations through training in Accounting and related fields. It provides the practical and theoretical background needed to succeed in the dynamic and fascinating world of Accounting.

### Degree Requirements (106 credits)

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

**Major Requirements** **25 cr.**

ACO 323, ACO 313, ACO 411, ACO 413, ACO 421, ACO 48, BAF 312,

Choose two (2) faculty elective courses from the following:

ACO 314, ACO 321, ACO 350, ACO 406, ACO 414, BAD 429, BAD 431, BAF 452, BAF 485, CSC 221, CSC 315, CSC 321

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the University.

**Note:** In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.

The accounting major highlights four (4) areas where students along with their respective advisors can develop their business elective courses in a way to meet their potential job / career requirements. The following four areas are:

- Accounting Information Systems (AIS);
- General Accounting (GA);
- Management Accounting & Control (MA&C);
- Auditing (A).

All Accounting majors must complete an internship course which provides field experience prior to graduation.

The Accounting Information Systems (AIS) field was developed in response to employers indicating an increased need for accounting majors with computer expertise.

The AIS program prepares students for career opportunities in the field of accounting systems design, accounting systems management and accounting systems auditing and other systems – related areas of accounting. Electronic processing of financial transactions is now the norm in small and large businesses alike. Accountants must be prepared to design, select, install and configure numerous accounting applications such as accounts receivable and billing systems, human resources management systems, and financial reporting systems.

Other Accounting majors may choose business elective courses meeting the track of General Accounting (GA). This field is designed to provide graduates with the knowledge and skills necessary to enter professional careers leading to an accounting designation or entry – level positions in accounting. Students can expect to develop conceptual and technical accounting competence and analytical abilities.

The Management Accounting & Control (MA&C) field of concentration was established to better serve the needs of students interested in industry or government. Typically, careers begin in one area of a company but soon involve work in a number of different functions within the organization such as the Controller's Department, Internal Audit, Treasury and Finance, Cost Accounting, planning and budgeting, etc. The purpose of the required courses in this track is to give students an understanding of these areas and the basic skills required to successfully enter the organization in any of these positions.

This track is distinct, because it gives an increased emphasis on understanding the role of Accounting and in assisting management with decision making and organizational control as well as producing necessary information for external reporting.

The Auditing (A) field of concentration is designed for students who desire to reach the top levels in public accounting. It provides the students with a strong technical and theoretical background which is helpful in solving today's complex auditing and reporting problems.

## Minor in Accounting (15 credits)

A Minor in Accounting will provide students with a broad understanding of the examination, organization, management, design and communication, accurate recording and reporting procedures of Financial and Business transactions. The student who graduate with a Minor in Accounting will be able to:

- Demonstrate a basic comprehension of Accounting principles, concepts and technical skills;
- Demonstrate through the evaluation and communication of financial information, the skills to provide information to internal and external users for decision making;
- Show ability to analyze, compare, and evaluate information to provide analysis for short and long term planning;
- Demonstrate knowledge of professional standards of ethics necessary for decision making;
- Use computers and financial software for financial analysis and presentation.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ACO 201	Principles of Accounting I	3	---
ACO 202	Principles of Accounting II	3	ACO 201
	<b>CHOOSE THREE OF THE FOLLOWING</b>		
ACO 311	Managerial Accounting	3	ACO 202
ACO 313	Intermediate Accounting I	3	ACO 202
ACO 314	Intermediate Accounting II	3	ACO 313
ACO 321	Cost Accounting	3	ACO 311
ACO 323	Accounting Information Systems	3	ACO 202,CSC 201
ACO 350	Corporate Financial Reporting	3	BAF 311
ACO 411	Taxation	3	Senior Standing
ACO413	Auditing I	3	ACO 202
ACO 421	Advanced Accounting	3	Senior Standing
Total		15 cr	

---

## Undergraduate Courses: Accounting

**ACO 201 Principles of Accounting I (3.0); 3 cr.** Introduction to the basic principles, concepts, and techniques of financial accounting. Explanation of the basic techniques of measuring, classifying, summarizing, reporting, and interpreting financial information. The passing grade for this course is "C".

**ACO 202 Principles of Accounting II (3.0); 3 cr.** A continuation of ACO 201. Explanation and understanding of more advanced procedures of accounting for partnerships, corporations, long-term debts and marketable securities. Includes use of accounting software. The passing grade for this course is "C". *Prerequisite:* ACO 201.

**ACO 311 Managerial Accounting (3.0); 3 cr.** Fundamental managerial accounting procedures and techniques used in management decision-making. Topics covered include: cost types; cost behavior patterns; cost-volume-profit relationships; budgeting and planning; and performance evaluation. *Prerequisite:* ACO 202.

**ACO 313 Intermediate Accounting I (3.0); 3 cr.** An in-depth study of accounting theory and concepts. Topics covered include: issues related to recording revenues, assets, liabilities and equity structure. *Prerequisite:* ACO 202.

**ACO 314 Intermediate Accounting II (3.0); 3 cr.** This course is the continuation of ACO 313. Topics include: handling of long-term investments, stockholders' equity, accounting for leases, analysis of financial statements, and other accounting topics.

**ACO 321 Cost Accounting (3.0); 3 cr.** In-depth study of the procedures for gathering cost information. Topics covered include: mixed cost analysis; relevant costs; capital budgeting; and decision models. *Prerequisite:* ACO 311.

**ACO 323 Accounting Information Systems (3.0); 3 cr.** Examination of the systems for collecting and processing data necessary in planning, decision-making, and the control of business organizations. Includes use of accounting software packages. *Prerequisites:* ACO 202.

**ACO 350 Corporate Financial Reporting (3.0); 3 cr.** This course covers the financial reporting system, principal financial statements other sources of financial information, statement of cash flows, foundations of ratio and financial analysis, analysis of business combinations,

analysis of multinational operations, valuation and forecasting. *Prerequisite:* BAF 311.

**ACO 406 Government and Non-Profit Accounting (3.0); 3 cr.** Principles, procedures and ethics of financial reporting for non-profit organizations including state & local government. Includes the use of funds, budgets appropriations and encumbrances as means of control. *Prerequisite:* ACO 313.

**ACO 411 Taxation (3.0); 3 cr.** Application of the Lebanese income taxes to business entities and its reporting procedures. Also discussion of the issues related to the Lebanese accounting system such as multi-currency transactions, chart of accounts and closing procedures. *Prerequisite:* Senior Standing.

**ACO 413 Auditing I (3.0); 3 cr.** This course covers the functions and work of the independent auditor. Topics include: the auditing profession, the professional ethics auditor liabilities, overview of the audit process including the audit evidence, objective, audit program, working papers, planning audit, materiality and risk, post audit and reporting on audited income statement. *Prerequisite:* ACO 202.

**ACO 414 Auditing II (3.0); 3 cr.** This course is the continuation of Auditing I. This course provides a thorough understanding of the detailed audit procedure, audit planning, complete audit and post audit. The audit covers cash changes (cash flow) assets, inventory, accounts receivable, accounts payable, fixed assets, auditing revenue cycle, other services and reports and assurance services. *Prerequisite:* ACO 413.

**ACO 421 Advanced Accounting (3.0); 3 cr.** A comprehensive study of financial accounting for partnerships, branches, business combinations, and the reporting of consolidated financial statements. Also discussion of accounting for non-profit organizations. *Prerequisite:* Senior Standing.

**ACO 481 Accounting Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquiring practical skills. The internship will be done in cooperating and department approved firms. A minimum of 150 hours of internship is required. *Prerequisite:* Senior Standing.

---

## **The Degree of Bachelor of Business Administration (BBA)-Economics**

The Economics Major is designed to provide the student with an understanding of the principles and institutions governing economic decisions made by Households, Businesses and Governments. This type of knowledge combined with studies in related areas, provides an appropriate background for employment in financial and non-financial business firms and governmental agencies. It also provides a solid basis for graduate study in economics, business and public administration, international studies, urban planning and law.

### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

**Major Requirements** **25 cr.**

ECN 313, ECN 321, ECN 323, ECN 431, ECN 436, ECN 439, ECN 481

Choose two (2) faculty elective courses from the following (6 credits.): ECN 314, ECN 325, ECN 327, ECN 432, ECN 434, ECN 435, ECN 437, BAF 312

**Free Electives** **6 cr.**

Students are free to choose any six (6) credits offered by the University.

**Note:** In rare cases graduating students may petition to substitute one business course for another, if the required business course is not offered in any one semester.

---

## Minor in Economics (15 credits)

A Minor in Economics is to provide students with the analytical tools which will enable them to apply economic reasoning to problem solving in business, economic and political issues.

A Minor in Economics is an excellent choice for business, political science, public administration, and diplomacy majors.

A student who graduates with a minor in economics should be able to:

- Understand the decision making mechanisms of households and firms;
- Understand and analyze economic data;
- Use computers and statistical packages to manipulate, read and interpret data;
- Evaluate the role of the government in the economy.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
ECN 211	Principles of Microeconomics	3	---
ECN 212	Principles of Macroeconomics	3	---
ECN 431	International Economics	3	ECN 211, 212
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
ECN 321	Intermediate Microeconomic Analysis	3	ECN 211, ECN 212
ECN 323	Intermediate Macroeconomic Analysis	3	ECN 211, ECN 212
ECN 313	Introduction to Econometrics	3	ECN 211, 212
ECN 325	Labor Economics	3	ECN 211, 212
ECN 327	History of Economic Thought	3	ECN 211, 212
ECN 333	Managerial Economics	3	ECN 211, STA 207
ECN 432	Urban Economics	3	Senior Standing
ECN 434	Environmental natural Resource Economics	3	ECN 321
ECN 435	Monetary Theory and Policy	3	ECN 211, ECN 212
ECN 436	Public Finance and Fiscal Policy	3	ECN 321, ECN 323
ECN 437	Contemporary Economic Systems	3	ECN 211, ECN 212
ECN 439	Economics of Developing Co	3	ECN 211, ECN 212
Total		15 cr	

---

## Undergraduate Courses: Economics

**ECN 200 Survey of Economics (3.0); 3 cr.** Survey of microeconomics and macroeconomics principles for non-Business Administration students. Students cannot receive credit for both ECN 200 and ECN 211 or ECN 212.

**ECN 211 Principles of Microeconomics (3.0); 3 cr.** An introduction to economic concepts, principles, and microeconomics analysis. Topics covered include: demand and supply analysis; consumers' choice; production and costs; price and output determination under different market conditions; and pricing of factors of production. The passing grade for this course for DAFE and DMM only is "C".

**ECN 212 Principles of Macroeconomics (3.0); 3 cr.** An introduction to macroeconomics analysis. Topics covered include: national income determination; money and banking; unemployment and inflation; fiscal and monetary policy; international trade and finance. The passing grade for this course for DAFE and DMM only is "C".

**ECN 313 Introduction to Econometrics (3.0); 3 cr.** The classical linear regression model and the multiple regression model in matrix form; the criteria for estimators; multicollinearity, serial correlation, heteroscedasticity; identification and estimation of simultaneous equation models and applications. *Prerequisites:* ECN 211, 212, STA 207.

**ECN 314 Applied Econometrics and Time Series (3.0); 3 cr.** The main purpose of this course is to provide a comprehensive treatment of econometric techniques applied in time series models. Topics include: stationary and non-stationary time series models, modeling economic time series, multiequation time series models, notation and interpretation of ARIMA models, forecasting,... An interactive econometric software package is used: Data-Fit or TSP (Time Series Processing). *Prerequisite:* ECN 313.

**ECN 321 Intermediate Microeconomic Analysis (3.0); 3 cr.** Theory of the firm and consumer. Topics covered include: maximizing behavior of consumers; business firm behavior in price and output decisions under different types of market structures; factor price determination; welfare implications of marketplace performance. *Prerequisites:* ECN 211, ECN 212.

**ECN 323 Intermediate Macroeconomic Analysis (3.0); 3 cr.** Macroeconomics theory and policy. Topics covered include: measurement of aggregate economic activity; theories of inflation and unemployment; Monetarist-Keynesian-Rational Expectation controversy; business cycles; fiscal and monetary policies. *Prerequisites:* ECN 211, ECN 212.

**ECN 325 Labor Economics (3.0); 3 cr.** An analytic study of the labor market. Topics covered include: labor force participation and composition; human capital theory; wage determination; demand for and supply of labor; trade-unions; collective bargaining; public policy and unemployment; and the economics of discrimination. *Prerequisites:* ECN 211, ECN 212.

**ECN 327 History of Economic Thought (3.0); 3 cr.** A study of origins and development of economic thought from mercantilism to the present. *Prerequisites:* ECN 211, ECN 212.

**ECN 333 Managerial Economics (3.0); 3 cr.** Application of economic analysis to business problems. Topics covered include: risk analysis; theory of consumer choice; estimation and analysis of demand, production and cost functions; forms of competition; pricing techniques; profits; game theory. *Prerequisites:* ECN 211, STA207.

**ECN 431 International Economics (3.0); 3 cr.** Theoretical and policy approach to the study of international trade and finance. Topics covered include: trade theory; instruments of commercial policy; trade policy in developing countries; economic integration; foreign exchange markets; balance of payments; international monetary system; world debt crisis. *Prerequisites:* ECN 211, ECN 212.

**ECN 432 Urban Economics (3.0); 3 cr.** An introduction to the existence and growth of cities, and the application of economic principles to the major problems of the modern urban community. Topics covered include: reasons for the existence of cities; market forces in the development of cities; urban economic growth; land rent and land use; land use controls and zoning; causes of poverty and public policy; housing problems and policies; urban transportation; autos and highways; mass transit; education and crime; discrimination; programs

for alleviation or solution of urban problems.  
*Prerequisite:* Senior standing.

**ECN 434 Environmental and Natural Resource Economics (3.0); 3 cr.** An introduction to the natural resource and environmental economics, and sustainable development. Topics covered include: introduction to resource and environmental economics; ethical foundations of environmental economics; economic concepts and analysis for examining natural resource use; the valuation of environmental resources; the population problem; sustainability and sustainable development; depletable, recyclable, non-recyclable, replenishable, storable, renewable and reproducible resources; the efficient and optimal use of environmental resources; the economics of pollution and pollution control policy; international and global environmental pollution problems.

**ECN 435 Monetary Theory and Policy (3.0); 3 cr.** A study of the development of monetary theory and policy. Topics covered include: demand for and supply of money; nature of the Monetarist-Keynesian-Rational Expectation controversy; policy coordination; government monetary policy; inflation and unemployment; international constraints; empirical verification of some theories. *Prerequisites:* ECN 211, ECN 212.

**ECN 436 Public Finance and Fiscal Policy (3.0); 3 cr.** This course examines the economics of the public sector. It has two broad topics: government expenditures and revenues. Topics include: market failures and optimal taxation;

cost/benefit analysis of government projects; income redistribution and poverty programs; political economy and voting; the economics of local governments; budget deficits, inflation and the lack of adequate financing in the developing countries; tax systems with special emphasis on the Lebanese case. *Prerequisites:* ECN 321.

**ECN 437 Contemporary Economic Systems (3.0); 3 cr.** An examination and comparison of the organization, operation, and performance of contemporary economic systems. Also study of the changing pattern of ideologies and practices. *Prerequisites:* ECN 211, ECN 212.

**ECN 439 Economics of Developing Countries (3.0); 3 cr.** A study of the economics of developing countries. Topics covered include: meaning of underdevelopment; historical patterns of economic change in the developing countries; population problems; obstacles to development; role of industry and agriculture; inequality of income and wealth distribution; economic planning; foreign aid and indebtedness. *Prerequisites:* ECN 211, ECN 212.

**ECN 481 Seminar in Economics (1.0); 1 cr.** An in-depth study of a selected topic in theoretical or applied economic. Students have to present a term-paper on a Lebanese government economic institution. With the permission of the instructor, students may repeat this course if topics vary. *Prerequisite:* Senior standing.

## DEPARTMENT OF MANAGEMENT AND MARKETING

---

<b>Associate Professors:</b>	Hasham, Elham; Matar – Haddad, Dorine
<b>Assistant Professors:</b>	Akhras, Caroline; Barakat, Edgard; Harb, Atef Sleilati, Esther
<b>Senior Lecturers:</b>	Ghaleb, George; Karam, Salim; Menassa, Joyce (Chair); Nakhlé, Vivianne; Zakhour, Kamal
<b>Instructor:</b>	Saad-Saber, Nada

---

### The Degree of Bachelor of Business Administration (B.B.A.)

#### Management Emphasis

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

The B.B.A.-Management option is designed to provide students with an understanding of the processes and structures of organizations to enable them to be more effective managers. The courses taken in addition to the required common courses provide the students with proficiency in management skills and decision-making. The program prepares candidates for managerial responsibilities in both the private and public sectors.

#### Graduation Requirements

Students seeking the degree of Bachelor of Business Administration must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the common core and major requirements. These 106 credits are divided into:

#### Degree Requirements (106 credits)

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Required Common Courses</b> ACO 201 <sup>1</sup> , ACO 202 <sup>1</sup> , BAD 201, BAD 311, BAD 323, BAD 433, BAD 453, BAF311 <sup>1</sup> , ECN 211 <sup>1</sup> , ECN 212 <sup>1</sup> , ECN 333, MRK 201, STA 206, STA 207, MAT 205	<b>45 cr.</b>
<b>Required Major Courses</b> BAD 315, BAD 317, BAD 425, BAD 429, BAD 431, BAD 482, MRK 421 <b>Plus two additional courses from the following:</b> BAF 312, BAD 321, BAD 329, BAD 421, BAD 423, BAD 427, ACO 311	<b>25 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>

---

<sup>1</sup> Minimum passing grade is “C”

### Minor in Management (15 credits)

In response to great demand from our student body, the Department of Management and Marketing has designed a minor in Management. This minor is intended to enhance our students' area of expertise, through acquiring knowledge of management theory and its application, which will allow them to be successful members in the global environment. The world in which we live is marked by rapid change where both managers and employees need to handle change as well as manage the day-to-day functions in the market-driven economy.

For those students who come from a business background, this minor will enhance their scope and depth in the managerial area. For those who come from another background, a minor in Management will expose them to the key managerial functions of planning, organizing, leading, and controlling, and, in doing so, will increase their level of efficiency and effectiveness in the work context.

Students are required to use the following table:

Course#	Description	Credits	Prerequisite
BAD 201	Fundamentals of Management	3	None
BAD 317	Organizational Behavior	3	BAD 201
BAD 429	Operations Management	3	Senior Standing
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
BAD 321	Managing a small Business	3	Junior Standing
BAD 421	International Business Management	3	Senior Standing
BAD 423	Business Research	3	Senior Standing
BAD 433	Business Policy & Strategic Management	3	Senior Standing
BAD 453	e-Business	3	Senior Standing
MGT 402	Business Negotiations	3	Junior Standing
MGT 411	Leadership, Quality, and Performance	3	Senior Standing
Total		15 cr.	

---

## Undergraduate Courses: Business Administration

### **BAD 101 Introduction to Business (3.0); 3 cr.**

An orientation to the field of business. Topics covered include: types of business organizations; financing of businesses; marketing functions; management functions; human resources management; production management; accounting; international business.

### **BAD 201 Fundamentals of Management (3.0); 3 cr.**

An introduction to the basic elements of the managerial process and the basic theories of management. Topics covered include: management objectives; organizational structure; material and human resource utilization; human relations; decision making, planning, organizing, staffing, directing, and controlling.

### **BAD 311 Business Law (3.0); 3 cr.**

Survey of Lebanese Commercial Law. Topics covered include: the nature of the law; the courts system; contracts; property sales and secured transactions; insurance; commercial papers; agency; business organizations; bailment; bankruptcy; banking operations; taxation.

### **BAD 315 International Business (3.0); 3 cr.**

An introduction to international business management principles and an overview of global organizations. Topics covered include: nature and importance of international business; human, cultural, political, economic and legal considerations in international business; commercial policies; international agreements; international trade and investment; the international monetary system. *Prerequisites:* BAD 201, ECN 212.

### **BAD 317 Organizational Behavior (3.0); 3 cr.**

An examination of the study of individual and group behavior in organizations. Topics covered include: perception; motivation; leadership; organizational development; communication; power politics; group behavior; conflicts; work design. *Prerequisite:* BAD 201.

### **BAD 321 Managing a Small Business (3.0); 3 cr.**

Procedures and techniques needed to start-up, purchase and manage a small firm. Emphasis on the differences between small and large firm environments and problems. Topics covered include: franchising; market research; site selection; sales and advertising; pricing and credit policies; managing human resources; financial planning; accounting and budgeting. *Prerequisite:* Junior Standing.

### **BAD 323 Software Tools for Business Applications (3.0); 3 cr.**

Application of software to business information processing and decision making in different business areas. *Prerequisite:* Junior Standing

### **BAD 325 International Business Law (3.0); 3 cr.**

An introduction to the legal aspects and ramifications of international trade. Topics covered include: international business transactions including sales contracts, agency and distribution contracts, investment contracts, licensing agreement, joint ventures; intellectual property; arbitration; dispute settlement before the WTO; problems in foreign investment; tariff regulation; taxation regulation; technology transfer. *Prerequisite:* BAD 311.

### **BAD 329 Labor and Social Security Law (3.0); 3 cr.**

Exploration of individual and collective aspects of employment in Lebanon. Topics covered include: employment contract; duties of employers and employees; impact of legislation providing for health, safety and welfare; workers' compensation; industrial disputes; strikes; social security law. *Prerequisite:* BAD 311.

### **BAD 421 International Business Management (3.0); 3 cr.**

An examination of management problems of organizations with international interests. Topics covered include: nature and role of international business management; impact of cultural, political, social and economic factors on management policies and practices; strategic planning; organizing international operations; human resource management in international corporations; managing foreign-exchange risk; production and marketing; asset management; ethics and social responsibility. *Prerequisite:* Senior Standing.

### **BAD 423 Business Research (3.0); 3 cr.**

An intensive study of the objectives and methodologies of research for business decisions. Topics covered include science and the scientific method; techniques of defining problems; research design; methods for collecting, analyzing and interpreting data. Includes presentation of a research proposal. *Prerequisite:* Senior Standing.

### **BAD 425 Quantitative Techniques for Management (3.0); 3 cr.**

Quantitative techniques in problem solving and decision making using mathematical methods and

modeling. Topics covered include: linear programming; network models; Markov analysis; queuing theory; decision theory; project management; simulation. *Prerequisite:* Senior Standing.

**BAD 427 Human Resource Management (3.0); 3 cr.** Theories, policies and practises of human resource management in a firm. Topics covered include: employee selection; training and development; performance appraisal and compensation; job analysis and design; benefits administration; labor-management relations. *Prerequisite:* BAD 317

**BAD 429 Operations Management (3.0); 3 cr.** Introduction to the concepts, techniques and methodology of modern operations management. Topics covered include: forecasting; production planning and scheduling; facility location and layout; quality control; productivity; inventory systems; process design; maintenance and reliability. *Prerequisite:* Senior Standing.

**BAD 431 Ethics in Business (3.0); 3 cr.** A practical rather than philosophical approach to the ethical dimension of business actions. The course deals with the ethical problem and dilemmas of individuals, managers, and organizations. *Prerequisite:* Senior Standing.

**BAD 433 Business Policy and Strategic Management (3.0); 3 cr.** A capstone course in management. Understanding of strategies pursued by contemporary organisations. Integration of concepts and skills previously

learnt, utilizing readings, projects, simulations, and case studies. Emphasis on the strategic issues facing domestic and international firms. *Prerequisite:* Senior Standing.

**BAD 453 e-Business (3.0); 3 cr.** The course examines the history, foundations, tools, and major issues surrounding the electronic commerce. Students will develop skills and learn how the economic framework and electronic technology come together in actual business applications, and how these applications become operational in the global business environment. *Prerequisite:* Senior Standing.

**BAD 481 International Business Management Internship; 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

**BAD 482 Management Internship 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing

---

## **The Degree of Bachelor of Business Administration (B.B.A.)-International Business Management**

Economic and business activity is becoming increasingly internationalized. There is a great demand for business students who are equipped with conceptual and analytical skills and can formulate feasible and effective management policies in a complex international setting. The objective of B.B.A. - International Business Management program is to answer this need.

The program provides useful preparation for careers in a variety of organizations, including local business firms with international trade, licensing or financial arrangements; headquarters or subsidiaries of multinational companies; banks and other international financial institutions, and various governmental organizations.

### **Graduation Requirements**

Students seeking the degree of B.B.A.-International Business Management Concentration must complete a total of 107 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements. These 107 credits are divided into:

#### **Degree Requirements (107 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, BAD 201, BAD 311, BAD 323, BAD 433, BAD 453, BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, STA 206, STA 207, MAT 205

**Required Major Courses** **25 cr.**

BAD 315, BAD 317, BAD 421, ECN 431, BAF 433, MRK 423, BAD 481

**Plus two additional courses from the following:** BAD 325, ACO 311, BAD 427, BAD 429, BAD 431, ECN 439, MRK 425

**Free Electives** **7 cr.**

## **The Degree of Bachelor of Business Administration (B.B.A.)-Marketing**

The marketing curriculum is organized around a managerial framework to provide students with an understanding of the operations and problems associated with getting the wide range of products and services required by modern society from the producer to the user. Students learn to successfully confront problems in a variety of areas and to make sound marketing decisions on the basis of careful analysis.

Marketing is a dynamic profession. There is a wide range of opportunities in marketing, including marketing management, marketing research, purchasing management, market analysis, product/brand management, retailing, sales promotion, social marketing, and international marketing.

### **Graduation Requirements**

---

<sup>1</sup> Minimum passing grade is "C"

Students seeking the degree of Bachelor of Business Administration in Marketing must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements.

These 106 credits are divided into:

**Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **45 cr.**

ACO 201<sup>1</sup>, ACO 202<sup>1</sup>, BAD 201, BAD 311, BAD 323, BAD 433, BAD 453,  
BAF 311<sup>1</sup>, ECN 211<sup>1</sup>, ECN 212<sup>1</sup>, ECN 333, MRK 201, STA 206, STA 207,  
MAT 205.

**Required Major Courses** **25 cr.**

MRK 313, MRK 321, MRK 423, MRK 311, MRK 431, MRK 433, MRK 481  
**Plus two additional courses from the following:** ACO 311, BAD 317, BAD  
431, MRK 315, MRK 323, MRK 325, MRK 421, MRK 425, MRK 372

**Free Electives** **6 cr.**

---

<sup>1</sup> Minimum passing grade is "C"

## Minor in Marketing Management (15 credits)

The Marketing Management minor was developed to allow students to broaden their intellectual base and increase their employment opportunities. Many university graduates obtain entry-level jobs, which not only allow them to apply the knowledge obtained in their major field, but also require an understanding of marketing principles and practices as a prerequisite for success.

Students will be able to successfully confront problems in areas of marketing management, marketing research, purchasing management, market analysis, product management, retailing sales promotions and international marketing.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
MRK 201	Fundamentals of Marketing	3	None
MRK 311	Consumer Behavior	3	MRK 201
MRK423	International Marketing	3	MRK 201
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
MRK 205	Principles of Channel Management	3	MRK 201
MRK 313	Salesmanship	3	MRK 311
MRK 321	Promotional Strategy	3	MRK 311
MRK 325	Services Marketing	3	MRK 311
MRK421	Sales Management	3	Senior Standing
MRK 431	Marketing Research	3	MRK 201, STA 207
ECN 212	Principles of Macroeconomics	3	None
MRK 425	Business to Business Marketing	3	MRK 423
Total		15 cr.	

## The Degree of Bachelor of Business Administration (B.B.A.)

### Distribution and Logistics Management Emphasis

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

This emphasis is designed to offer knowledge in the field of supply chain management and to build candidates' capacities, in all of its major components namely: packaging, warehousing, procurement, transportation, inventory, and physical distribution management.

The distribution and logistics management activities are carried out by manufacturers, wholesalers, retailers, public warehouse firms, freight forwarders as well as public and private transportation firms with heavy dependence on innovative technological breakthroughs in this field. Globalization, the increasing demand for the movement of goods across the world, and the applied knowledge required by the candidates will be the focal learning points for the candidates.

## **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration in Distribution and Logistics Management must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements. These 106 credits are divided into:

### **Degree Requirements (106 credits)**

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Required Common Courses</b> ACO 201 <sup>1</sup> , ACO 202 <sup>1</sup> , BAD 201, BAD 311, BAD 317, BAD 323, BAD 433, BAD 453, BAF 311 <sup>1</sup> , ECN 211 <sup>1</sup> , ECN 212 <sup>1</sup> , MRK 201, STA 206, STA 207, MAT 205.	<b>45 cr.</b>
<b>Required Major Courses</b> MRK 205, MRK 215, MRK 335, MRK 345, MRK 422, MRK 431, MRK 482.	<b>19 cr.</b>
<b>Plus <u>three</u> additional courses from the following</b> MRK 311, MRK 315, MRK 323, MRK 372, MRK 404, MRK 421, MRK 423, MRK 425.	<b>9 cr.</b>
<b>One Free Elective</b>	<b>3 cr.</b>

---

<sup>1</sup> Minimum passing grade is "C"

## Minor in Distribution and Logistics Management (15 credits)

The Distribution and Logistics minor provides graduates with added knowledge in the areas of transportation, logistics, inventory management, as well as other aspects of Distribution and Logistics. Such knowledge, once applied, will enhance students' effectiveness and efficiency in the workplace .

Distribution management activities are carried out by manufacturers, wholesalers, retailers, public warehouse firms, freight forwarders, and public and private transportation firms. Careers in distribution management provide an individual with the potential for rapid advancement within a firm.

Students are required to use the following table:

Course #	Description	Credits	Prerequisite
MRK 201	Fundamentals of Marketing	3	
MRK 205	Principles of Channel Distribution	3	MRK 201
MRK 335	Materials & Warehouse Management	3	MRK 205
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
MRK 215	Fundamentals of Purchasing	3	MRK 201
MRK 315	Import-Export Management	3	BAD 315 , MRK 311
MRK 323	Retail Management	3	MRK 205 , MRK 311
MRK 422	Packaging, Warehousing & Inventory Control	3	MRK 335
MRK 345	Logistics & Supply Chain Management	3	MRK 205
MRK 404	Transportation Management	3	MRK 345
MRK 425	Business to Business Marketing	3	MRK 423
Total		15 cr.	

---

## Undergraduate Courses: Marketing

**MRK 201 Fundamentals of Marketing (3.0); 3 cr.** Introduction to the marketing process in social, economic, and legal environments. Topics covered include: consumer and institutional behavior patterns; market segmentation; product and service development; pricing strategy and promotion; channels of distribution; retailing and wholesaling; marketing research.

**MRK 205 Principles of Channel Management (3.0); 3 cr.;** This course surveys, organizes, and integrates theories and practices relative to current issues of marketing channel management, with a focus on key strategic marketing principles. Physical distribution is reviewed as a functional area within the firm and its interface with channel intermediaries is analyzed. Topics include retailing, wholesaling, industrial marketing, transportation, warehousing, location, inventory control, and channel design. *Prerequisite:* MRK 201.

**MRK 215 Fundamentals of Purchasing (3.0); 3 cr.;** This course is designed to present the purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues. The focus of the course will be on the role and function of purchasing in the Logistics Management Process. *Prerequisite:* MRK 201.

**MRK 311 Consumer Behavior (3.0); 3 cr.** Concepts and theories to explain the decision making process of consumer and organizational buying. Attention is focused on economic, psychological, sociological, and anthropological variables to understand, predict, and control purchasing behavior. *Prerequisite:* MRK 201.

**MRK 313 Salesmanship (3.0); 3 cr.** Examination of persuasive techniques used in promotional presentations conducted on a person-to-person basis. Emphasis on effective selling techniques, understanding the company and its products, understanding the customer and the selling environment, recognizing selling opportunities, and planning, implementing, and control of the personal selling programs. *Prerequisite:* MRK 201.

**MRK 315 Import-Export Management (3.0); 3 cr.** Application of management theories to efficient management of an import-export business. Topics covered include: starting an import-export business; international trade; export financing; import-export documentation; export promotion; tariffs and duties. *Prerequisites:* MRK 311.

**MRK 321 Promotional Strategy (3.0); 3 cr.** Introduction to various promotional strategies

adopted by different companies and guidelines for determining a company's promotional mix. Topics covered include: advertising; personal selling; publicity and promotion; determination of objectives and budgets; situation analysis. Also, discussion of managerial issues and problems. *Prerequisite:* MRK 311.

**MRK 323 Retail Management (3.0); 3 cr.;** Application of management and marketing theories to retailing. Topics covered include: management, organization and control of retail outlets, consumer behavior, store location, financial management, promotion, presentation, pricing, control of inventories, advertising, personnel, and wholesaler-retailer relationship. *Prerequisites:* MRK 201.

**MRK 325 Services Marketing (3.0); 3 cr.** An introduction to the distinctive aspects of service marketing. Topics covered include: understanding services marketing; improving service quality and productivity; positioning a service in the marketplace; managing the customer portfolio; creating and delivering services; developing and managing the customer service function. *Prerequisite:* MRK 311.

**MRK 335 Materials and Warehouse Management (3.0); 3 cr.** This course covers the organization and operations of warehouses and distribution centers. Topics covered include the role, types, and functions of warehouses and distribution centers, location analysis, facility layout and design, equipment handling, employee safety, public and private warehouses, computer control and tracking, conveyance equipment, and hazardous materials handling. *Prerequisite:* MRK 205.

**MRK 345 Logistics and Supply Chain Management (3.0); 3 cr.** This course develops an integrated approach to the analysis of physical distribution problems. It deals with transportation and assignment problems; application of network techniques to production; distribution systems design; optimal allocation of inventory; cost allocation methods; pricing policies; and power structure of shareholders within a firm. *Prerequisite:* MRK 205.

**MRK 372 Internet Marketing (3.0); 3 cr.** e-marketing is traditional marketing using electronic methods. It helps students develop the skills necessary to understand and integrate Internet technology and characteristics into marketing strategy. It helps students recognize and understand the implications of the Internet not only as a market place but also as a set of tools and opportunities. *Prerequisites:* BAD 323.

**MRK 404 Transportation Management (3.0); 3 cr.** This course includes an introduction to the principles of transportation with emphasis on transportation modal operations (rail, highway, air, pipeline, water transportation) and transportation management. Consideration is given to the economical, social and political aspects of the transportation industry and strategic issues in transportation management. *Prerequisite:* MRK 345.

**MRK 421 Sales Management (3.0); 3 cr.** Development, operation, and control of a sales organization. Topics covered include: managing the sales force; selecting, training and compensating the sales force; forecasting sales and establishing budgets; structuring a sales organization; motivating salespeople. *Prerequisite:* Senior Standing.

**MRK 422 Packaging, Warehousing and Inventory Control (3.0); 3 cr.** The course deals with important supports for a modern material handling process. Among other things, it discusses packaging and carriers, and their importance to logistics. Furthermore, it deals with systems and IT tools for material handling, such as Warehouse Management Systems (WMS), bar codes and other identification systems, transport administration systems, and systems for controlling material flows in logistical networks. The course also gives an overview of material handling equipment, such as forklifts, storage systems, bar code scanners etc. *Prerequisite:* MRK 335.

**MRK 423 International Marketing (3.0); 3 cr.** Analysis and strategies for marketing in an area with different social, political, legal, and economic environment. Topics covered include: cross-national consumer behavior; direct foreign investment; strategy of international product development, pricing, promotion and distribution policies; forms of international involvement. *Prerequisites:* MRK 201; Junior Standing.

**MRK 425 Business-to-Business Marketing (3.0); 3 cr.** Development of principles of distribution of industrial goods and management of industrial marketing organizations. Topics covered include: industrial marketing system and organization buying behavior; management of industrial marketing mix; industrial market-research; planning, pricing, selling and advertising decisions; strategies for industrial markets. *Prerequisite:* MRK 201; Senior Standing..

**MRK 431 Marketing Research (3.0); 3 cr.** Techniques and procedures of collecting and analyzing information to identify marketing problems and facilitate their solution. Topics covered include: marketing research design; questionnaire construction; sample design; data analysis. *Prerequisite:* MRK 201, STA 207.

**MRK 433 Marketing Strategies and Policies (3.0); 3 cr.** A capstone course in marketing. Emphasis on strategic and executional issues connected to marketing policy. Integration of materials previously taken, utilizing readings, projects and case studies. *Prerequisite:* Senior Standing.

**MRK 481 Marketing Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

**MRK 482 Distribution and Logistics Management Internship (1.0); 1 cr.** Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner and acquire practical skills in logistics and distribution. The internship will be done in cooperating and department approved firms. A minimum of 120 hours of internship is required. *Prerequisite:* Senior Standing.

## **The Degree of Bachelor of Business Administration (B.B.A.)**

### **Human Resources Management Emphasis**

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

Today, corporations consider human resources management as a strategic partner in order to help them achieve a competitive advantage. The Human Resources Management emphasis stresses on both strategic and operational aspects through theories, policies and practices of human resources management in a firm. Topics learned cover employee staffing as well as recruitment and selection, training and development, performance appraisal and compensation and benefits administration, job analysis and design as well as labor-management relations.

#### **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration in Human Resources Management must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements.

These 106 credits are divided into:

#### **Degree Requirements (106 credits)**

<b>General Education Requirements</b>	<b>30 cr.</b>
<b>Required Common Courses</b> ACO 201 <sup>1</sup> , ACO 202 <sup>1</sup> , BAD 201, BAD 311, BAD 317, BAD 323, BAD 433, BAD 453, BAF 311 <sup>1</sup> , ECN 211 <sup>1</sup> , ECN 212 <sup>1</sup> , MRK 201, STA 206, STA 207, MAT 205.	<b>45 cr.</b>
<b>Required Major Courses</b> MGT 201, MGT 210, MGT 312, MGT 325, MGT 453, BAD 329, MGT 483, <b>Plus two additional courses from the following:</b> MGT 337, MGT 402, MGT 411, MGT 475, BAD 429, BAD 431.	<b>25 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>

---

<sup>1</sup> Minimum passing grade is "C"

### Minor in Human Resources Management (15 credits)

Human Resources play a key role in private and public-sector organizations. The minor in Human Resources Management is designed to provide students with the required skills to deal with the human aspect of organizations including appraisal systems, team management, communications, dispute resolution, and human resource planning..

Students are required to use the following table:

Course No.	Description	Credits	Prerequisite
MGT 201	Principles of Human Resources Management	3	None
MGT 210	Organizational Staffing	3	MGT 201
MGT 325	Compensation and Reward Systems	3	Junior Standing
<b>CHOOSE TWO OF THE FOLLOWING</b>			
MGT 402	Business Negotiations	3	Senior Standing
MGT 312	Training and Career Development	3	Junior Standing
MGT 337	Recruitment and Selection	3	MGT 210
MGT 411	Leadership, Quality and Performance	3	Senior Standing
BAD 317	Organizational Behavior	3	BAD 201
MGT 453	Global Human Resources Management	3	Senior Standing
Total		15 cr.	

## Undergraduate Courses: Human Resource Management

---

**MGT 201 Principles of Human Resources Management (3.0); 3 cr.** Theories, policies, and practices of human resources management in a firm. Topics covered include employee selection, training and development, performance appraisal and compensation, job analysis and design, benefits administration, and labor-management relations.

**MGT 210 Organizational Staffing (3.0); 3 cr.** This course provides an in-depth examination of the organizational staffing process. Procedures for human resources needs assessment such as personnel audits and forecasting are discussed. Recruitment strategies and the process of organizational choice of candidates are explored. There is emphasis on understanding basic types of assessment tools and procedures for choosing new employees. *Prerequisite:* MGT 201.

**MGT 312 Training and Career Development (3.0); 3 cr.** The course is an advanced study of personnel training and development in contemporary organizations. Emphasis is placed on the identification of training needs, program design, selection of training methods, monitoring the process, and evaluating the results. *Prerequisite:* MGT 201; Junior Standing.

**MGT 325 Compensation and Reward Systems (3.0); 3 cr.** This course provides the study of labor markets and examines the general structure of an organization and the rewards employees seek in exchange for their services and contributions to the firm. Topics covered include developing pay structure, measuring performance, providing employee benefits, rewards and a motivating work environment, and administering the compensation plan. *Prerequisite:* MGT 201; Junior Standing.

**MGT 337 Recruitment and Selection (3.0); 3 cr.** The objective of this course is to describe to students how organizations search for prospective employees and influence them to apply for available jobs. It is an advanced study of recruitment and selection practices of organizations. *Prerequisite:* MGT 210.

**MGT 402 Business Negotiations (3.0); 3 cr.** Negotiation permeates human interactions. It affects the balance and distribution of resources

among nations, organizations, families, and individuals. Students will understand the theory behind successful negotiation, recognize situations that call for negotiation, and study the utilization of alternative negotiating strategies and tactics. *Prerequisite:* Senior Standing

**MGT 411 Leadership, Quality and Performance (3.0); 3 cr.** The purpose of this course is to focus on the major traits, which come together in a leader to produce Leadership. Theory, Power, Motivation, and Communication, this course explores the causes and consequences of effective leadership in organizations. *Prerequisite:* Senior Standing.

**MGT 453 Global Human Resources Management (3.0); 3 cr.** This course is designed to help students develop skills as global managers and to provide them with an understanding of critical issues in the management of multinational organizations. Topics covered include international leadership skills, cross-cultural negotiations, ethical dilemmas in cross-cultural environments, and designing and managing multinational organizations. *Prerequisite:* Senior Standing.

**MGT 475 Managing Employment Relations (3.0); 3 cr.** This course provides an overview of the relationships between human resources and parties to employment. It considers contract negotiations, discipline and grievance procedures, and human resources department assistance in conflict resolutions. Special attention is given to the organizational structure of the parties and their diversified objectives. *Prerequisites:* MGT 210, BAD 329.

**MGT 483 Human Resources Management Internship (1.0); 1 cr.** The Internship program is designed to provide the Interns with the opportunity to develop professional skills related to their studies by working under the supervision of an experienced business practitioner. Internship is conducted under the supervision of a program director at NDU and in cooperation with the Interns employer. A minimum of 120 working hours are required. *Prerequisite:* Senior Standing.

---

## **The Degree of Bachelor of Business Administration (B.B.A.)**

### **Health Care Management Emphasis**

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

The health care industry size is growing worldwide driven by increasing consumerism and health needs, advancing technologies, changing regulations, aging population as well as an enhanced awareness towards a healthier lifestyle.

In addition to providing effective care, today's health care organizations urgently need to be managed in terms of organizational issues, human resources and cost control. The program provides students with business management skills and knowledge of healthcare delivery system needed to work in this growing field.

### **Graduation Requirements**

Students seeking the degree of Bachelor of Business Administration in Health Care Management must complete a total of 106 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the core and concentration requirements.

These 106 credits are divided into:

#### **Degree Requirements (106 credits)**

**General Education Requirements** **30 cr.**

**Required Common Courses** **48 cr.**

ACO 201, ACO 202, BAD 201, BAD 315, BAD 317, BAD 323, BAD 433, BAD 453, BAD 427, BAD 429, BAF 311, ECN 211, ECN 212, MRK 201, STA 206, STA 207

**Required Major Courses** **28 cr.**

HCM 301, HCM 302, HCM 401, HCM 402, HCM 403, HCM 404, HCM 405, HCM 406, HCM 407, HCM 408.

---

## Undergraduate Courses: Health Care Management

**HCM 301 Introduction to Health Care Management (3.0), 3 cr.** This course provides an overview of the evolution, structure and current issues in the health care system. It examines the unique features of health care as a product, and the changing relationships between patients, physicians, hospitals, insurers, employers, communities, and government. The course examines three broad segments of the health care industry: payers, providers, and suppliers. Within the payer segment, the course examines the sources and destinations of spending, MOH, CNSS, insurance, technology assessment and renewal, and payer strategy. Within the provider segment, the course examines the impact of cost containment and competition on hospitals and integrated HC delivery systems, and physicians' relationships. Within the supplier segment, the course will examine developments in the biotechnology, pharmaceutical, medical devices (equipment and supplies), genomic and IT industries.

**HCM 302 Health Care Economics (3.0), 3 cr.** This course is designed to build an understanding of the health care delivery system from an applied economics perspective. The application of these skills will be drawn from examples that illustrate the production of and demand for health. The economic analysis of health care delivery is based on microeconomic theory: elasticity of demand, price sensitivity, etc. As the managed care model develops, greater emphasis is being placed on individual choice and responsibility as determinants of healthcare utilization. This trend has resulted in greater emphasis on the use of economic theory to both plan and evaluate the health care setting. Insurance is a major economic lever of these trends. The rationale for government intervention in medical markets as well as the effectiveness and efficiency of various health policies, including: MOH medical aid, CNSS coverage, price regulation of hospitals, physician payment reform, are surveyed. *Prerequisite:* ECN 212.

**HCM 401 Management Of Health Care Organizations I (3.0), 3 cr.** The purpose of this course is to prepare you for managing health care organizations within an

environment of cost containment and quality management of health care services. In Module I, we will first focus on the profession of health care management. This will present a picture of the daily tasks health care managers faces and knowledge, skills, and abilities needed to be successful. The second focus is on the management of health care teams. This section will equip the student to participate in and successfully manage, coach and/or mentor teams of clinicians, managers, and others. *Prerequisites:* HCM 301, HCM 302.

**HCM 402 Management Of Health Care Organizations II (3.0), 3 cr.** The purpose of this course is to prepare you for managing health care organizations within an environment of cost containment and quality management of health care services. In Module II, we will focus on quality improvement since many health care facilities are turning to total quality management concepts and processes as they strive for efficiency in operations and improvement of medical care delivered. Cost containment programs will be discussed with an emphasis on supply chain management and IT driven processes. *Prerequisite:* HCM 401.

**HCM 403 Health Care Strategic Management (3.0), 3 cr.** This course provides an introduction to how health care organizations (Payers, Providers, Suppliers) identify, create, and market their services within the context of a long-term strategic plan. The course will analyze the evolution of strategic management within the healthcare industry, and how it has responded to individuals in need of healthcare services. The class will also examine the core components of a strategic management approach, including situation analysis, formulation of a strategy, implementation, and follow-up relative to the mission and vision of the health care organization. As an adjunct to these concepts, the class will review real world cases studies from throughout the healthcare industry. Finally, the communication of the organization's mission, vision, and overall strategic management plan will be discussed. *Prerequisites:* HCM 301, HCM 302.

**HCM 404 Health Care Marketing Management (3.0), 3 cr.** This course focuses on strategic and tactical marketing issues facing health systems including: payers, providers and suppliers. The course requires a basic

understanding of what is marketing. Emphasis is placed on analyzing market and patient needs and on understanding branding, service line marketing, patient retention, patient satisfaction, measuring marketing effectiveness, internet marketing and marketing implementation programs. The course explores the practical application of these marketing concepts on major industry players: Hospitals, Insurers, Medical Device Suppliers, and Pharmaceutical companies. *Prerequisites:* MRK 201, HCM 301, HCM 302.

**HCM 405 Health Care Financial Management (3.0), 3 cr.** This course examines the tools and methods of financial management in health care organizations with emphasis on allocation and use of funds in managing the components of health care delivery systems. Analysis of cost drivers and constraints of alternative source of funds, and the application of financial decision instruments and their effect on operational management and market value of the entity, including valuation methodology and risk management, are covered. Modeling profitability analysis and planning for health care providers and payers is surveyed. *Prerequisites:* BAF 311, HCM 301, HCM 302.

**HCM 406 Health Care Legal Environment (3.0); 3 cr.** This course provides a description of the legal framework in which Health Care Services operate. The course focuses on the national legislation at the level of the Ministry of Health, the National Social Security Fund (NSSF) and the Ministry of Labor to focus on citizens' rights, patients' rights and the duties, responsibilities and obligations of health care professionals, complemented with an overview of the laws surrounding the activities of private health care insurance providers. Professional orders will also be covered to complete the

review at the local level. More globally, the course will investigate the statutes of the United Nations World Health Organization and its relationship with national Health Care Services entities. Ethical issues will be discussed to emphasize the particular nature of Health Care provision.

**HCM 407 Seminars and Topics in Health Care Management (3.0); 3 cr.** Health care organizations are under continued pressure to contain costs while maintaining high quality health care. The purpose of this course is twofold: (1) to help you learn about the many controversial issues facing the healthcare industry; and (2) to prepare you for analyzing the issues affecting health care institutions, including payers, providers, and suppliers. You will learn how the various sectors of the health care delivery system deal with conflicting demands from an assortment of stakeholders, including governments, insurers, suppliers, employers, health care professionals, and patients. *Prerequisites:* HCM 401, HCM 402, HCM 403.

**HCM 408 Health Care Internship Program (1.0); 1 cr.** This course is required of all students in the Health Care Management Program. The course is designed to give students first hand experience in a health care setting. Students receive practical experience under the supervision of a qualified professional. In collaboration with the preceptor, students define a complex problem in the assigned firm/facility and in the area of responsibility, conduct an analysis of the problem and conceptualize a project to resolve the problem. In addition, upon completion of the course students should have the tools to effectively search for their first job. *Prerequisites:* HCM 301, HCM 302

## DEPARTMENT OF HOSPITALITY AND TOURISM MANAGEMENT

---

**Assistant Professor:** Zgheib, Yussef

**Senior Lecturer:** Assaf, Carole; Beyrouthy, Ghassan (Chair)

**Lecturer:** Sakr, Omar

---

### **The Degree of Bachelor of Hotel Management and Tourism (BHMT)**

**Disclaimer:** Emphasis area appears on student transcript of record but not on student diploma.

#### **Mission**

Hospitality, travel, and tourism are rapidly growing industries. The NDU program of Bachelor of Hotel Management and Tourism is designed to prepare students for successful professional and executive careers in the hospitality and tourism industries by allowing them to specialize in one of the following four concentrations: Hospitality Management, Food & Beverage Management, Travel and Tourism Management, as well as Hospitality Events Management.

The various concentrations provide a sound foundation in hotel, restaurant management, tourism administration and events management through focused academic coursework, hands-on work experience, and intense interaction with the industry. They also provide relevant educational opportunities for persons currently employed in these industries and wishing to upgrade their skills.

Hospitality and Tourism Management students at NDU benefit from a rare opportunity to learn the international management techniques, and seek knowledge adapted to their professional career orientations and specializations.

Consistent with its pioneering drive, and addressing market needs, in 2010 the Department of Hospitality and Tourism Management (DHTM), launched the first Hospitality Events Management program in Lebanon and the region. Moreover, in 2011 the Department of Hospitality and Tourism concluded a Memorandum of Understanding (MOU) with the American Hospitality Academy (AHA), a leading institution in hospitality education and training in the US and worldwide. Based on this MOU, NDU's Hospitality students will be entitled to professional training in the US as well as AHA certificates and accreditation.

#### **Graduation Requirements**

Students seeking the degree of Bachelor of Hotel Management and Tourism must complete a total of 103 credits (104 credits for the Food and Beverage concentration) with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the major and concentration requirements. The 103 credits are divided into:

**C - Travel and Tourism Management Emphasis (19 cr.):**

**Degree Requirements (103/104 credits)**

**General Education Requirements** **27 cr.**

**Major Requirements** **54cr.**

TTM 201, TTM 204, HSM 205, HSM 211, HSM 224, HSM 22v, TTM 237, HSM 281, HSM 311, FBM 313, HSM 314, FBM 31v, HSM 319, FBM 324, TTM 326, FBM 351, HSM 411, HSM 451, HSM 459

**Concentration Requirements** **19 /20cr.**

Hospitality Management Emphasis (19cr)

Food and Beverage Management Emphasis (20cr) Travel and Tourism Management Emphasis (19cr)

Hospitality Events Management Emphasis (19cr)

**Free Electives** **3 cr.**

Halfway through their university education, students majoring in Hotel Management and Tourism are provided with the opportunity to choose one of four concentration schemes. These options allow graduates to enhance their expert knowledge in one of the four most englobing fields of hospitality and tourism; thus, differentiating themselves from their peers and improving their potential for professional success.

**A - Hospitality Management Emphasis (19 cr.):**

**Major Requirements** **10 cr.**  
FBM 381 or TTM 382, HSM 432, HSM 437, HSM 460

**A choice of 3 courses from the following** **9cr.**  
FBM 332, , TTM 342, FBM 343, TTM 344, TTM 346, , , FBM 424, , FBM 444, TTM 445, HSM 447, , HSM 485, STA 206, ECN 211, COA 252, BAF 312, NTR 313, GEM 202 or ITL 202 or SPA 202, HVM 201, HVM 420, HVM 422, HVM 311, HVM 301.

**B - Food and Beverage Management Emphasis (20 cr.):**

**Major Requirements** **11 cr.**  
FBM 332, FBM 381, FBM 41t, FBM 424

**A choice of 3 courses from the following** **9 cr.**  
FBM 343, HSM 432, HSM 437, , FBM 444, , HSM 447, FBM 464, HSM 485, STA 206, ECN 211, BAF 312, NTR 313, GEM 202 or ITL 202 or SPA 202, HVM 201, HVM 420, HVM 422, HVM 311, HVM 301.

**9 cr.**

**Major Requirements**

**10 cr.**

TTM 342, TTM 345, TTM 382, TTM 445

**A choice of 3 courses from the following**

FBM 343, TTM 344, TTM 346, HSM 432, HSM 437, FBM 444, HSM 447, ,  
TTM 462, HSM 485, STA 206, ECN 211, BAF 312, GEM 202 or ITL 202 or  
SPA 202, HVM 201, HVM 420, HVM 422, HVM 311, HVM 301.

---

**D- Hospitality Events Management Emphasis (19 cr.)**

**Major requirements:**

- **5 courses will be required as major core courses:**
  1. HVM 201 (3 cr.): Introduction to the International Events Industry
  2. HVM 301 (3 cr.): Events Management Operations and Logistics
  3. HVM 311 (3cr.): Events Sponsorship, Fundraising and Partnership
  4. HVM 431 (3 cr.): Event Management Project
  5. HVM 382 (1cr.): Internship

**Major Electives:**

**6 cr.**

- **A choice of two courses from the following:**

HVM 401, HVM 414, HVM 416, HVM 420, HVM 422, HVM 425, HVM 430, HSM 437,  
FBM 332, HSM 432, FBM 444, FBM 343, HSM 460, TTM 345, , HSM 485, GEM 201 or  
ITL 202 or SPA 202, STA 206, NTR 313, TTM 342.

### Minor in Hospitality Services Management (18 credits)

This minor introduces the student to the hospitality branch of the tourism industry, i.e. the world of hotels, clubs, casinos, service institutions, and all other accommodation facilities. Students are required to use the following table:

Course #	Description	Credits
TTM 201	Introduction to Tourism & Hospitality Management	3
HSM 224	Front Office Operations & Management	3
HSM 227	Housekeeping Operations & Management	2
HSM 319	Information Technology in the Hospitality Industry	3
HSM 281	Internship I: Rooms Division Operations	1
	<b>CHOOSE TWO OF THE FOLLOWING</b>	
HSM 205	Principles of Hospitality Financial Accounting	3
HSM 211	Hospitality & Tourism Law	3
HSM 311	Hospitality Managerial Accounting	3
HSM 314	Human Resources Mgt in the Hospitality Industry	3
HSM 334	Resort & Receptions Management	3
HSM 411	Hospitality Managerial Finance	3
HSM 432	Hospitality Property Management	3
TTM 237	Hospitality and Tourism Marketing	3
HSM 437	Hospitality Sales & Promotional Techniques	3
HSM 447	Advanced Hospitality & Tourism Marketing	3
HSM 449	Meetings, Conventions, Exhibitions & Events Mgt	3
HSM 450	Hospitality Project Planning & Facilities Design	3
HSM 451	Hospitality Management	3
HSM 459	Hospitality & Tourism Strategic Management	3
Total		18 cr.

## Minor in Food and Beverage Management (20 credits)

This minor is designated to students who intend to be involved in the food & beverage, restaurant, or catering business. The scope of this minor is to provide students with a broad and professional understanding of the world of restaurants, pubs, catering companies, and the like.

Students are required to use the following table:

Course #	Description	Credits
FBM 313	Food Production	3
FBM 316	Food Production Lab	3
FBM 324	Restaurant Operations & Floor Management	3
FBM 351	Food, Beverage & Labor Cost Control	3
FBM 381	Internship II: Food & Beverage Operations	1
	<b>CHOOSE TWO OF THE FOLLOWING</b>	
FBM 332	Catering, Functions & Banqueting Management	3
FBM 335	Institutional & Contract Foodservice Management	3
FBM 343	Purchasing for Hospitality Operations	3
FBM 349	International Cuisine	3
FBM 413	Advanced Food Production	4
FBM 424	Restaurant Development & Management	3
FBM 444	Alcoholic Beverages Appreciation	3
FBM 446	Bartending & Beverage Operations Management	3
FBM 464	Special Topics in Food & Beverages	3
HSM 449	Meetings, Conventions, Exhibitions & Events Mgt	3
Total		19/20cr.

## Minor in Travel and Tourism (16 credits)

This minor is intended to introduce the student to the world of Travel and Tourism through travel agencies, airports, tour operators, tourist destinations, and, among others, sustainable tourism.

Students are required to use the following table:

Course #	Description	Credits
TTM 201	Introduction to Tourism & Hospitality Management	3
TTM 326	Domestic Travel & Tourism Development	3
TTM 342	Travel Agency & Tour Management	3
TTM 382	Internship III: Travel Agency & Tour Operations	1
	<b>CHOOSE TWO OF THE FOLLOWING</b>	
TTM 204	Economics of Tourism	3
TTM 237	Hospitality & Tourism Marketing	3
TTM 341	International Air Law	3
TTM 344	International Travel & Tourism	3
TTM 345	Airline Passenger Services	3
TTM 346	Automated Travel System	3
TTM 440	Tourism & Multicultural Management	3
TTM 445	Sustainable Tourism	3
TTM 454	Strategic Airline Business Operations	3
TTM 462	Special Topics in Travel & Tourism	3
Total		16 cr.

## Minor in Events Management

The Minor in Events Management offers a solid introduction and understanding of the events management industry. It allows students enrolled in other undergraduate programs at NDU to broaden their educational experiences by developing the knowledge and skills to plan and execute a wide range of social, cultural, educational, business, entertainment, and fundraising events within a local, regional, and international context.

Course #	Description	Credits	Pre/Co-requisite
HVM 201	Introduction to the International Events Industry	3	---
HVM 301	Events Management Operations and Logistics.	3	
HVM 311	Events Sponsorship, Fundraising and Partnership.	3	---
HVM 382	Internship	1	
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
FBM 381	Internship II: Food & Beverage Operations	3	
	<b>CHOOSE TWO OF THE FOLLOWING</b>		
HVM 401	Contemporary Issues and Best Practices in Events Management	3	
HVM 414	Events Production and Technical issues	3	
HVM 416	Risk and Safety in Events Management	3	
HVM 420	Protocol and Etiquette in Events Management	3	
HVM 422	M.I.C.E (meetings, incentives, conferences, & exhibitions) MGT	3	
HVM 425	Casino and Entertainment Management	3	
HVM 430	Recreational, Leisure and Sports Events Management	3	
<b>HVM 431</b>	Event Management Project	3	
<b>Total</b>		16cr.	

---

## Undergraduate Courses: Hotel Management and Tourism

**TTM 201 Introduction to Tourism & Hospitality Management (3.0); 3 cr.** A comprehensive overview of the tourism and hospitality global industry. The course is a broad introduction of the industry's scope, supply and demand components, socio-economic and environmental impacts, operations, career opportunities, and requirements for success. Students further gain exposure to the basic managerial functions and how they relate to the tourism and hospitality industry.

**TTM 204 Economics of Tourism (3.0); 3 cr.** This course applies economic principles to the tourism and hospitality industry. Special emphasis is placed on supply and demand and the determination of prices. It also discusses the impact of the GDP, growth, and fluctuations on the Tourism industry. The course further focuses on the contribution of tourism to the overall performance of the economy.

**HSM 205 Principles of Hospitality Financial Accounting (3.0); 3 cr.** Hospitality accounting principles, concepts, and practices pursuant to the industry's systems of accounts. Careful consideration is given to practical transaction analysis, flow of accounting data to the financial statements and their implications with respect to cash flow, revenues, expenses, assets, liabilities, and equity management. *Corequisite:* TTM 201.

**HSM 211 Hospitality and Tourism Law (3.0); 3 cr.** A study of the legal responsibilities affecting the operations of the hospitality and tourism industries, including aspects of innkeeping, occupier's liability, trades practices, licensing, health, taxation, and employment. Other topics include: corporation legislation, the law of contract, the role of ethics, and a comparative approach to foreign legislations relating to hospitality and tourism industries. *Prerequisite:* TTM 201.

**HSM 224 Front Office Operations and Management (3.0); 3 cr.** The course acquaints the student with the operations and procedures involved in managing the guest services area of a lodging operation. Functions covered deal with the guest cycle from reservations through checkout, including the night audit and their interaction with other operations. Intensive lab applications. *Prerequisite:* TTM 201.

**HSM 227 Housekeeping Operations and Management (0.4); 2 cr.** This course is a guide

to various aspects of housekeeping in a lodging industry from cleanliness, hygiene, maintenance, and aesthetic upkeep of the property. It deals with duties from those of executive housekeeper to room attendant. Intensive lab applications. *Corequisite:* HSM 224.

**TTM 237 Hospitality and Tourism Marketing (3.0); 3 cr.** An introduction to the concept, principles and practices of contemporary marketing as they apply to the specialized needs of the hospitality industry. Subjects covered are marketing concepts and environment, segmentation and positioning, consumer behavior, and marketing mixed strategies. The development of a practical marketing plan for an actual hospitality business is a special feature of this course. *Prerequisite:* TTM 201.

**HSM 281 Internship I: Rooms Division Operations 1 cr.** A supervised on-the-job work experience in the lodging business. Arranged with a Department approved cooperating institution. This field experience—of no less than 500 hours—emphasizes front office and housekeeping operations and management tasks. Student must check course guidelines before registering. *Prerequisites:* HSM 224, HSM 226.

**HSM 311 Hospitality Managerial Accounting (3.0); 3 cr.** This course focuses on the use of accounting information for management decision-making and control. Topics include costing, management control systems and performance measurement. Emphasis is on cost-volume analysis, budgeting and pricing decisions. *Prerequisite:* HSM 205.

**FBM 313 Food Production (3.0); 3 cr.** An introduction to food production techniques and management. The course is designed to familiarize students with food composition and properties, commercial food preparation, safety, and sanitation. Students will develop the ability to standardize recipes, plan menus, and manage potential production problems. Practical involvement in food production is included. Intensive lab applications.

**HSM 314 Human Resources Management in the Hospitality Industry (3.0); 3 cr.** Knowledge of the human resources management function in the context of hospitality organizations is developed. In addition to personnel management techniques, exposure will focus on the HRM activities aimed at

attracting, retaining, and motivating hospitality employees. *Prerequisite:* TTM 201.

**FBM 316 Food Production Lab (0.6); 3 cr.** Practical implementation of the culinary concepts and techniques taught in Food Production (FBM 313). (*Corequisite:* FBM 313 for HTM students only).

**HSM 319 Information Technology in the Hospitality Industry (3.0); 3 cr.** This course aims to provide students with a competence in the computerized property management systems used in hotels and restaurants. Information processing concepts, equipments and systems with respect to front office and restaurant automation are introduced. Applied software programs are used intensively. Intensive lab applications. *Corequisite:* HSM 224.

**FBM 324 Restaurant Operations and Floor Management (3.0); 3 cr.** An extensive theoretical and practical exposure to dining room operations and management. Students learn and practice different service and functions concepts as well as learn to manage scheduling, hosting, selling, cashiering, sanitation and safety, and operational performance. Service and related software labs are intensely used.

**TTM 326 Domestic Travel and Tourism Development (2.2); 3 cr.** The course provides a complete description and geography of domestic tourism from the view-point of the traveler and the travel/tourism entrepreneur. Students will gain a solid practical understanding of local travel and tourism development, and potentials from a specific destination and potentials. Field trips and projects are part of this course. *Junior Standing*

**FBM 332 Catering, Functions and Banqueting Management (3.0); 3 cr.** Course leading to a thorough understanding of the different catering concepts for special functions. Lectures and demonstrations focus on menu planning, working methods, catering equipment, kitchen and service layout, service, events preparation and execution, sales, and human resources organization. The course will equip students to operate and manage different types of food and beverage service, on and off premises. *Corequisite:* FBM 313.

**TTM 342 Travel Agency and Tour Management (3.0); 3 cr.** A thorough examination of the services and functions of retail and wholesale travel agencies. Specifically covered are agency organization, automation,

and operations as well as wholesale package planning, implementation and evaluation. Field trips and actual projects will supplement classroom discussions. *Junior Standing*

**FBM 343 Purchasing for Hospitality Operations (3.0); 3 cr.** A comprehensive exposure to the basic principles of purchasing food, beverage, equipment, supplies and contract services. Specific topics include product specifications and ordering, supplier selection, store management, and negotiations. Field Trips included. *Corequisite:* FBM 313.

**TTM 344 International Travel and Tourism (3.0); 3 cr.** A complete description and geography of international travel, notably current trends and cultural behavior, popular destinations, and international tourism organizations as well as major international travel transportation modes and routes. A comparative approach and evaluation of national and international destinations organization, management and marketing.

**TTM 345 Airline Passenger Services (3.0); 3 cr.** An introduction to the most important air transport service and safety skills essential to maintain traveler satisfaction. The course enables students to understand the application of international air transport standards relating to passenger and baggage handling functions. Practical working knowledge of airport passenger service functions will be acquired. *Junior Standing*

**TTM 346 Automated Travel System (3.0) 3 cr.** A comprehensive, hands-on computer learning experience. Students will progress from the characteristics and development of automation in the retail travel agency to practical applications in computerized reservations and back-office systems. *Corequisite:* TTM 342.

**FBM 351 Food, Beverage and Labor Cost Control (3.0); 3 cr.** This fundamental course is designed to familiarize the student with the theory and practice of internal cost controls in the hospitality industry. A comprehensive and thorough understanding of quality assurance versus cost impact on profitability management is provided. Practical financial problems and actual operational techniques of functioning systems of internal control are studied. The focus is to provide future hospitality managers with the ability to handle the diverse issues regarding service quality, employee morale and cost management. *Prerequisites:* FBM 313.

**FBM 381 Internship II: Food and Beverage Operations 1 cr.** A supervised on-the-job work experience in the food and beverage business, particularly restaurants and catering. Arranged with a Department approved cooperating institution, this field experience—of no less than 500 hours—emphasizes operations and management functions in service, production, inventory, and cost control. Student must check course guidelines before registering. *Prerequisite:* FBM 324.

**TTM 382 Internship III: Travel Agency and Tour Operations 1 cr.** A supervised on-the-job work experience in the travel and tourism business, particularly travel agency and tour operations. Arranged with a Department approved cooperating institution, this field experience—of no less than 500 hours—emphasizes agency and group travel operations and management functions. Student must check course guidelines before registering. *Corequisites:* TTM 342.

**HSM 411 Hospitality Managerial Finance (3.0); 3 cr.** Understanding the role of the hospitality financial controller through the application of accounting, finance and cost control principles, aimed at maximizing the organization value. Focus areas include: preparation of financial statements, bond and stock valuation, working capital management, short-term financing, capital budgeting, and alternative financing arrangements. *Prerequisite:* HSM 311.

**FBM 414 Advanced Food Production (2.4); 4 cr.** The course aims to examine the latest techniques and production systems in the food service industry. Commercialized innovations in forms of food, techniques in production, storing and serving, and new technological developments in food service equipments are explored. *Prerequisite:* FBM 313.

**FBM 424 Restaurant Development and Management (3.0); 3 cr.** Students systematically plan and develop a restaurant from concept to operations. The course comprises concept analysis, feasibility study, menu development and pricing, technical and architectural planning, staffing, and pre-opening, opening, and operational administration. An applied project approach is used. *Prerequisite:* FBM 324.

**HSM 432 Hospitality Property Management (3.0); 3 cr.** This course provides an

understanding of the peculiar responsibilities of the engineering and maintenance department. It includes a basic technical understanding of the major building operating systems (HVAC, sound, water, safety, and security), landscaping as well as the related operating energy and cost management. Field property visits included.

**HSM 437 Hospitality Sales and Promotional Techniques (3.0); 3 cr.** An analysis of hospitality buyers' motivations and behavior, and the related effective promotional and sales techniques. This partly experiential course provides the opportunity to develop and practice promotional and personal-selling skills. *Prerequisite:* TTM 237

**FBM 444 Alcoholic Beverages Appreciation (3.0); 3 cr.** This course provides knowledge and appreciation of the major alcoholic beverage from cultural background to production, evaluation purchasing, storing, and service etiquette. Wine, whisky, arak, beer, and spirits are emphasized. A further introduction to coffee, tea and non-alcoholic beverages is provided. Evaluation by tasting is an integral part of the course. Laboratory fee.

**TTM 445 Sustainable Tourism (3.0); 3 cr.** A deeper understanding and analysis of the business-society interface. Policy guidelines to bring both hospitality business and society towards sustainable, workable and mutually beneficial solutions are studied. Topics investigated: ecotourism, corporate policy and social responsibility, ethics and values in business, business interests and community issues, business and media relations, corporation and government relations.

**HSM 447 Advanced Hospitality and Tourism Marketing (3.0) 3 cr.** This elective course builds on the student's previous exposure to the principles and practices of marketing. The key feature is the comprehensive and in-depth coverage of global market analysis for business opportunities and sustainable competitive advantage. A strong emphasis is placed upon the development of a greater appreciation of consumer behavior and competition analysis, selling and communication strategies and management as well as business negotiations. The course is heavily case oriented. *Prerequisite:* TTM 237.

**HSM 451 Hospitality Management (3.0); 3 cr.** Analysis of hospitality operating practices and policies and their managerial implications on the

individual and group behavior in the organizational setting. The focus is on the acquisition and implementation of leadership styles to enhance organizational effectiveness and individual well-being. The course includes the study of group behavior, attitudes and stress management, communication, motivation, leadership, power politics, conflict, and organizational culture. Life case discussions and field projects are included. *Prerequisite:* HSM 314.

**HSM 459 Hospitality and Tourism Strategic Management (3.0); 3 cr.** This capstone course in hospitality and tourism features the integration of business theories and practices into strategic decision making. Focus is on external and internal analysis for business opportunities, organizing for market competitive orientation, quality assurance and sustainable competitive advantage. The course is heavily case-oriented to bring forward realism, and develop critical thinking and decision-making ability.

**HSM 460 Special Topics in Hospitality (3.0); 3 cr.** Selected readings and case studies referring to current topics and developments within the lodging and food service industries. The purpose is to expose students to recent developments, current challenges and future trends affecting the industry. Studied during the course is the impact of change on hotel and food service management. This is a seminar and case study course.

**TTM 462 Special Topics in Travel and Tourism (3.0); 3 cr.** An overview and analysis of current developments, trends, and challenges in travel and tourism. Studied during the course are the impact and decision-making challenges faced by management due to macro and micro environmental changes with the resulting shifts of tourism destinations and expectations. This is a seminar and case study course.

**FBM 464 Special Topics in Food and Beverages (3.0); 3 cr.** This course provides students discussion and problem solving in major and current topics in the F&B field. Topics are announced in the term schedule

**HSM 485 Seminar in Hospitality and Tourism Management (3.0); 3 cr.** Individual and group studies of a hospitality and tourism business in an area of special interest. It is an in-depth dissection of the managerial functions of the business concern. Findings and decisions are

reported and discussed in class. *Corequisite:* HSM 451.

**HVM 201 Introduction to the International Events Industry (3.0); 3 cr.** This course is the initiation of the international events industry. The students throughout this course will gain understanding of the scope and purposes of the wide variety of events. The different components, timeline, and major integral parts that constitute an event will be emphasized. Appropriate skills and knowledge will be developed in order to adequately perform and assume responsibility of the management of an event. Practical exposure to case studies, field visits, and guest speakers will be part of this course.

**HVM 301 Events Management Operations and Logistics (3.0); 3 cr.** This course is comprehensive that examines the details of event planning, management, and operations. The students go through the nuts and bolts of events operations in terms of timeline, logistics, budget control, resources, stakeholders, laws, and regulations methodologies in order to organize successful fly plan and management events. *Prerequisite:* HVM 201

**HVM 311 Event Sponsorship, Fundraising and Partnership (3.0); 3 cr.** This course develops the students' research planning skills, to develop effective financial plans and feasibility studies, as well as to identify source and secure fund raising, sponsorship, and partnership opportunities. Applied case studies that investigate the above issues in the private, public, and non-profit sectors will be used intensively. *Prerequisite:* HVM 201

**HVM 431 Events Management Project (3.0); 3 cr.** In this course, experiential learning opportunity will be given to the students to apply theoretical, knowledgeable, and practical skills acquired in class to organize and manage public events (from pre-planning concept phase, to executive and post-evaluation phases). *Prerequisite:* HVM 301

**HVM 382 Internship 1 cr.** A supervised on-the-job work experience in the events industry, particularly MICE, arranged with a Department-approved cooperating institution. This field experience—of no less than 500 hours—emphasizes operational involvement in the planning and execution of events. Students must follow the course's pre-set guidelines. *Corequisite:* HEM 414.

**HVM 401 Contemporary Issues and Best Practices in Events Management (3.0); 3 cr.**

This course is a highly interactive course that is destined to identify major trends, contemporary issues, and best practices in the events management industry. Through intensive use of case studies drawn from real life events. Students will have the opportunity to discuss and conduct post-event evaluations to identify success and failure factors, winning strategies, and potential challenges will be outlined. Thus, students will learn to develop alternative planning scenarios. *Prerequisite:* HVM 201

**HVM 414 Events Production and Technical Issues (3.0); 3 cr.**

This course conveys advanced knowledge of key production and technical issues, including: design, layout, printed material, power, lights, sound, audiovisual, information technology, special effect, music, colors, decoration, and costumers. As an event manager, the student will combine the theoretical and practical applications in the above-mentioned setups to employ methods that are effective and cost-efficient. *Prerequisite:* HVM 301

**HVM 416 Risks and Safety in Events Management (3.0); 3 cr.**

A framework of contingency procedures will be elaborated to respond to possible safety and security risks that can hinder an event execution. Legal, logistics, financial, risk assessment, and operational safeguards to ensure protection against failures, losses, damage, and injury will be emphasized. *Prerequisite:* HVM 201

**HVM 420 Protocol and Etiquette in Events Management (3.0); 3 cr.**

This course outlines the importance of protocol and etiquette in events management. The student will enhance his/her manners and *savoir vivre* skills in conducting events and business transactions. Areas that will be emphasized include: the knowledge of agenda and time management, verbal and written communication, guest management, media management, dress codes, postures and gestures, and table manners. The outcome of the course is a student that carefully and professionally deals with both: known situations and difficult or unfamiliar situations to avoid any social "faux pas" that could ruin a perfectly good business deal. *Prerequisite:* HVM 201

**HVM 422 M.I.C.E (meetings, incentives, conferences, and exhibition) Management (3.0); 3 cr.**

This course serves as an overview of the Size and scope of the MICE industry. Upon completion, Students will acquire specialized managerial skills required to package, plan, execute, and evaluate these product segments. The management of such events incorporate the determination of the purpose, the message, the budget, the selection of site, the negotiation of contracts, the prospection for attendees, the setting of dates and timelines, the management of exhibit spaces, the lodging services, the procurement of food and beverages, the telecommunications and audio-visual requirements, the transportation, the recruitment of labor and material, the measures of safety and security, the assessment of the event's success, and all other related necessities. *Prerequisite:* HVM 201

**HVM 425 Casino and Entertainment Management (3.0); 3 cr.**

A specialized course that provides a blend of technical, operational, and managerial knowledge that pertains to the gaming and entertainment businesses. The content emphasizes ethical and regulatory issues, technological and operational expertise, site and property management, security and surveillance systems, financial and marketing management, behavior-metrics, and the relationship of the casino and entertainment industries to the overall tourism and socio-cultural environments. *Prerequisite:* HVM 201

**HVM 430 Recreational, Leisure and Sports Events Management (3.0); 3 cr.**

This course covers the guidelines and principles of managing, executing, and evaluating recreational leisure and sport events. Students will broadly consider the different forms that these events can take; with a focus on the ones that are most popular. On top of the standard planning, logistics, funding, operations, design, maintenance, risk and safety tasks; Students will also learn to manage the interaction of the different stakeholders involved from a psychological and sociological perspectives. Patterns of behavior, control techniques, safety and environmental concerns, and demographic characteristics will be examined. *Prerequisite:* HVM 201



# **FACULTY OF ENGINEERING (FE)**

## FACULTY DIRECTORY

### Office of the Dean

Engineering Building, 3rd floor, Room E 311  
Tel: 09-218-950/51/52 (Extension 2028), Direct line: 09-208401  
E-mail: feng@ndu.edu.lb

Dr. Michel El-Hayek, Dean (E 311)  
Ms. Jeanette Elias, Administrative Assistant (E 310)  
Dr. Elias Nassar, ABET Coordinator (HA 369)  
Ms. Nancy Turc, ABET Academic Support Officer (HA 368)  
Dr. Chady El-Moucary, FE Coordinator, NLC (NLC-F 11)  
Dr. Charbel Zgheib, FE Coordinator, SC (SC-CA 112)

### Department of Civil and Environmental Engineering

Engineering Building, 3rd floor, Room E 308  
Tel: 09-218-950/51/52 (Extension 2029), Direct line: 09-208402  
E-mail: jharb@ndu.edu.lb

Dr. Jacques Harb, Chairperson (E 308)  
Ms. Loulou Saliba, Secretary (E 307)

**Advisors:** Elie Chakar (E 212), Sophia Ghanimeh (HA 367), Jacques Harb (E 308), Dima Jawad (E 218), Naji Khoury (HA 377), Alain Matta (E 223), Talal Salem (E 216)

**Advisors NLC:** Dalia Youssef-Abdel Massih (NLC-F 12), Elsy Ibrahim (HA 373)

**Laboratory Instructors:** Wissam Haddad (Lab 306), Yara Maalouf (Lab 422)

**Laboratory Staff:** Elie Lahoud (Lab 305)

### Department of Electrical & Computer and Communication Engineering

Engineering Building, 3rd floor, Room E 302  
Tel: 09-218-950/51/52 (Extension 2174), Direct line: 09-208405  
E-mail: sgeorges@ndu.edu.lb

Dr. Semaan Georges, Chairperson (E 302)  
Mrs. Jacqueline Hobaiter, Secretary (E 303)

**Advisors:** Jad Atallah (E 215), Marwan Bou Sanayeh (E 211), Sami Elmurr (S 332), Semaan Georges (E 302), Mustapha Hamad (E 217), George Hassoun (E 209), Abdallah Kassem (E 204), Fakhreddine Keyrouz (E 372), Ghassan Kraidy (HA 376), Nassar Mendalek (S 331), Elias Nassar (HA 369)

**Advisor NLC:** Chady El-Moucary (NLC-F 11)

**Advisor SC:** Charbel Zgheib (SC-CA 112)

**Laboratory Instructors:** Nadine Bou Dargham (SC-CC 214), Georges Breidy (E 210), Wissam El-Beiano (Lab 423), Nisrine El-Turcy (E 214), Aline Siranossian (E 213), Walid Zakhem (NLC- F 10)

**Department of Mechanical Engineering**

Engineering Building, 3rd floor, Room E 306  
Tel: 09-218-950/51/52 (Extension 2232), Direct line: 09-208407  
E-mail: me@ndu.edu.lb

Dr. Ghazi Asmar, *Chairperson* (E 306)

Mrs. Ghada Khoury, *Secretary* (E 305)

**Advisors:** Ghazi Asmar (E 306), Marwan Azzi (HA 370), Charbel Bou Mosleh (E 224),  
Francis Francis (E 208), Najib Metni (E 206), Rayan Slim (E 205)

**Advisor NLC:** Francis Francis (NLC-F 8)

**Laboratory Instructors:** Wissam Daou (Lab 371), Sylvie Melki (Lab 421).

**Laboratory Staff:** Fady Awad (Lab 377)

## **FACULTY OF ENGINEERING**

### **FACULTY PROFILE**

The programs in civil, computer and communication, electrical and mechanical engineering prepare students to enter professional practice immediately upon graduation and to pursue graduate study.

The curricula of the Engineering Departments share three basic tenants: scientific and technological competence, balance between theory and practice, and commitment to self-directed and life-long personal and professional development.

Courses are enhanced by excellent computing facilities and by extensive hands-on, state-of-the-art laboratory experiences that are integrated throughout the five-year curriculum.

The states-of-the-art and extensive laboratories of the Faculty of Engineering are made available to faculty and student research, senior engineering projects, engineering competition projects and instruction through open hours, and scores of regularly scheduled laboratory courses.

Faculty members in the academic ranks are responsible for laboratory course content, relevance to the curriculum, project supervision, and the development and update of facilities. Dedicated instructors supported by the laboratory staff are in charge of the laboratory courses instruction.

With these academic functions, laboratories have the effective capabilities, practical functionalities, and excellent quality to provide wide-ranging services to the engineering profession. These services include testing to the construction industry as well as advanced and unique experimental research.

Class and laboratory enrollment is maintained at small class sizes to ensure personal attention by a Faculty that is committed to outstanding instruction as well as close student-faculty interaction both within and outside the classroom.

The Faculty supports and counsels on-campus chapters of international professional organizations that engage in a variety of activities to provide students with national and international exposure. The list includes the ASHRAE, ASME, EWB, IEEE, and SCE, and is growing as more and more students are moving from local scale to regional and international exposure.

### **MISSION, VISION, AND VALUES**

#### **Mission**

The Faculty of Engineering at NDU endeavors to graduate engineers who understand the ethical, social, economic, and environmental contexts of their profession at the local, regional, and international levels, and who apply their knowledge with sound judgment and responsibility in order to develop ways to utilize the materials and forces of nature in a sustainable manner for the benefit of mankind. The Faculty of Engineering is committed to the education of the whole person according to the University's model of liberal arts education and through its applied curricula, quality research, and extra-curricular activities. Students are encouraged to pursue lives of global citizenship, community service, life-long learning, and exemplary leadership. In keeping with the University mission, the Faculty of Engineering aims to graduate students who are rooted in their faith of God.

## **Vision**

To be recognized as a regional center of excellence for engineering education where highly qualified faculty and outstanding students pursue knowledge in a context of ethical and social values. This distinguished education will enable students to contribute in a socially responsible manner to the development of Lebanon and the region.

## **Values**

***Excellence in education and scholarship:*** Highly qualified faculty educate students through theory and hands-on instruction using the latest available technologies. High quality research addresses problems of relevance to the community and enhances classroom instruction.

***Life-long learning:*** Our students will be equipped with the tools and skills that enable them to keep up to date in their field.

***Service:*** Our students will be encouraged to use their knowledge for the service of the community through engineering projects and extra-curricular activities.

***Faith and integrity:*** In keeping with the tradition of the Maronite Mariamite Order, we aim to graduate students that are rooted in their faith in God. This faith expresses itself in respect for God's creation and integrity in their daily professional and social interactions.

## **ACADEMIC DEPARTMENTS AND DEGREE PROGRAMS**

The Faculty of Engineering consists of the following departments:

- Department of Civil and Environmental Engineering
- Department of Electrical & Computer and Communication Engineering
- Department of Mechanical Engineering

and offers degree programs in Civil Engineering (CE), Mechanical Engineering (ME), Electrical Engineering (EE), and Computer and Communication Engineering (CCE), leading to the degree of Bachelor of Engineering.

The Department of Civil and Environmental Engineering offers a minor in Engineering Management which is opened to all Engineering students.

## **POLICIES AND PROCEDURES**

### **Admission Requirements**

Admission to the Engineering programs is governed by the University admission requirements as outlined in the general section of the University Catalog.

The Faculty of Engineering at NDU accepts transfer students from Sciences, Architecture, and Engineering majors at accredited universities provided they have completed a minimum of 12 credits at their institution with a cumulative GPA of 2.3. For students from European-system universities, they need to have successfully completed a minimum of one academic year and are eligible to continue their studies at their home institution.

For students from Sciences and Architecture majors, the following additional requirement applies:

**They have completed a minimum of 12 credits of Mathematics/Physics/Chemistry courses at the sophomore level or higher with a minimum total GPA of 2.5 in these 12 credits.**

Transfer students can receive credit for NDU courses listed under the General Education Requirements (GER), Core Requirements, and Free Elective categories of the NDU contract sheet. In order to ensure that the student has achieved the needed outcomes and objectives specified by the concerned Department, the Faculty of Engineering reserves the right not to give transfer credit for courses listed under the Major Requirements category even if the student has taken similar courses at his or her institution. For students transferring from Science majors, no courses listed under major requirements or technical electives can be transferred.

For a list of required documents and the relevant dates and deadlines, students planning to transfer to the Faculty of Engineering need to check with the NDU Admissions Office.

### **Residency Requirements**

Full-time students entering the Engineering programs of first year standing must complete the listed program within eight years of the date of enrollment in the corresponding program.

A transfer candidate with a Bachelor of Engineering degree from an accredited institution is required to successfully complete a minimum of 45 credits of upper-division course work including a graduation project. A transfer student without a Bachelor of Engineering degree is required to successfully complete a minimum of 60 credits of upper-division course work including 3 credits of project work.

### **Course Load Requirements**

In general, students are not allowed to carry more than 17 credits per semester, nor more than 9 credits in a summer session unless otherwise specified in their suggested program. Restrictions may be imposed on students whose overall GPA is less than 2.3/4.0. Upon the approval of the advisor, a student whose overall GPA is no less than 3.2/4.0 may be permitted to carry a maximum load of 18 credits per semester.

Students in their last semester may petition to take up to 20 credits given they have a cumulative GPA of 3.5 and above and they satisfy the minimum residency requirement for their major. Students with a cumulative GPA less than 3.5 may petition to take up to 19 credits maximum in their last semester provided they satisfy all other requirements.

### **Graduation Requirements**

To receive a degree of Bachelor of Engineering offered by the Faculty of Engineering, a student must complete a total of 150 credits with an overall GPA of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements and technical electives. In addition all major requirements and technical elective courses must be successfully completed with a minimum grade of "C-".

## GENERAL EDUCATION REQUIREMENTS

All engineering degree programs share a common General Education Requirement (GER), made of 27 credits distributed as follows:

### Communications Skills

9 cr.

A: English (6 cr.)

ENL 213: *Sophomore English Rhetoric*

One course from:

ENL 223: Communication Arts

ENL 230: English in the Workplace

B: Arabic (3 cr.)

One course from:

ARB 211: Appreciation of Arabic Literature

ARB 212: Advanced Arabic Grammar

ARB 224: Arabic Literature and Human Thought

ARB 231: Technical Arabic

ARB 317: Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> Century)

### Philosophy and Religion

6 cr.

A: Religion (3 cr.)

One course from:

REG 212: Religion and Social Issues

REG 213: Catholicism

REG 215: World Religions

REG 313: The Maronites: Faith and Cultural Heritage

REG 314: Marriage and Family in the Catholic Church

B: Philosophy (3cr.)

One course from:

ENG 310: Ethics in Engineering

ENS 205: Environment, Society and Ethics

PHL 311: Ethics and the Modern World

POS 345: Ethics and Leadership

### Cultural Studies and Social Sciences

6 cr.

A: Culture (3 cr.)

One course from:

ARP 215: Cultural Themes in Lebanese Architecture

COA 359: Media and Society

COA 315: World Cinema Survey

FAP 215: Art & Culture

HUT 305: Human Thought to 1500

HUT 306: Human Thought from 1500 to the Present

LIR 214: Introduction to Literary Genres

MUS 210: Music Appreciation

NTR 215: Foods and Nutrition of World Cultures

PSL 201: Introduction to Psychology

SOL 201: Introduction to Sociology

SOL 301: Introduction to Anthropology

SOL 313: Family Violence and Child Abuse

**B:Business/Economics (3 cr.)**

One course from:

- BAD 201: Fundamentals of Management
- ECN 200: Survey of Economics
- ECN 211: Principles of Microeconomics
- ECN 212: Principles of Macroeconomics
- ENG 210: Introduction to Engineering Economy

**Citizenship:**

3 cr.

One course from:

- HIT 211: History of Lebanon and the Middle East
- IAF 301: Modern Political Ideologies
- POS 201: Introduction to Political Science
- POS 210: Government and Politics of Lebanon
- POS 240: Law and Society
- POS 319: Democracy and Human Rights
- POS 337: Dialogue Among Civilizations

**Science and Technology:**

3 cr.

One course from:

- AST 201: Discovering Astronomy
- BIO 201: Your Body in Action
- BIO 202: Mystery of Life
- BIO 203: Discover Biology
- HEA 201: Health Awareness
- HEA 204: Contemporary Health Issues
- ENS 201: Introduction to Environmental Science
- ENS 202: The Environment and Sustainable Development
- ENS 206: Ecotourism
- GIS 211: Principles of Geographic Information Systems
- NTR 201: Basic Human Nutrition
- PHS 207: Development of Science and Technology

## Common Engineering Courses

The Faculty of Engineering offers general courses of interest to all degree programs:

**ENG 201 Introduction to Engineering (3.0); 3 cr.** Engineering design: needs, specifications, feasibility, models. System, detailed alternative and optimum design. Reliability and liability. Communication. Patents and copyrights. Ethics.

**ENG 202 Computers and Engineering (3.0); 3 cr.** Operating systems. Application softwares: MATLAB. Programming and Languages. Computer Architecture. Input/output. Storage. Network Architecture. Hardware applications: Data acquisition, PLC. *Co-requisite:* MAT 215

**ENG 210: Introduction to Engineering Economy (3.0); 3 cr.** Interest and time value of money. Investment, financing, depreciation, and economic selection. Analysis of engineering costs and capital investment in the design and implementation of engineering projects. *Prerequisite:* ENG 201.

**ENG 310: Ethics in Engineering (3.0); 3 cr.** Ethical issues in the practice of engineering: corporate responsibility; personal rights; honesty, ethical aspects of safety, risk and liability and conflicts of interest; environmental issues and sustainability; codes of ethics; emphasis on developing the capacity for independent ethical analysis of real cases

## **Minor in Engineering Management**

### **Rationale**

Management of Engineering projects has gained significant importance in a competitive global market. The Undergraduate Minor in Engineering Management aims at assisting engineering students to enhance their engineering skills by acquiring managerial skills. Through a selectivity of courses, the students will be able to learn the business aspect of Engineering projects.

### **Objective and Outcome**

The Objective of this minor is to provide engineering students with better exposure to 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 intended to prepare engineering students in any engineering discipline to acquire specific useful management skills and to be able to use technology more appropriately. It strives to graduate engineers 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  
BAD 201 Fundamentals of Management  
CEN 393 Project Management  
One course from:  
CEN 392 Engineering Economy  
ENG 210 Introduction to Engineering Economy

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

Choose 2 courses from the following pool:  
BAD 317 Organizational Behavior  
BAD 429 Operations Management  
BAD 425 Quantitative Techniques for Management  
CEN 471 Civil Engineering Laws and Ethics  
CEN 493 Construction Planning  
ECN 200 Survey of Economics  
MAT 339 Numerical Analysis  
MGT 201 Principle of Human Resources  
MGT 411 Leadership Quality & Performance  
MRK 201 Fundamentals of Marketing

A minimum grade of "C-" is required in each course of the minor. The cumulative GPA should be a minimum of 2.0.

**Application Procedure**

An Application Form is available in the Department of Civil and Environmental Engineering. Students must submit a petition through their advisor and attach the application form. All application forms must be received by **July 10** for **Fall** enrollment and **January 10** for **Spring** enrollment. Late or incomplete application forms will not be considered.

**Withdrawal Procedure**

Withdrawal from the Minor in Engineering Management must be done by filing a petition through the advisor.

## **DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

---

**Associate Professor:** Harb, Jacques (Chair)

**Assistant Professors:** Chakar, Elie; Ghanimeh, Sophia; Ibrahim, Elsy (NLC);  
Jawad, Dima; Khoury, Naji; Matta, Alain; Salem,  
Talal; Youssef-Abdel-Massih, Dalia

---

### **Mission of the Department**

The mission of the Department of Civil and Environmental Engineering (DCEE) is aligned with the mission of NDU. In addition, the DCEE seeks to graduate civil engineers who use their knowledge and ability to design and construct sustainable civil engineering systems, which serve the needs of society and adhere to professional ethical standards. Graduates will understand and be able to apply current knowledge of engineering, environmental and legal issues to advance sustainable engineering practices. The curriculum includes an introduction to practical aspects of engineering such as successful management and business practices and public policy. Students and graduates are prepared to successfully compete for regional and international grants and positions. The DCEE alumni will promote the values learned from the University, faculty and department both locally and regionally. The DCEE faculty will increase their research activities in order to provide an ongoing atmosphere of excellence.

### **Degree Requirements**

The Department of Civil and Environmental Engineering offers one program leading to the degree of Bachelor of Engineering in Civil Engineering. The course requirements of the degree involve a total of 150 credits divided into the following pools:

**General Education Requirements** **27 cr.**

**Core Requirements** **47 cr.**

CHM 211, CHM 271, CSC 212, EEN 205, ENG 201, ENG 202, MAT 213, MAT 215, MAT 224, MAT 235, MAT 326, MAT 339, MEN 201, MEN 215, PHS 206, PHS 275, GEO 201.

**Major Requirements** **58 cr.**

CEN 202, CEN 203, CEN 250, CEN 251, CEN 270, CEN 204, CEN 210, CEN 311, CEN 220, CEN 325, CEN 221, CEN 271, CEN 330, CEN 343, CEN 443, CEN 360, CEN 361, CEN 392, CEN 462, CEN 463, CEN 465, CEN 430, CEN 431, CEN 440, CEN 598, CEN 599.

**Approved Professional Training** **1 cr.**  
CEN 489.

**Technical Electives** **12 cr.**

Choose any four courses from the following pool: CEN 393, CEN 407, CEN 510, CEN 520, CEN 521, CEN 522, CEN 530, CEN 531, CEN 523, CEN 524, CEN 541, CEN 450, CEN 543, CEN 544, CEN 560, CEN 461, CEN 370, CEN 471, CEN 580, CEN 581, CEN 493, CEN 594, MEN 400.

**Or you may choose to follow a concentration on one of the tracks below:**

**Track A: Structural and Material Engineering**

CEN 407, CEN 510, CEN 520, CEN 521, CEN 522, CEN 523, CEN 524, CEN 541, CEN 580, CEN 581, CEN 392, CEN 493, CEN 594, MEN 400.

**Track B: GeoEnvironmental Engineering**

CEN 392, CEN 393, CEN 530, CEN 531, CEN 560, CEN 461, CEN 580, CEN 581, CEN 493, CEN 594.

**Track C: Transportation and Planning Engineering**

CEN 392, CEN 393, CEN 450, CEN 543, CEN 544, CEN 493, CEN 594.

**Track D: Construction Management**

CEN 370, CEN 392, CEN 393, CEN 471, CEN 493, CEN 594.

Choose any four courses from the following pool: CEN 393, CEN 407, CEN 510, CEN 520, CEN 521, CEN 522, CEN 530, CEN 531, CEN 523, CEN 524, CEN 541, CEN 450, CEN 543, CEN 544, CEN 560, CEN 461, CEN 370, CEN 471, CEN 580, CEN 581, CEN 493, CEN 594, MEN 400.

**Free Electives**

**5 cr.**

Include any course offered of particular interest, of sophomore level (200 level) or above.

---

**Undergraduate Courses: Civil Engineering**

**CEN 201 Engineering Mechanics (3.0); 3cr.**

Forces; free body diagrams; beams; trusses, tension, compression, shear and bending moment diagrams; stress-strain relationship; stress in beams due to bending and shear forces; torsion of circular members, buckling of columns. Opened only to EE and CCE students.

**CEN 202 Statics (3.0); 3cr.** Forces, moments and couples; free body diagrams; problems involving beams, trusses, and various engineering applications. *Corequisite:* ENG 201.

**CEN 203 Mechanics of Materials (3.0); 3cr.**

Tension, compression, shear and bending moment diagrams; torsion; stress-strain relationship; stresses in beams; pressure vessel; combined loading and unsymmetric bending; Mohr's circle beam deflections; buckling of columns. *Prerequisite:* CEN 202.

**CEN 204 Mechanics of Materials Laboratory (0.2); 1cr.**

Testing for material characterization. Experiments related to static and fatigue testing of various types of materials. Tests include tension, compression, bending and buckling. *Prerequisite:* CEN 203.

**CEN 210 Structures I (3.0); 3cr.**

Structural forms; analysis of structurally determinate structures; moving loads, influence lines; introduction to indeterminate structures. Collapse and analysis. *Prerequisite:* CEN 203.

**CEN 220 Soil Mechanics (3.0); 3cr.** Stress-strain relations and properties of soil, seepage and flow nets. Bearing capacity of soils, footings on sand and clay. *Prerequisite:* CEN 203.

**CEN 221 Soil Mechanics Laboratory (0.2); 1 cr.**

The nature of soil behavior; laboratory tests include physical properties of soils, stress-strain relationships, compressibility, and shear strength. *Prerequisite:* CEN 220.

**CEN 250 Surveying (2.0); 2 cr.**

Surveying and instrumentation; Introduction to optical, photographic, mathematical, and geometrical principles relevant to photogrammetry and remote sensing; introduction to global positioning system.

**CEN 251 Field Surveying (0.2); 1 cr.**

Field plane surveying; topographic mapping; location survey and route surveying. *Corequisite:* CEN 250.

**CEN 270 Engineering Graphics (0.2); 1 cr.**

Drawing of three-dimensional objects, orthographic, sectional, pictorial view. Developed surfaces and intersections.

**CEN 271 Civil Engineering CAD (0.2); 1 cr.**

This is an introductory course lab on CAD tools to be used by engineers and architects. CAD systems are interface soft wares. The CAD systems shall be used in conjunction with civil engineering basic drafting tools to form

visualizations in 2D and 3D engineering entities. It constitutes the basic knowledge in AutoCAD, TransCAD, and other CAD software systems. *Corequisite:* CEN 270.

**CEN 311 Structures II (3.0); 3 cr.** Analysis of statically indeterminate structures; methods of consistent deformations, slope, deflection, and moment distribution. Energy theorems and applications to trusses, beams, and frames. *Prerequisite:* CEN 210.

**CEN 325 Shallow Foundations (3.0); 3cr.** Subsurface explorations, methods of exploration and sampling, design of sheeting and bracing systems for shallow foundations. Consolidation theory, settlement analysis. *Prerequisite:* CEN 220.

**CEN 330 Concrete Design I (3.0); 3 cr.** Behavior of reinforced concrete. Ultimate strength design method. Design of beams for flexure and shear, one-way slabs, and short columns. *Prerequisite:* CEN 210.

**CEN 343 Transportation Engineering I (3.0); 3 cr.** Transportation in society, and mobility; people and goods. Introduction to operating principles and procedures for transportation systems. Level-Of-Service, vehicle flow and capacity. Traffic analyses and control. Transportation Planning; Travel Demand Forecasts; demand-supply relationships; modeling. Project. *Prerequisite:* Third Year Standing. *Corequisite:* MAT 326.

**CEN 360 Hydraulics (3.0); 3 cr.** Open channel flow, momentum and energy principles; water surface profiles; flow measurement. *Prerequisite:* MEN 320.

**CEN 361 Hydraulics Laboratory (0.2); 1 cr.** Applying continuity, momentum, and energy principles to flow problems. Experiments include laminar and turbulent flows, major and minor losses, hydraulic jump, weirs, flow measurements. *Prerequisite:* CEN 360.

**CEN 370 Electrical, Mechanical, and Sanitary Systems (3.0); 3 cr.** Electrical requirements and distribution in buildings; design of heating, cooling, and ventilation systems; selection and design of water distribution and plumbing systems.

**CEN 392 Engineering Economy (3.0); 3 cr.** Engineering economic analysis for project and design evaluation, decision making including replacement and retention, budget limitation,

breakeven and sensitivity analysis. Case studies in the design/system analysis process, time value of money and economic evaluation of alternatives, risk analysis, and the effects of depreciation and taxes.. *Prerequisite:* ENG 201, Junior Standing.

**CEN 393 Project Management (3.0); 3 cr.** Fundamentals of Project Management, engineering organization, planning, budgeting, scheduling and cost controls, bidding process, tender documents and contracts. Examples will be given in all fields of Engineering. *Prerequisite:* Junior Standing.

**CEN 407 Advanced Mechanics of Materials (3.0); 3 cr.** Three dimensional strain and stress states, application of energy methods, torsion of noncircular members, nonsymmetrical bending of straight beams, shear center for thin-wall beam cross sections, curved beams. *Prerequisite:* CEN 210.

**CEN 430 Concrete Design II (3.0); 3 cr.** Study of the strength, behavior, and design of indeterminate reinforced concrete structures, with primary emphasis on slab systems; emphasis on the strength of slabs and on the available methods of design of slabs spanning in two directions, with or without supporting beams. Analysis and design of long columns, and footings. *Prerequisite:* CEN 330.

**CEN 431 Concrete and Pavement Design Laboratory (0.2); 1 cr.** Experiments dealing with concrete and asphalt properties, proportioning, design and analysis. *Prerequisite:* CEN 330. *Corequisite* CEN 443.

**CEN 440 Steel Design (3.0); 3 cr.** Design of steel beam girders, tension member columns, bolted, riveted, and welded connections. *Prerequisite:* CEN 210.

**CEN 443 Transportation Engineering II (3.0); 3 cr.** The geometric design of highways, drainage, roadbed, environmental concerns, cost. Highway interchanges concepts. Roadbed construction; pavement design, construction, and management. Intermodal stations, airports design concepts. Project. *Prerequisite:* CEN 343.

**CEN 450 Advanced Surveying (3.0); 3 cr.** Subdivision theory, usage of total station in field surveying. *Prerequisites:* CEN 250, CEN 251.

**CEN 461 Water Pollution control and treatment (3.0); 3 cr.** Fundamental principles

and engineering application of physical, chemical, and biological processes (like sedimentation, filtration, coagulation, flocculation, membranes, aerobic, anaerobic biological processes) are discussed. *Prerequisite:* CEN 462, or instructor's approval.

**CEN 462 Environmental Engineering (3.0); 3 cr.** Quantitative evaluation of the environmental, economic, and technical problems involved in control of pollutants of the air, water, and land. *Prerequisite:* MEN 320.

**CEN 463 Water and Waste Water Networks (3.0); 3 cr.** Quantities of water and wastewater; collection, transportation, and distribution; water distribution network; design of sanitary and storm- water sewer systems. *Prerequisite:* CEN 360.

**CEN 465 Environmental engineering Laboratory (1.0); 1 cr.** Laboratory and field experiments related to pollution of air, water and soil. Tests include air sampling, water testing, sound measurement, wastewater treatment, compost tests and landfill cover performance. *Prerequisite:* CEN 462.

**CEN 471 Civil Engineering Laws and Ethics (3.0); 3 cr.** Survey of Lebanese construction codes and regulations; civil engineering practice as related to environmental destruction and moral behavior.

**CEN 489 Approved Professional Training (0.0); 1 cr.** Department approved summer training practice in Civil Engineering. A report is required. *Prerequisite:* Senior Standing, Third year standing, CEN 325, CEN 330, CEN 392.

**CEN 493 Construction Planning (3.0); 3 cr.** Job Planning and management, selection of construction equipment, soil stabilization, tractors, scrapers, excavating equipment, trucks, operation analysis, drilling rock, blasting, tunneling.

**CEN 495 Engineering Project; 3 cr.** Individual supervised work in one of the main field of Civil Engineering. *Prerequisites:* CEN 491, ENL 230.

**CEN 510 Elasticity (3.0); 3 cr.** Stress-Strain, elasticity formulation, solution by potentials, stress functions, torsion, thick cylinders, rotating disks, thermal stresses, straight simple beams, curved beams. *Prerequisite:* CEN 407.

**CEN 520 Matrix Method for Structural Analysis (3.0); 3 cr.** Displacement (stiffness) method, truss applications, rectilinear, tapered

and curved beams, matrix transformation, frame analysis, influence coefficients and coordinate transformation, force method. *Prerequisite:* CEN 311.

**CEN 521 Dynamics of Structures (3.0); 3 cr.** Theory and application of structural dynamics for single and multiple degree-of-freedom models of buildings due to dynamic forces. Concepts of overall seismic design of buildings, proportioning, and detailing to achieve satisfactory seismic response. *Prerequisite:* Senior Standing.

**CEN 522 Structural Project (3.0); 3 cr.** Usage of commercial software packages in the analysis and design of multi-story concrete and steel buildings, Bridges and storage tanks. *Prerequisite:* CEN 430.

**CEN 523 Design of Structural Systems (3.0); 3 cr.** The whole structural design process including definition of functional requirements, selection of structural scheme, formulation of design criteria, preliminary and computer-aided proportioning, and analysis of response, detailing. *Prerequisites:* CEN 430, CEN 440, or instructor's approval.

**CEN 524 Prestressed Concrete (3.0); 3 cr.** Fundamentals of analysis and design of post-tensioned and pre-tensioned structural members, proportioning of members, calculation of the amount and positioning of reinforcement. *Prerequisite:* CEN 430 or instructor's approval.

**CEN 530 Slope Stability (3.0); 3 cr.** Slope stability analysis methods. Use of software packages. *Prerequisite:* CEN 325.

**CEN 531 Deep Foundations (3.0); 3 cr.** Subsurface exploration and sampling, design of sheeting and bracing systems for deep foundations. Pile and corrosion analysis. *Prerequisite:* CEN 325.

**CEN 541 Advanced Steel Design (3.0); 3 cr.** Design of structural systems for multiple loads, combined loading, torsion, and fatigue in structural members, plate and box members. *Prerequisite:* CEN 440.

**CEN 543 Transportation Engineering III (3.0); 3 cr.** One, two, or three topics in Transportation Engineering shall be offered. The course shall be concerned with the process of analyses and design of the topic concerned. Topics like airports; ports and harbours; railways and railway stations; traffic; supply-demand

modelling; others. Projects. Topics shall be specified when the course is offered..  
*Prerequisite:* Fourth Year Standing  
*Corequisite:* CEN 443.

**CEN 544 Designs of Highway Bridges and Interchanges (3.0); 3 cr.** Geometric design of highway interchanges and analyses and design of simple highway bridges. Project. *Prerequisites:* Fourth Year Standing, Instructor approval.

**CEN 560 Air pollution Engineering (3.0); 3 cr.** Characterization of sources, emissions, transport, transformation, effects, and control of air pollutants. *Prerequisites:* CEN 462, or instructor's approval.

**CEN 580 Finite Element Methods I (3.0); 3 cr.** Theory and application of finite element methods as an analysis tool for two-dimensional stress problems in engineering. *Prerequisite:* CEN 203 or MEN 202.

**CEN 581 Finite Element Methods II (3.0); 3 cr.** Solution of advanced three-dimensional

stress problems in engineering. *Prerequisite:* CEN 580.

**CEN 594 Selected Topics in Civil Engineering (3.0); 3 cr.** Structured presentations of new and developing areas of knowledge in civil engineering offered by the department to augment the formal courses available. *Prerequisite:* Individually identified for each offering under this course number.

**CEN 598 Engineering Design I (1.0); 1 cr.** The objective of this course is to develop a project proposal that includes the following items: Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc. *Prerequisite:* ENL 230 and Department approval.

**CEN 599 Engineering Design II (2.0); 2 cr.** Implementation of the engineering design project that was proposed in CEN 598. Includes report, final presentation. *Prerequisite:* CEN 598.

## DEPARTMENT OF ELECTRICAL & COMPUTER AND COMMUNICATION ENGINEERING

---

<b>Professor:</b>	Nassar, Elias
<b>Associate Professors:</b>	El-Mou Cary, Chady (NLC); El-murr, Sami; Georges, Semaan (Chair); Hamad, Mustapha; Kassem, Abdallah; Mendalek, Nassar; Zgheib, Charbel (SC).
<b>Assistant Professors:</b>	Atallah, Jad; Bou Sanayeh, Marwan; Hassoun George; Keyrouz, Fakheredine; Kraidy, Ghassan; Tawk, Youssef (NLC).

---

### Mission of the Department

The mission of the Electrical and Computer and Communication Engineering Department is to provide students with excellent undergraduate engineering education following a liberal arts model of education whilst promoting ethical and spiritual values. The department is dedicated to endow students with quality knowledge, technical skills, and values that prepare them to excel as engineers and leaders in their profession and to be committed to life-long learning and good citizenship at the local, regional, and international levels.

### Degree Requirements

The Department of Electrical & Computer and Communication Engineering offers two programs leading to the degrees of Bachelor of Engineering in Electrical Engineering and Bachelor of Engineering in Computer and Communication Engineering. The course requirements of each degree involve a total of 150 credits divided into the following pools:

#### 1) Bachelor of Engineering in Computer and Communication Engineering:

**General Education Requirements** 27 cr.

**Core Requirements** 41 cr.

CEN 201, ENG 201, ENG 202, MAT 211, MAT 213, MAT 215, MAT 224, MAT 235, MAT 326, MAT 339, CHM 211, CHM 271, PHS 212, PHS 213, PHS 271.

**Major Requirements** 59 cr.

CSC 212, CSC 213, CSC 312, CSC 414/415, CSC 425, EEN 201, EEN 202, EEN 203, EEN 220, EEN 221, EEN 310, EEN 311, EEN 312, EEN 322, EEN 324, EEN 325, EEN 330, EEN 331, EEN 340, EEN 344, EEN 443, EEN 489, EEN 598, EEN 599.

**Technical Electives** 20 cr.

Students should complete 20 credits of approved technical electives in EEN and CSC courses including two elective laboratories.

Year 3 Technical Electives (2 CSC courses): CSC 301, CSC 311, CSC 313, CSC 316, CSC 323, CSC 385, CSC 387.

Year 4 Technical Electives (2 EEN and 2 EEN/CSC courses, at most one EEN 300 level course may be taken as part of Year 4 Electives): CSC 412, CSC 422, CSC 423, CSC 426, CSC 431, CSC 432, CSC 463, EEN 315, EEN 326, EEN 327, EEN 342, EEN 350, EEN 360, EEN 416, EEN 421, EEN 422, EEN 426, EEN 430, EEN 431, EEN 432, EEN 433, EEN 436, EEN 473, EEN 480, EEN

523, EEN 545, EEN 546, EEN 547, EEN 548, EEN 583, EEN 585.  
Technical Elective Lab. 1 courses: EEN 328, EEN 363, EEN 365.  
Technical Elective Lab. 2 courses: EEN 439, EEN 444, EEN 481.

**Free Elective**

**3 cr.**

This elective is chosen by the students according to their interests in broadening their knowledge. It can be any course offered by the University provided that it is of Sophomore level (200 level) or above.

**2) Bachelor of Engineering in Electrical Engineering:**

**General Education Requirements**

**27 cr.**

**Core Requirements**

**44 cr.**

CEN 201, ENG 201, ENG 202, MEN 210, MAT 211, MAT 213, MAT 215, MAT 224, MAT 235, MAT 326, MAT 339, CHM 211, CHM 271, PHS 212, PHS 213, PHS 271.

**Major Requirements**

**53 cr.**

CSC 212, CSC 213, CSC 312, EEN 201, EEN 202, EEN 203, EEN 220, EEN 221, EEN 310, EEN 311, EEN 312, EEN 324, EEN 330, EEN 331, EEN 340, EEN 350, EEN 352, EEN 360, EEN 416, EEN 489, EEN 598, EEN 599.

**Technical Electives**

**23 cr.**

Students should complete 23 credits of approved technical electives in EEN and CSC courses including two elective laboratories.

Year 3 Technical Electives (1 EEN course and 1 EEN/CSC course): CSC 313, CSC 318, CSC 387, EEN 315, EEN 322, EEN 326, EEN 327, EEN 344. The EEN/CSC course can be substituted by CEN 270, MEN 270, and MEN 370 or a course from the Technical Elective Labs 1 and 2.

Year 4 Technical Electives (4 EEN and 1 EEN/CSC course):

One course from the Electronics pool: EEN 411, EEN 412, EEN 413, EEN 421, EEN 422, EEN 426, EEN 455, EEN 523.

One course from the Electromagnetics pool: EEN 430, EEN 431, EEN 432, EEN 433, EEN 435, EEN 436, EEN 527, EEN 534.

Two courses from the Power and Control pool: EEN 353, EEN 452, EEN 553, EEN 357, EEN 451, EEN 453, EEN 455, EEN 457, EEN 458, EEN 461.

One course chosen from the above areas or from the following courses:

(Communication Pool): EEN 342, EEN 443, EEN 545, EEN 546, EEN 548.

(Signal Processing Pool): EEN 473, EEN 480, EEN 583, EEN 585.

(Computer Science Pool): CSC 414, CSC 425, CSC 426.

Technical Elective Lab. 1 courses: EEN 325, EEN 328, EEN 363, EEN 365, EEN 462.

Technical Elective Lab. 2 courses: EEN 439, EEN 444, EEN 456, EEN 459, EEN 481.

**Free Elective**

**3 cr.**

This elective is chosen by the students according to their interests in broadening their knowledge. It can be any course offered by the University provided that it is of Sophomore level (200 level) or above.

---

## Undergraduate Courses: Electrical Engineering & Computer and Communication Engineering

**EEN 201 Circuits Analysis I (3.0); 3 cr.** Passive elements. Circuits laws. Node and mesh analysis. Introduction to ideal operational amplifier circuits. Energy storage elements. RC, RL and RLC circuits. Forced and natural response. *Prerequisite:* ENG 201, *Corequisite:* MAT 213.

**EEN 202 Circuits Analysis II (3.0); 3 cr.** Analysis of AC networks. Fourier and Laplace analysis. Frequency domain circuit analysis. Bode plots. Driving point and network transfer functions. Synthesis and design of first and second order linear time invariant circuit systems. Two port networks. One-phase and polyphase networks. *Corequisite:* MAT 235. *Prerequisite:* EEN 201 and ENG 202.

**EEN 203 Circuits Laboratory (0.2); 1 cr.** Introduction to circuit laboratory instruments, Ohm's, Kirchhoff's laws. Mesh, Nodal, Superposition, Thevenin's. RC, RL, RLC networks, operational amplifiers. *Corequisite:* EEN 202.

**EEN 205 Electric Circuits (3.0); 3 cr.** Fundamentals of electric circuits. Resistive circuit techniques and methods of analysis. Introduction to operational amplifiers. AC network analysis. Sinusoidal frequency response. Transient analysis. AC power and transformers. Polyphase systems. Not open to EE and CCE students. *Corequisite:* MAT 235.

**EEN 206 Electronics (3.0); 3 cr.** Semiconductor theory. Diodes and applications. Transistor fundamentals. Transistor amplifiers and switches. Operational amplifiers. Digital Logic circuits. Digital Systems. Principles of electromechanics. Introduction to electric machines. Not open to EE and CCE students. *Prerequisite:* EEN 205.

**EEN 207 Instrumentation and Circuits Laboratory (0.2); 1 cr.** Measuring equipment such as voltmeter, ammeter, ohmmeter, function generator, and oscilloscope. Experiments in circuits, electronics, digital circuits, electronic transducers and machines. Not open to EE and CCE students. *Corequisite:* EEN 206

**EEN 220 Introduction to Logic Design (3.0); 3 cr.** Binary and non-binary systems. Boolean algebra. Logic gates. Logic minimization, combinational circuits, sequential circuits, flip-flops, synthesis of synchronous sequential

circuits. PLDs (ROM, PLA, PAL). *Prerequisite:* MAT 211.

**EEN 221 Logic Design Laboratory (0.2); 1 cr.** Experiments with basic Logic gates, combinational network design, sequential network design. Designing with counters, registers, decoders, multiplexers, and adders. *Prerequisite:* EEN 220.

**EEN 310 Electronic Circuits I (3.0); 3 cr.** Properties, operation, and biasing of pn junction diodes, bipolar junction and field-effect transistors. Large and small signal models and their applications. Analog signal amplification. Op amp applications. *Prerequisite:* EEN 202.

**EEN 311 Electronic Circuits II (3.0); 3 cr.** Differential amplifiers. Frequency response of amplifiers. Concepts of feedback. Audio amplifiers. Concept of active filters. *Prerequisite:* EEN 310.

**EEN 312 Electronic Circuits Laboratory (0.2); 1 cr.** Experiments based on EEN 210 and EEN 311. Introduces the practical applications of analog circuits, including transistor and diode circuits, operational amplifiers applications, simple amplifiers, filters, and oscillators. *Prerequisite:* EEN 203, *Corequisite:* EEN 311.

**EEN 322 Digital Integrated Circuits (3.0); 3 cr.** Properties and definitions of digital ICs. Basic logic circuit families: TTL, CMOS, dynamic CMOS, BiCMOS, ECL, and GaAs; with emphasis on CMOS digital logic. Oscillators, Schmitt Trigger. *Prerequisites:* EEN 220 and EEN 311.

**EEN 324 Microprocessor System Design (3.0); 3 cr.** Microprocessor internal architecture. Registers, CPU, memory organization. Instructions, execution and timing. Interfacing with peripherals. Interrupts. Designing and Interfacing with state of the art microprocessors. Assembly language programming. *Prerequisite:* EEN 310 and CSC 312.

**EEN 325 Microprocessor Laboratory (0.2); 1 cr.** Experiments and design project related to the course EEN 324. *Prerequisite:* EEN 221, *Corequisite:* EEN 324.

**EEN 327 Advanced Logic Design (3.0); 3 cr.** Combinational and sequential network design. State machine SM charts, Asynchronous

sequential Networks. State Assignment and Flow Tables. Hazards, PLDs and hardware description languages (HDL). *Prerequisite:* EEN 324.

**EEN 328 Advanced Digital Design laboratory (0.2); 1 cr.** Designing combinational and sequential digital circuits with an FPGA board (Xilinx, Altera or similar) and a CAD tool (HDL). *Prerequisite:* EEN 221. *Co-requisite:* EEN 327.

**EEN 330 Electromagnetics I (3.0); 3 cr.** Sinusoidal steady state and transient analysis of transmission lines. Static electric and magnetic fields. Laplace and Poisson's equations. Resistance, inductance and capacitance. Conductors, dielectrics and magnetic materials. Polarization and magnetization. Electromagnetic devices. Bioelectromagnetics. *Prerequisites:* PHS 212, EEN 202 and MAT 235.

**EEN 331 Electromagnetics II (3.0); 3 cr.** Maxwell's equations. Plane wave propagation reflection and transmission in lossless and lossy media. Normal and oblique incidence. Waveguides. Impedance matching. Electromagnetic effects in high-speed circuits. Computer simulation. *Prerequisite:* EEN 330.

**EEN 340 Signals and Systems (3.0); 3 cr.** Basic concepts in linear system theory. Analyzing continuous and discrete signals and linear systems. Superposition, convolution and impulse response. Sampling theorem. Spectral analysis. Fourier series and transforms. Laplace transforms. Transfer functions. Bode plots and stability. Discrete-Time Fourier transform. Introduction to z-transforms. *Prerequisites:* EEN 202 and MAT 235.

**EEN 344 Communication Systems I (3.0); 3 cr.** Mathematical analysis and signal processing used in basic communication systems. Spectral analysis. Signal transmission. Amplitude and angle modulations. Frequency-division multiplexing. FM stereo. Pulse modulation. Time-division multiplexing. Impulse radio. Baseband data transmission. Equalization. Digital band-pass modulation techniques. OFDM. Spread-spectrum techniques. Applications to digital voice, digital television and data communications. *Prerequisite:* EEN 340.

**EEN 350 Fundamentals of Electric Machines (3.0); 3 cr.** Magnetic materials. Fundamental operation of transformers, DC and AC machines.

Design considerations of rotating machinery. *Prerequisite:* EEN 202, *Corequisite:* EEN 331.

**EEN 352 Fundamental of Electric Machines Laboratory (0.2); 1 cr.** Experiments with single phase and three-phase transformers. DC and AC machines. *Prerequisite:* EEN 350.

**EEN 360 Modern Control Systems (3.0); 3 cr.** Mathematical models for control systems. State variables and transfer functions representations. System performance and design criteria. Stability, sensitivity, time response of linear control systems. Use of Hurwitz, root-locus, Nyquist and Bode methods for analysis and synthesis of linear systems. *Prerequisite:* EEN 340.

**EEN 363 Instrumentation Laboratory (0.2); 1 cr.** Input and output transducers. Position, temperature, light intensity, force, speed and sound measurements and display. Introduction to PCB design techniques. Design project. *Prerequisite:* EEN 312.

**EEN 365 Programmable Logic Control Laboratory (0.2); 1 cr.** Programmable control applications. Advanced PLC control techniques using pneumatic sequencer. Control of an automation system. *Prerequisite:* EEN 324.

**EEN 370 Practical Training (0.0); 6 cr.** Department approved practice in industry in one of the areas of Electrical, Computer and Communication Engineering. A report is required. (Only open to students admitted before Fall 2008). *Prerequisite:* Department approval.

**EEN 371 Practical Training (0.0); 3 cr.** Department approved practice in industry in one of the areas of Electrical, Computer and Communication Engineering. A report is required. *Prerequisite:* Department approval.

**EEN 416 Principles of Semiconductor Devices (3.0); 3 cr.** Fundamentals of the physical properties of semiconductors. Doping. Fermi-Dirac statistics. Generation-recombination properties of excess carriers in semiconductors. Optical absorption and luminescence. Carrier drift and diffusion. Properties of the p-n junction under forward and reverse bias. Characteristics of semiconductor devices, and advanced device issues relevant to state-of-the-art integrated-circuit technologies. *Prerequisites:* PHS 213 and EEN 331.

**EEN 421 Introduction to VLSI Design (3.0); 3 cr.** Large-scale MOS Design. Topics: MOS

transistors, static and dynamic MOS gates, MOS circuit fabrication, design rules, resistance and capacitance extraction, power and delay estimation, scaling, MOS combinational and sequential logic design, registers and clocking schemes, memory and data-path. Elements of computer-aided circuit analysis, synthesis, and layout techniques. *Prerequisite:* EEN 322.

**EEN 426 Biomedical Engineering (3.0); 3 cr.** Design consideration for clinical and health care devices. Design of biomedical devices. Involves analog, digital and microprocessor / microcontroller based designs. Design of monitoring devices. *Prerequisites:* EEN 311 and EEN 324.

**EEN 430 Antenna Design for Wireless Communications (3.0); 3 cr.** Fundamentals of radiation from antennas. Wire antennas such as monopole, dipole and loop antennas. Aperture antennas such horn and reflector antennas. Wideband antennas. Antenna arrays. Application to cellular systems. Course includes design project. *Prerequisite:* EEN 331.

**EEN 431 Microwave Circuit Design (3.0); 3 cr.** Coverage of passive and active microwave devices including transformers, couplers, resonators, circulators, oscillators and amplifiers. Course includes project consisting of computer-aided design of a microwave circuit. *Prerequisites:* EEN 311 and EEN 331.

**EEN 436 Fiber Optics (3.0); 3 cr.** Ray optics and wave optics. Design optimization of fibers for optical data transmission. Fiber fabrication. Signal degradation in optical fibers. Fiber connections and diagnostics. *Prerequisite:* EEN 331.

**EEN 439 Electromagnetics Laboratory (0.2); 1 cr.** Properties of magnetic materials. Electromagnetic devices. Transmission lines. Impedance matching. Antennas and microwave circuits. Includes design project and computer simulations. *Prerequisite:* EEN 331.

**EEN 443 Communication Systems II (3.0); 3 cr.** Random signals and noise. Noise in analog communications. Noise in digital communications. Error detection and correction. System and noise calculations. Electrical noise. Noise figure. Cascade connection of two-port networks. Free-space link calculations. Terrestrial mobile radio. Spread-spectrum techniques, CDMA. Turbo codes and Trellis Coded Modulation (TCM). *Prerequisites:* EEN 344 and MAT 326.

**EEN 444 Communication Systems Laboratory (0.2); 1 cr.** Introduction to Amplitude Modulation. Fault detection in DSB and SSB systems, FM modulators and demodulators. Analog to Digital conversion A/D, Digital to Analog conversion D/A, Encoding/Decoding. Pulse Modulation, PAM, PPM, PDM. Coherent detection of signal in noise. Frequency Shift Keying (FSK). *Corequisite:* EEN 443.

**EEN 452 Fundamentals of Power Engineering (3.0); 3 cr.** Power system components. Basic principles of electrical power systems. Generator and transformer models, steady-state characteristics and the per-unit system. Overhead transmission line parameters, capacitance and inductance. Transmission line model, performance and line compensation. Power flow analysis. *Prerequisite:* EEN 350.

**EEN 453 Electric Drives (3.0); 3 cr.** Introduction to elements of drive systems, characterization of mechanical loads, requirements of electric drive systems, dc drives with various power electronics based conversion sources, dynamic equations and closed loop control of dc drives, induction motor drives, ac controller, slip-energy recovery, volts/Hz control, synchronous motor drives, permanent magnet motors, reluctance motors. *Prerequisites:* EEN 210 and EEN 350.

**EEN 455 Power Electronics (3.0); 3 cr.** Switching power supplies. AC power controllers. Controlled rectifiers. DC choppers and DC-AC converters. Bridge structure inverters. *Prerequisites:* EEN 210 and EEN 350.

**EEN 456 Power Electronics Laboratory (0.2); 1 cr.** Experiments based on EEN 455. *Corequisite:* EEN 455.

**EEN 457 Industrial Electrification (3.0); 3 cr.** Lighting design for residential and industrial facilities. Emphasis on latest lighting technologies. Cable types and sizing. Motor control centers. Includes design project. *Prerequisite:* EEN 350.

**EEN 461 Digital Control (3.0); 3 cr.** Sampling and data reconstruction in computer control systems. Z-transforms and state equations to describe discrete and mixed data systems. Analysis of digital feedback systems using frequency domain techniques and state space techniques. Non-linear digital feedback systems. *Prerequisite:* EEN 360.

**EEN 462 Control Systems Laboratory (0.2); 1 cr.** Laboratory based on EEN 360 and EEN 461. Analog and digital control systems, PID control, PLC systems. *Prerequisite:* EEN 461.

**EEN 473 Special Topics in Electrical Engineering (3.0); 3 cr.** Material includes coverage of recent developments in Electrical Engineering that are needed to update students on the latest technologies. Department determines topics to be covered and *prerequisites* when offered. Open to EE and CCE students.

**EEN 480 Discrete-Time Signal Processing (3.0); 3 cr.** Fundamental concepts of discrete-time signals and systems. Digital signal processing of discrete signals. Sampling theory and reconstruction. Discrete Fourier transforms and analysis of digital filters in the frequency domain. Z-transforms, causality and stability. State-space equations. Design and analysis of FIR and IIR digital filters. Windowing. Bilinear transformation. Filter structures. *Prerequisite:* EEN 340.

**EEN 481 Signal Processing Laboratory (0.2); 1 cr.** Digital filtering techniques. Architectural feature of single-chip DSP processors. Design project. *Prerequisite:* EEN 480.

**EEN 489 Approved Professional Training (0.0); 1 cr.** Department approved practice in industry in one of the areas of Electrical, Computer and Communication Engineering. A report is required. *Prerequisite:* Department approval.

**EEN 534 Radar Systems and Remote Sensing (3.0); 3 cr.** Operation of a radar system including antennas, circuitry and wave propagation. Remote sensing and mapping of the earth. Ground penetrating radar, intelligent

vehicle highway system. Aircraft navigation. *Prerequisite:* EEN 344 and EEN 430.

**EEN 546 Algebraic Coding and Information Theory (3.0); 3 cr.** Information theory and its relation to statistics. Kolomogrov complexity, entropy and inference. Shannon theory of communication. Source coding for noisy channels. Capacity theorems for multiple user channels. *Prerequisite:* EEN 443.

**EEN 548 Wireless Communications (3.0); 3 cr.** Introduction to wireless systems and cellular principles, modulation techniques for mobile radio, speech and channel coding, multiple access techniques, applications to wireless systems. *Prerequisites:* EEN 331 and EEN 443.

**EEN 553 Power System Analysis (3.0); 3 cr.** Optimal dispatch of generation. Synchronous machine transient analysis. Balanced and unbalanced short-circuits, balanced three-phase fault and systematic fault analysis. Symmetrical components and unbalanced faults. Transient stability and numerical solution of the swing equation. Power system control. *Prerequisite:* EEN 452.

**EEN 598 Engineering Design I (1.0); 1 cr.** The objective of this course is to develop a project proposal that includes the following items: Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc. *Prerequisites:* ENL 230 and Department approval.

**EEN 599 Engineering Design II (2.0); 2 cr.** Implementation of the engineering design project that was proposed in EEN 598. Includes report, final presentation. *Prerequisite:* EEN 598.

## DEPARTMENT OF MECHANICAL ENGINEERING

---

**Associate Professors:** Asmar, Ghazi (Chair); El-Hayek, Michel; Francis, Francis.

**Assistant Professors:** Azzi, Marwan; Bou-Mosleh, Charbel; Metni, Najib, Slim, Rayan.

---

### Mission of the Department

The Mechanical Engineering Program strives to graduate mechanical engineers who understand the ethical, social, economic, and environmental context of their profession and who apply their knowledge with judgment and responsibility to develop ways to utilize the materials and forces of nature for the benefit of mankind. The program prepares students to either immediately enter professional practice upon graduation or to pursue graduate studies, without neglecting the requirements for a fruitful life by emphasizing the University's model of liberal arts education. The curriculum of the program shares three basic tenants: scientific and technological excellence, balance between theory and practice, and a commitment to self-maintained, and enduring personal and professional development. The results are mechanical engineers naturally inclined to life-long learning and problem solvers ready to deal with any technological challenge at local, regional, and/or international scales.

### Degree Requirements

The Department of Mechanical Engineering offers one program leading to the degree of Bachelor of Engineering in Mechanical Engineering. The course requirements of the degree involve a total of 150 credits divided into the following pools:

**General Education Requirements** **27 cr.**

**Core Requirements** **42 cr.**

CHM 211, CHM 271, PHS 203, PHS 212, PHS 273, EEN 205, EEN 206, EEN 207, ENG 201, ENG 202, CSC 212, MAT 215, MAT 235, MAT 326, MAT 335, MAT 339.

**Major Requirements** **64 cr.**

CEN 202, CEN 204, CEN 270, MAT 213, MAT 224, MEN 200, MEN 201, MEN 202, MEN 210, MEN 211, MEN 270, MEN 302, MEN 310, MEN 320, MEN 321, MEN 330, MEN 340, MEN 370, MEN 376, MEN 401, MEN 430, MEN 435, MEN 437, MEN 471, MEN 489, MEN 598, MEN 599.

**Major Electives** **12 cr.**

Choose any four courses from the following pool: MEN 400, MEN 410, MEN 439, MEN 503, MEN 507, MEN 510, MEN 511, MEN 512, MEN 515, MEN 516, MEN 517, MEN 518, MEN 520, MEN 521, MEN 523, MEN 525, MEN 526, MEN 530, MEN 534, MEN 540, MEN 541, MEN 544, MEN 550, MEN 580, MEN 581.

**Laboratory Electives** **2 cr.**

Choose any two courses from the following pool: MEN 571, MEN 573, MEN 576, MEN 578.

## Free Electives

3 cr.

Choose any course of sophomore level or higher offered by the University.

---

## Undergraduate Courses: Mechanical Engineering

**MEN 200 Science of Materials (3.0); 3 cr.** Material microstructures, dislocations, and defects. Alloying and analysis of phase diagrams. Mechanical properties of metals, polymers, and composites. Heat treatment of metals, elastic and plastic behavior of materials, strain hardening, and fracture.

**MEN 201 Engineering Mechanics: Dynamics (3.0); 3 cr.** Description of force, position, velocity and acceleration in fixed and moving reference frames. Kinematics and kinetics of particles, of collections of particles and of rigid bodies. Energy and momentum concepts. *Prerequisite:* CEN 202.

**MEN 202 Mechanics of Materials I (3.0); 3 cr.** Equilibrium, force and moment resultants. Stress/strain concepts, generalized Hooke's law, classification of material behavior. Axial loads, torsion of rods and circular bars. Pressure vessels. Bending and shear stresses in beams. Analysis of Statically determinate and indeterminate structures. Stress transformation, combined loading. *Prerequisite:* CEN 202.

**MEN 210 Thermodynamics I (3.0); 3 cr.** Fundamentals of engineering thermodynamics: properties and behavior of pure substances, concepts of work and heat, systems and control volume analyses, first law, second law, entropy and entropy production, introduction to availability, Carnot cycle. *Prerequisite:* PHS 203 or CEN 201

**MEN 211 Thermodynamics II (3.0); 3 cr.** Thermodynamic cycles: steam and gas power systems, refrigeration and heat pump systems. Compressible substances: thermodynamic properties, general thermodynamic relations, virial equations of state. Introduction to psychrometrics. Introduction to combustion and equilibrium calculation. *Prerequisite:* MEN 210.

**MEN 215 Introduction to Thermal-Fluid Sciences (3.0); 3 cr.** Fundamentals of thermal sciences including thermodynamics, fluid flow and heat transfer for non-ME students: Properties of Pure Substances, Energy & Power, First Law of Thermodynamics, Systems/Control Volumes, Fluid Statics, Bernoulli Equation, Momentum Equation, Introduction to

Conduction, Convection and Radiation Heat Transfer. *Prerequisite:* MAT 235.

**MEN 270 Computer-Aided Design (0.2); 1 cr.** Application of existing CAD software to engineering problems: Basic concepts of engineering graphics in a computerized environment; Representation of engineering objects; 2D/3D representations, CAD Standards. *Prerequisite:* CEN 270.

**MEN 302 Mechanics of Materials II (3.0); 3 cr.** Analysis of more complicated problems in stress and strain. Energy methods, torsion of non-circular members. Shear center concept. Curved beams, thick cylinders and rotating disks. Contact stresses. *Prerequisites:* MEN 202, MAT 235.

**MEN 310 Heat Transfer (3.0); 3 cr.** Mechanisms of heat transfer. Steady and transient conduction: one and multiple dimensions, approximate and exact solution procedure, introduction to numerical methods. Forced and free convection. Applications to heat exchanger design and performance evaluation. Introduction to thermal radiation. *Prerequisite:* MEN 211, *Corequisite:* MEN 321.

**MEN 320 Fluid Mechanics I (3.0); 3 cr.** Fundamentals of fluid mechanics: Fluid properties, fluid statics and kinematics, inviscid flow, potential flow, simple viscous incompressible flow. Flow analyses: Control volume analysis, differential analysis, dimensional analysis and similitude. Flow equations: continuity, momentum and energy equations. *Prerequisites:* MEN 210, MAT 235.

**MEN 321 Fluid Mechanics II (3.0); 3 cr.** Incompressible and compressible flows: laminar/turbulent flows, pipe flow, boundary layers, lift and drag, introduction to turbulence, elementary gas dynamics. Unsteady flow phenomena. Introduction to centrifugal and axial flow machinery: pumps, fans, hydraulic turbines, and torque converters. *Prerequisite:* MEN 320.

**MEN 330 Mechanical Vibrations (3.0); 3 cr.** Free and forced vibrations for undamped and viscously damped single-degree-of-freedom systems. Conservation of energy approach and

Rayleigh's method. Vibration of multi-degree-of-freedom systems, eigenvalue problems and mode shapes. Modal analysis. *Prerequisites:* MEN 201, MEN 202, MAT 235

**MEN 340 Manufacturing Processes (3.0); 3 cr.** Fundamentals and technologies used in processing various industrial materials: casting, forging, machining, metal-sheet processing, joining techniques, etc. *Prerequisites:* MEN 200, MEN 370.

**MEN 370 Graphics for Mechanical Engineers (0.2); 1 cr.** Application of the basic concepts of engineering graphics to the representation of mechanical components: shafts, bearings, fasteners, keys, springs, gears, cams, etc.; Assembly drawings; Dimensioning and tolerancing; Standards. CAD tools are to be used throughout the course for representation purposes. *Prerequisite:* MEN 270.

**MEN 376 Thermo/Fluid Laboratory (0.2); 1 cr.** Experiments related to fundamentals of fluid and thermal sciences. Topics include fluid properties, flow regimes, flow measurement, energy and power, heat transfer modes, pressure and temperature measurement, data acquisition. *Prerequisite:* MEN 210. *Corequisite:* MEN 320.

**MEN 380 Practical Training in Mechanical Engineering (0.0); 3 cr.** Two-month-training in a mechanical engineering environment in which the student is exposed to different aspects of mechanical engineering practice and equipment: design, construction, testing, maintenance, etc. *Prerequisite:* Senior standing.

**MEN 400 Mechanics of Composite Materials (3.0); 3 cr.** Introduction to composite materials. Lamina and laminate mechanical properties. Micromechanics. Mechanical and hygrothermal behavior of laminae and laminates. Lamina and laminate strength theories. *Prerequisite:* MEN 302.

**MEN 401 Introduction to Mechatronics (3.0); 3 cr.** Interfacing of mechanical and electrical systems; Analysis of smart systems: sensors and transducers, electronics and logics, microprocessors and programmable logic controllers, data acquisition, and actuators; Integration of these components to create a complete functional mechatronics system. *Prerequisites:* ENG 202, EEN 206.

**MEN 410 Internal Combustion Engines (3.0); 3 cr.** Analysis of internal combustion engines: dynamics, thermodynamics, combustion, friction

and wear, and other factors affecting power, efficiency and emissions. Design and operating characteristics of different types of engines. *Prerequisites:* MEN 310.

**MEN 430 Theory of Machines (3.0); 3 cr.** Kinematics of machinery: linkages, cams, gears, bearings, belts, etc. Static and dynamic balancing and force analysis of machines. *Prerequisites:* MEN 201, MEN 370.

**MEN 431 Mechanical Engineering Laboratory (0.2); 1 cr.** Applications of mechanical engineering theories and design techniques to complex mechanical systems. Topics include air-conditioning and refrigeration, hydro-power generation, solar energy, combustion systems, pump systems, bearings, assembly processes, vibrations systems. *Prerequisite:* MEN 376.

**MEN 435 Automated Controls (3.0); 3 cr.** Feedback analysis and control of linear systems, with emphasis on linear system dynamics, time and frequency response, stability analysis, classical control theory, and controller design for Mechanical Engineering applications. *Prerequisites:* MEN 201, MAT 235.

**MEN 437 Mechanical Engineering Design (3.0); 3 cr.** Design of machine elements. System reliability. Interchangeability of mechanical devices. Stress-strain relationship in mechanical elements configuration. *Prerequisite:* MEN 302.

**MEN 439 Engineering Instrumentations (3.0); 3 cr.** Fundamentals of experimental methods, data acquisition and treatment, error analysis. Design and selection of measurement tools used in mechanical engineering. *Prerequisite:* MEN 401.

**MEN 440 Computer Aided Design and Manufacturing (3.0); 3 cr.** Principles of computer aided design and manufacturing: design process, geometric modeling, design for assembly, design for manufacturability, design/manufacture interface, computer numerical control, product development, production planning and control, standards. *Prerequisites:* MEN 340.

**MEN 471 Manufacturing Technology Laboratory (0.2); 1 cr.** Experiments related to fundamentals of manufacturing processes. Topics include properties of materials, metrology, foundry processes, cold and hot working of metals, machining processes and machines tools, welding and joining processes,

heat treating techniques. *Prerequisite:* MEN 340.

**MEN 489 Approved Professional Training (0.0); 1 cr.** Two-month-training in a mechanical engineering environment in which the student is exposed to different aspects of mechanical engineering practice and equipment: design, construction, testing, maintenance, etc. *Prerequisite:* Department Approval.

**MEN 503 Theory of Plates and Shells (3.0); 3 cr.** Rectangular and circular plates. Variational methods in the analysis of plates and shells. Plates of unusual shape. Shear deformation effects. Large deformation analysis. Analysis of cylindrical shells. *Prerequisite:* MEN 302.

**MEN 507 Fracture Mechanics (3.0); 3 cr.** Mechanics of flawed structure. Concepts include Griffith theory, Irwin analysis, energy analysis of cracked bodies, fracture toughness testing, plane strain, plane stress, transition temperature concepts, subcritical flaw growth. *Prerequisite:* MEN 302.

**MEN 510 Energy Conversion (3.0); 3 cr.** Fundamentals of energy conversion: thermal powerplants, nuclear and fossil fuels, etc.; Energy resources; Energy conservation and recovery; Energy Storage; Pollution and environmental issues. *Prerequisite:* MEN 310.

**MEN 511 Heat Exchangers (3.0); 3 cr.** Fundamentals of heat exchangers design: Types and selection of heat exchangers, Thermal design of heat exchangers; Mechanical design of heat exchangers. *Prerequisites:* MEN 302, MEN 310.

**MEN 512 Industrial Refrigeration (3.0); 3 cr.** Fundamentals of refrigeration systems; Refrigeration cycles; Design and selection of components; Cold storage facilities. *Prerequisite:* MEN 310.

**MEN 515 Heating, Ventilating and Air-Conditioning (3.0); 3 cr.** Design and analysis of HVAC systems and components, comfort, cooling and heating load calculations, piping and duct design, domestic hot and cold water system. Introduction to refrigeration. *Prerequisite:* MEN 310.

**MEN 516 Piping Networks (3.0); 3 cr.** Design of piping networks with emphasis on water distribution systems in buildings: plumbing systems, fire-fighting systems, hot and cold

water distribution; Codes and standards. *Prerequisite:* MEN 321.

**MEN 517 Solar Energy (3.0); 3 cr.** Fundamentals of solar radiation, design and analysis of solar systems for both low and high temperature applications, passive and active solar thermal engineering, design of solar collectors, energy storage systems. *Prerequisite:* MEN 310.

**MEN 518 Renewable Energy Systems (3.0); 3 cr.** Renewable energy resources and systems: Solar energy, wind energy, geothermal energy, biomass, etc. Applications in buildings and power generation. *Prerequisite:* MEN 310.

**MEN 520 Fluid Power Control (3.0); 3 cr.** Fundamentals of fluid power technology: hydraulic fluids and system components like pumps, valves, motors, and cylinders; pneumatic systems, fluidic components. Design, analysis and control of fluid power circuits. *Prerequisite:* MEN 321.

**MEN 521 Viscous Flow and Boundary Layers (3.0); 3 cr.** Fundamentals of real flow phenomena: concepts of stress and strain and derivation of Navier-Stokes equations. Application to boundary layers, creeping flows and lubrication. Flow instabilities and turbulence. *Prerequisite:* MEN 321.

**MEN 523 Applied Aerodynamics (3.0); 3 cr.** Fundamental concepts of aerodynamics and their application to the design of airplanes, automobiles and racing cars. Steady/unsteady, incompressible/compressible, inviscid/viscous fluid flows over airplane wings, airplanes and automotive bodies. *Prerequisite:* MEN 321.

**MEN 525 Combustion and Flame (3.0); 3 cr.** Introduction to combustion processes; combustion thermodynamics and reaction kinetics; combustion phenomena: ignition, quenching, detonation and deflagration; flame instabilities; diffusion and premixed flames; introduction to turbulent combustion. *Prerequisite:* MEN 310.

**MEN 526 Fundamentals of Gas Turbines (3.0); 3 cr.** Types of gas turbines; Design and selection of components: Compressors, Combustion Chambers, Turbines, Diffusers/Nozzles; Systems for stationary, automotive and aircraft applications. *Prerequisite:* MEN 310.

**MEN 530 Advanced Vibration Analysis (3.0); 3 cr.** Advanced topics in vibration theory and its application to Mechanical Systems. Topics include vibration analysis of multi-degree of freedom, distributed and nonlinear systems, random vibration analysis, and vibration control. *Prerequisite:* MEN 330.

**MEN 534 Joining Processes: Welding, Soldering and Brazing (3.0); 3 cr.** Analysis of various joining processes: mechanisms of surface bonding; welding metallurgy; effect of heat input on resulting microstructures; residual stresses and distortion; welding processes: MIG, TIG, Laser, electron beam, spot welding, resistance welding. *Prerequisite:* MEN 340.

**MEN 540 Robots and Manipulators (3.0); 3 cr.** Concepts underlying the design and application of computer-controlled manipulators: Manipulator geometry, work volume, sensors, feedback control of manipulator linkages, kinematics, trajectory planning, programming, robot system architecture, applications in mechanical engineering. *Prerequisites:* MEN 430, MEN 435.

**MEN 541 Automotive Mechatronics (3.0); 3 cr.** Fundamentals of automotive mechatronics; Overview of sensors and actuators used in motor vehicles; Communication protocols and control systems. *Prerequisite:* MEN 401.

**MEN 544 Computer-Aided Manufacturing (3.0); 3 cr.** Fundamentals of industrial automation; numerical control (NC) systems; part programming; robotics in manufacturing; materials handling and automated storage systems; group technology; automated identification and inspection systems; flexible manufacturing systems. *Prerequisites:* MEN 340, MEN 370.

**MEN 550 Computational Methods in Thermal and Fluid Mechanics (3.0); 3 cr.** Physical and mathematical foundations of computational fluid mechanics and heat transfer with emphasis on applications: governing equations and mathematical approximations; partial differential and integral equations, discretization and solution methods, stability and convergence. Introduction to physical modeling of turbulence, combustion, and radiation. *Prerequisites:* MEN 310, MAT 335, CSC 212.

**MEN 571 Design and Machinery Laboratory (0.2); 1 cr.** Applications of mechanical design techniques to complex systems. Topics include

mechanisms – linkages, springs, gears and gear trains, bearings, etc... - assembly processes, geometric dimensioning and tolerancing, mechanical vibrations, balancing of machineries. *Prerequisites:* MEN 330, MEN 430, MEN 471.

**MEN 573 Mechatronics and Control Laboratory (0.2); 1 cr.** Applications of control theory to mechanical systems and evaluation of their performance. Topics include feedback systems, PLC control systems, mechatronics systems, etc. *Prerequisites:* MEN 401, MEN 435, EEN 207.

**MEN 576 Applied Fluid Mechanics Laboratory (0.2); 1 cr.** Applications of thermo-fluid theories to the design and evaluation of turbomachinery. Topics include pumps and pumping stations, hydraulic turbines, fans and compressors, drag and lift experiments using wind tunnels. *Prerequisites:* MEN 321, MEN 376.

**MEN 578 Applied Energy Laboratory (0.2); 1 cr.** Experiments dealing with energy related technology. Topics include heating, ventilating, air-conditioning, refrigeration, combustion techniques, energy conversion, renewable energy – solar, wind, etc... *Prerequisites:* MEN 310, MEN 376.

**MEN 580 Finite Elements Methods (3.0); 3 cr.** The concepts and fundamentals of the finite element method with applications to problems in solid mechanics, fluid mechanics, and heat transfer. *Prerequisites:* MEN 302, MEN 310.

**MEN 581 Special Topics in Mechanical Engineering (3.0); 3 cr.** Material includes coverage of recent developments in mechanical engineering that are needed to update students on the latest technologies. Department determines topics to be covered and *prerequisites* when offered.

**MEN 598 Engineering Design I (0.2); 1 cr.** Development of a project proposal that includes the following items: Choice of project topic, literature survey, market analysis, feasibility study, project timeline, list of materials and cost, engineering ethics issues, social and environmental impact, etc. *Prerequisites:* ENL 230, Department approval.

**MEN 599 Engineering Design II (2.0); 2 cr.** Implementation of the engineering design project that was proposed in MEN 598. Includes report, final presentation. *Prerequisite:* MEN 598.



**FACULTY OF  
HUMANITIES  
(FH)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

Dr. Mary-Angela Willis, Acting Dean  
Pink Building, 3<sup>rd</sup> floor, Office 342  
Tel: 09-218950/1/2 (Extension 2433), Direct line: 09-208500  
E-mail: mwillis@ndu.edu.lb

Ms. Wassil Chemaly, Administrative Assistant  
Pink Building, 3<sup>rd</sup> floor, Office 344  
Tel: 09-218950/1/2 (Extension 2423), Direct line: 09- 208501  
E-mail: fhum@ndu.edu.lb  
wchemaly@ndu.edu.lb and

### **Department of English, Translation, and Education**

Dr. Maha Mouchantaf, Chair  
Pink Building, 3<sup>rd</sup> floor, Office 326  
Tel: 09-218950/1/2 (Extension 2537), Direct line: 09-208535  
E-mail: mmouchantaf@ndu.edu.lb

Ms. Fabienne Zarifeh, Secretary  
Pink Building, 3<sup>rd</sup> floor, Office 328  
Tel: 09-218950/1/2 (Extension 2426), Direct line: 09-208509  
E-mail: dete@ndu.edu.lb  
fzarifeh@ndu.edu.lb and

Undergraduate Education/ Teaching Diploma/ Teaching Certificate Advisor

Dr. Tony Kopaly  
Pink Building, 3<sup>rd</sup> floor, Office 352  
Tel: 09-218950/1/2 (Extension. 2514), Direct line: 09- 208507  
E-mail: tkopaly@ndu.edu.lb

Graduate Education Advisor

Dr. Christine Sabieh  
Pink Building, 2<sup>nd</sup> floor, Office 245  
Tel: 09-218950/1/2 (Extension 2409), Direct line: 09- 208510  
E-mail: csabieh@ndu.edu.lb

Doctorate of Education Advisor

Dr. Carol Kfoury  
Pink Building, 2<sup>nd</sup> floor, Office 260  
Tel: 09-218950/1/2 (Extension 2709), Direct line: 09- 208548  
E-mail: ckfoury@ndu.edu.lb

Undergraduate/ Graduate English Advisor

Dr. Mary-Angela Willis  
Pink Building, 3<sup>rd</sup> floor, Office 342  
Tel: 09-218950/1/2 (Extension 2433), Direct line: 09- 208500  
E-mail: mwillis@ndu.edu.lb

Physical Education Advisor

Mr. Nadim Nassif

Pink Building, 3<sup>rd</sup> floor, Office351  
Tel: 09-218950/1/2 (Extension 2443), Direct line: 09- 208533  
Email: nnessif@ndu.edu.lb

Undergraduate/ Graduate Translation Advisor  
Dr. Maya El-Hajj  
Pink Building, 2<sup>nd</sup> floor, Office 230  
Tel: 09-218950/1/2 (Extension 2163), Direct line: 09- 208539  
E-mail: melhajj@ndu.edu.lb

### **Department of Mass Communication**

Mr. Sam Lahoud, Chair  
Pink Building, 3<sup>rd</sup> floor, Office 340  
Tel: 09-218950/1/2 (Extension2389), Direct line: 09- 208550  
E-mail: slahoud@ndu.edu.lb

Ms. Alice Eid, Secretary  
Pink Building, 3<sup>rd</sup> floor, Office 354  
Tel: 09-218950/1/2 (Extension 2427), Direct line: 09- 208503  
Email: mass\_communication@ndu.edu.lb  
aeid@ndu.edu.lb and

Graduate Media Studies Advisor (I-Z) :  
Dr. Joseph Ajami  
Pink Building, 2<sup>nd</sup> floor, Office 258  
Tel: 09-218950/1/2 (Extension 2404), Direct line: 09- 208538  
E-mail: jajami@ndu.edu.lb

Journalism and Graduate Media Studies Advisor (A-H):  
Mr. Sam Lahoud  
Pink Building, 3<sup>rd</sup> floor, Office 341  
Tel: 09-218950/1/2 (Extension 2389), Direct line: 09- 208550  
E-mail: slahoud@ndu.edu.lb

Advertising & Marketing Advisor (A-B):  
Dr. Maria Abou Zeid  
Yellow Building, 2<sup>nd</sup> floor, Office 218  
Tel: 09-218950/1/2 (Extension 2040), Direct line: 09- 208521  
E-mail: mbouzeid@ndu.edu.lb

Advertising & Marketing Advisor (C-H):  
Ms. Christy Madi  
Green Building, 2<sup>nd</sup> floor, Office 291  
Tel: 09-218950/1/2 (Extension 2588), Direct line: 09- 208547  
E-mail: cmady@ndu.edu.lb

Advertising & Marketing Advisor (I-O):  
Ms. Zoya Awki  
Studio, Office 127  
Tel: 09-218950/1/2 (Extension 2385), Direct line: 09- 208553  
E-mail: zawky@ndu.edu.lb

Advertising & Marketing Advisor (P-Z):  
Dr. Khalid El Fakih

Yellow Building, 2<sup>nd</sup> floor, Office 217  
Tel: 09-218950/1/2 (Extension 2048), Direct line: 09- 208520  
E-mail: kfakih@ndu.edu.lb

Radio and Television Advisor (A-E)  
Mr. Nicolas Khabbaz  
Studio, Office 108  
Tel: 09-218950/1/2 (Extension 2417), Direct line: 09- 208559  
E-mail: nkhabbaz@ndu.edu.lb

Radio and Television Advisor (F-J):  
Mr. Naoum Abi Adam  
Studio, Office 114  
Tel: 09-218950/1/2 (Extension 2383), Direct line: 09- 208558  
E-mail: nabiadam@ndu.edu.lb

Radio and Television Advisor (K-P):  
Mr. Samer Al-Achy  
Studio, Office 104  
Tel: 09-218950/1/2 (Extension 2395), Direct line: 09- 208561  
E-mail: sachy@ndu.edu.lb

Radio and Television Advisor (Q-Z):  
Ms. Najwa Mallah  
Studio, Office 105  
Tel: 09-218950/1/2 (Extension 2219), Direct line: 09- 208560  
E-mail: nmallah@ndu.edu.lb

### **Department of Social and Behavioral Sciences**

Dr. Mansour Eid, Chair  
Pink Building, 3<sup>rd</sup> floor, Office 341  
Tel: 09-218950/1/2 (Extension 2429), Direct line: 09- 208504  
E-mail: meid@ndu.edu.lb

Ms. Karen Dabaghy, Secretary  
Pink Building, 3<sup>rd</sup> floor, Office 355  
Tel: 09-218950/1/2 (Extension 2430), Direct line: 09- 208505  
E-mail: kdabaghy@ndu.edu.lb and sbs@ndu.edu.lb

Psychology Advisor :  
Dr. Joseph Yaacoub  
Pink Building, 2<sup>nd</sup> floor, Office 240  
Tel: 09-218950/1/2 (Extension 2414), Direct line: 09- 208526  
E-mail: jyacoub@ndu.edu.lb

### **Freshman Arts Advisors:**

Freshman Arts Advisor (A-G)  
Dr. Harvey Oueijan  
Pink Building, 2<sup>nd</sup> floor, Office 256  
Tel: 09-218950/1/2 (Extension 2415), Direct line: 09- 208540  
E-mail: houeijan@ndu.edu.lb

Freshman Arts Advisor (H-O)

Dr. Wessam Chibani

Pink Building, 2<sup>nd</sup> floor, Office 231

Tel: 09-218950/1/2 (Extension 2400), Direct line: 09- 208519

E-mail: wchibani@ndu.edu.lb

Freshman Arts Advisor (P-Z)

Dr. Maria Chlela

Pink Building, 2<sup>nd</sup> floor, Office 257

Tel: 09-218950/1/2 (Extension 2502), Direct line: 09- 208543

E-mail: mchlela@ndu.edu.lb

# FACULTY OF HUMANITIES

## FACULTY PROFILE

The Faculty of Humanities plays two roles in the academic life of the University. The first is to offer degree-granting programs on both the undergraduate and graduate levels; the second is to provide a large array of general education requirements, foreign language courses, and special programs designed for students at the various stages of their academic careers.

## MISSION, VISION AND VALUES

### Mission

The mission of the Faculty of Humanities is to provide opportunities for NDU students to develop their intellectual and interpersonal capacities to their full potential. The faculty also aims to encourage students to appreciate their culture and to work for justice and peace in their world. With a liberal arts education as the foundation of our programs, our mission is to equip students with a well-rounded knowledge-base enabling them to think critically and independently, to reflect on timeless issues, and to shape progress. The Faculty also aims to train students in professional career-based degrees.

### Vision

During the upcoming five years, the faculty will strive to become a university of choice for undergraduate degrees in Education, English, Physical Education, Psychology, Arabic, Translation, Advertising and Marketing, and Mass Communication. To attain this goal, the curriculum will be reviewed and updated with special emphasis given to the inclusion of courses which offer students exposure to the career they have chosen. In addition, efforts will be made to promote interdisciplinary studies as well as a greater emphasis on research both for students and faculty members. In line with JPPI's *Ex Corde Ecclesiae*, "research activities will study serious contemporary problems in areas such as the dignity of human life, the promotion of justice for all, the quality of personal and family life, the protection of nature, and the search for peace and political stability...." (*Article 32*). Graduate programs will continue to be expanded to welcome adult learners who wish to further their specialization. The Faculty of Humanities is also in the process of developing Ph.D. programs which will cater to graduate students in the region.

### Values

As an integral part of a Catholic university which embraces the Maronite tradition of faith in the role of education to empower its members, the Faculty of Humanities places special emphasis on the following in all of its courses and activities:

- Academic integrity;
- Academic excellence;
- Personal ethics;
- Belief in one's own worth;
- Responsibility of the individual towards one's family and community;
- Respect for tradition;
- Becoming independent, critical thinkers;
- Serving others ;

- Compassion ;
- Developing the ability to work in a team atmosphere for the good of the entire group;
- Cross-cultural understanding;
- Social consciousness ;
- Encouraging dialogue between faith and reason (Ex Corde Ecclesiae # 15).

## **ACADEMIC DEPARTMENTS AND DEGREE PROGRAMS**

### **The Department of English, Translation, and Education:**

B.A. Education

B.A. English

B.A. Physical Education and Sport

B.A. Translation and Interpretation

M.A. English Language and Literature

M.A. Education

M.A. Translation

Ed.D. Doctor of Education

Teaching Diploma

Teaching Certificate

Minor in English

Minor in Translation

Minor in Physical Education

### **The Department of Mass Communication:**

B.A. Advertising and Marketing

B.A. Communication Arts – Journalism Emphasis

B.A. Communication Arts – Radio and Television Emphasis

M. A. Media Studies - Advertising Emphasis; M. A. Media Studies - Electronic Media Emphasis

M. A. Media Studies - Journalism Emphasis

Minor in Advertising and Marketing

Minor in Radio and Television

Minor in Journalism

### **The Department of Social and Behavioral Sciences:**

B.A. Psychology – Clinical Psychology Emphasis

B.A. Psychology – Educational Psychology Emphasis

B.A. Psychology – Industrial Psychology Emphasis

M.A. Psychology – Educational Psychology Emphasis

Minor in Arabic

Minor in Psychology

Summer Arabic Program

## **GENERAL EDUCATION REQUIREMENTS (33 crs.)**

Students (I.D.'s 2008 and on) whose majors fall under the Faculty of Humanities must fulfill the General Education Requirements as outlined below. Refer to the degree program requirements in the appropriate department for more specific details.

### **I. Communication Skills 9 cr.**

#### **English (6 cr.)**

ENL 213: Sophomore English Rhetoric

**And**

ENL 223: Communication Arts

**Or**

ENL 230: English in the Workplace

#### **Arabic (3 cr.) One course from:**

ARB 211: Appreciation for Arabic Literature

ARB 212: Advanced Arabic Grammar

ARB 224: Arabic Literature and Human Thought

ARB 231: Technical Arabic

ARB 317: Themes of Modern Arabic Literature in Lebanon (20th century)

### **II. Philosophy and Religion 6 cr.**

#### **Religion (3 cr.)**

REG 213: Catholicism

REG 212: Religion and Social Issues

REG 215: World Religions

REG 314: Marriage and Family in the Catholic Church

REG 313: The Maronites: Faith and Cultural Heritage

#### **Philosophy and Ethics (3 cr.)**

PHL 211: Logic and the Scientific Method

PHL 311: Ethics and the Modern World

POS 345: Ethics and Leadership

ENS 205: Environment, Society and Ethics

COA 360: Media Ethics

### **III. Cultural Studies and Social Sciences 6 cr.**

#### **Cultural Studies (3 cr.)**

HUT 305: Human Thought to 1500

HUT 306: Human Thought from 1500 to the Present

LIR 214: Introduction to Literary Genres

MUS 210: Music Appreciation

FAP 215: Art and Culture

ARP 215: Cultural Themes in Lebanese Arch

COA 359: Media and Society

COA 315: World Cinema Survey

NTR 215: Foods and Nutrition of World Cultures

#### **Social Sciences (3 cr.)**

PSL 201: Introduction to Psychology

SOL 201: Introduction to Sociology

SOL 301: Introduction to Anthropology

SOL 313: Family Violence and Child Abuse  
BAD 201: Fundamentals of Management  
ECN 200: Survey of Economics  
ECN 211: Principles of Micro Economics  
ECN 212: Principles of Macro Economics

#### **IV. Citizenship**

**6 cr.**

Two courses from the following pool:  
POS 201: Introduction to Political Science  
HIT 211: History of Lebanon and the Middle East  
POS 210: Government and Politics in Lebanon  
POS 212: Political History of the Near East until WWI  
POS 240: Law and Society  
IAF 301: Modern Political Ideologies  
COA 350: Current Issues

#### **V. Science and Technology**

**6 cr.**

##### ***Mathematics/Statistics/Computer Science (3 cr.)***

CSC 201: Computers and Their Use  
CSC 202: Computers for Visual Arts  
CSC 203: Introduction to Programming  
MAT 201: Fundamentals of Mathematics  
MAT 202: Mathematics for Arts  
MAT 204: Mathematics for Business and Economics I  
MAT 211: Discrete MathematicsE  
MIS 201: Introduction to Management Information Systems  
STA 201: Statistics for Social Sciences  
STA 202: Statistics for Humanities  
STA 206: Applied Statistics for Business and EconomicsI

##### **Natural Sciences (3 cr.)**

PHS 211: Principles of Physics  
PHS 207: Development of Science and Technology  
AST 201: Discovering Astronomy  
AST 210: Introduction to Astronomy and Astrophysics  
BIO 201: Your Body in Action  
CHM 211: Principles of Chemistry  
ENS 201: Introduction to Environmental Science  
ENS 202: Environment and Sustainable Development  
ENS 205: Environment, Society, and Ethics  
ENS 206: Ecotourism  
GIS 211: Principles of Geographic Information Systems  
GEO 202: Geology for Architects  
BIO 202: Mystery of Life  
BIO 203: Discover Biology  
HEA 201: Health Awareness  
HEA 204: Contemporary Health Issues  
NTR 201: Basic Human Nutrition

## DEPARTMENT OF ENGLISH, TRANSLATION, AND EDUCATION

---

<b>Professors:</b>	Eid, Assad; Oueijan, Naji; Sabieh, Christine
<b>Associate Professors</b>	Abou-Chedid, Kamal; Jahshan, Paul; Kfourri, Carol; Malek, Amal; Samra, Sami
<b>Assistant Professors</b>	Abdel-Nour, George; Akar, Bassel; Antoun, Ziad Chibani, Wissam; Chikri, Roger, (Fr.); El-Hajj, Maya El-Meouchy, Rita; Ghosn-Chelala, Maria ; Guldimmann, Colette;Hage, Leslie ;Oueijan, Harvey; Karam, Savo Khoury, Mary; Kopaly, Tony; Mouchantaf, Maha (Chair); Tannous, Joseph, (Fr.); Willis, Mary-Angela
<b>Senior Lecturers</b>	Akkari, Juliet;Hajj, Micheal;Samrani, Diana
<b>Lecturers</b>	Bassil, Janet; Karam, Mirna; Nassif, Nadim ; Van Loan, Amira

---

### Intensive English Program

Students who score less than 400 on the NDU EET are offered the opportunity to take a one-semester 12-credit. Intensive English course. Students may also take one Math remedial course simultaneously. The passing grade in Intensive English is “C” (70). A student who scores a “B” or above is placed automatically in ENL 110. Students may repeat this course only once.

Intensive English is divided into two components:

- Grammar and Writing (6cr.)
- Reading and Oral (6cr.)

In addition to the traditional class setting, students are encouraged to participate in the University’s academic life by sitting in on regular University classes, and will have access to the Mariam and Youssef Library and the Writing Center.

---

### Communication Skills Courses

The placement of students in Communication Skills Courses is based upon their EET scores (see Undergraduate Admission).

- ENL 105 - College English I (5 non-credit carrying; passing grade is “C”) *Note: Students who score “B” or above will be placed in ENL 213*
  - ENL 110 - College English II (3 non-credit carrying; passing grade is a “C”)
  - ENL 213 - Sophomore English Rhetoric (3cr.)
  - ENL 223 - Communication Arts (3cr.)
  - ENL 230 - English in the Workplace (3cr.)
- 

### Languages

The Department offers courses in the following languages:  
Chinese, French, German, Italian, Latin, Spanish, and Syriac.

---

## **Teaching Diploma**

The purpose of the Teaching Diploma program is to prepare school teachers.

The program is designed to cater to both the freshly-out-of- school, inexperienced graduate and the teacher who has already had some experience but who lacks scientific preparation.

The course material will cover the various aspects of teaching, regardless of the subject matter. Such aspects include general educational theories of acquisition, basic educational psychology, discipline and management in the classroom, testing and evaluating, and the different methods of the teaching-learning process.

### **Admission Requirements**

To qualify for admission, a candidate must either be working towards a BA/BS degree, or hold a recognized B.A./B.S. degree in the following: English, Mathematics, Life Science, Physical Education, Chemistry, Physics, and Information Technology. All candidates must pass the EET with a minimum score of 500.

### **Recognition**

The Government of Lebanon recognizes the Teaching Diploma as equivalent to the “License d’Enseignement” if the student holds the Lebanese Baccalaureate Part II and has successfully passed the number of credits required for the Diploma over and above the total number of credits required for the B.A./B.S. degree.

### **Graduation Requirements**

In order to obtain the Teaching Diploma, students must successfully pass 21 credits with a GPA of 2.0/4.0 or above in the following courses:

EDU 201 Introduction to Education

EDU 313 Psychology of Education: Learning

EDU 343 Classroom Management

**Or**

EDU 330 or 331 or 332 or 333 Curriculum Development and Evaluation

EDU 350 or 351 or 352 or 353 or 354 or 355 or 356 or 357 Methods of Teaching

EDU 430 or 431 or 432 or 433 or 434 or 438 Tests, Measurement and Evaluation

EDU 460 or 461 or 462 or 463 or 464 or 465 or 466 or 468 Teaching Practicum I

EDU 470 or 471 or 472 or 473 or 474 or 475 or 476 or 477 or 478 Teaching Practicum II

In addition, depending on their original Bachelor’s degree, English, Mathematics, Life Science, Physical Education , Chemistry, Physics, and Information Technology students must select an additional set of 3 courses suited to their discipline. NDU students may elect to begin their Teaching Diploma parallel to their degree program. T.D. courses are offered during Summer Session as well as Fall and Spring semesters.

---

## **Teaching Diploma in Arabic Language and Literature**

The purpose of the Teaching Diploma program is to prepare school teachers.

The program is designed to cater to both the freshly-out-of- school, inexperienced graduate and the teacher who has already had some experience but who lacks scientific preparation.

The course material will cover the various aspects of teaching Arabic. Such aspects include general educational theories of acquisition, basic educational psychology, discipline and management in the classroom, testing and evaluating, and the different methods of the teaching-learning process.

### **Admission Requirements**

To qualify for admission, a candidate must either be working towards a B.A. degree in Arabic or hold a recognized B.A. degree in Arabic.

### **Recognition**

The Government of Lebanon recognizes the Teaching Diploma as equivalent to the “License d’Enseignement” if the student holds the Lebanese Baccalaureate Part II and has successfully passed the number of credits required for the Diploma over and above the total number of credits required for the B.A. degree in Arabic.

### **Graduation Requirements**

In order to obtain the Teaching Diploma, students must successfully pass 21 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 202 Introduction to Education (in Arabic)
- EDU 314 Educational Psychology (in Arabic)
- EDU 315 Literary Criticism (in Arabic)
- EDU 345 Methods of Teaching Arabic Language and Literature (in Arabic)
- EDU 359 Curriculum Design (in Arabic)
- EDU 414 Writing Styles and Textual Analysis (in Arabic)
- EDU 477 Practicum in Teaching Arabic (in Arabic)

---

### **Teaching Certificate**

The Teaching Certificate program is designed to help school teachers conduct their classes scientifically. The candidate is not required to hold a university degree to join. This program will cater to elementary school teachers who are already teaching in a school but do not hold a university degree.

### **Admission Requirements**

To qualify for admission, a candidate must hold a Lebanese Baccalaureate Part II or its equivalent. The candidate must prove English language proficiency, by passing the EET with a minimum score of 500. The candidate must also sit for an oral interview before he/she can be admitted to the program.

### **Academic Requirements**

In order to obtain the Teaching Certificate, a candidate must successfully complete 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 201 Introduction to Education
- EDU 313 Psychology of Education: Learning
- EDU 343 Classroom Management
- EDU 350 Methods of Teaching - Elementary Level
- EDU 430 Tests, Measurement and Evaluation - Elementary Level
- EDU 460 Teaching Practicum - Elementary Level
- EDU 470 Elementary Teaching Practicum II

---

### **Teaching Certificate in Arabic Language and Literature**

The Teaching Certificate program is designed to help school teachers conduct their classes scientifically. However, this is not a graduate program: the candidate is not required to hold a university degree to join. This program will cater to elementary school teachers who are already teaching in a school but do not hold a university degree.

### **Admission Requirements**

To qualify for admission, a candidate must hold a Lebanese Baccalaureate II or its equivalent. The candidate must prove Arabic language proficiency. The candidate must also sit for an oral interview before he/she can be admitted to the program.

### **Academic Requirements**

In order to receive the Teaching Certificate, a candidate must complete 18 credits with a GPA of 2.0/4.0 or above in the following courses:

- EDU 202 Introduction to Education (in Arabic)
- EDU 314 Educational Psychology (in Arabic)
- EDU 315 Literary Criticism (in Arabic)
- EDU 345 Methods of Teaching Arabic Language and Literature (in Arabic)
- EDU 359 Curriculum Design (in Arabic)
- EDU 414 Writing Styles and Textual Analysis (in Arabic)
- EDU 477 Practicum in Teaching Arabic (in Arabic)

---

## **The Degree of Bachelor of Arts in Education**

The purpose of the B.A. Education comes in line with the University's commitment to serve the community around it, and within the national strategy of educational reform.

Students majoring in Education may choose one of the following options: Early Childhood, Learning Disabilities, or Education of the Gifted.

### **Graduation Requirements**

Students must complete a total of 105 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements. The 105 credits are divided into:

#### **Degree Requirements (105 credits)**

#### **General Education Requirements**

**33 cr.**

Education students must take STA 202 to fulfill the 3-credit requirement in Science and Technology.

#### **Core Requirements**

**24 cr.**

PSL 211, ENL 311, SOL 313, EDU 201, EDU 213, EDU 313, EDU 343, EDU 360

#### **Major Requirements**

**42 cr.**

##### **Option I – Early Childhood**

EDU 311, EDU 332, EDU 344, EDU 355, EDU 411, EDU 413, EDU 465, EDU 475

Students must choose an additional 18 credits as described below:

*Group I:* EDU 301 or EDU 321 (3 credits)

*Group II:* EDU 361, EDU 362, EDU 402, EDU 420, EDU 421, EDU 422, EDU 430, EDU 450 (12 credits)

*Group III:* EDU 401 or SOL 312 (3 credits)

##### **Option II – Learning Disabilities**

EDU 311, EDU 324, EDU 344, EDU 357, EDU 422, EDU 430, EDU 460, EDU 470

Students must choose an additional 18 credits as described below:

*Group I:* EDU 302 or EDU 325 (3 credits)

*Group II:* EDU 342 (3 credits)

*Group III:* EDU 362, EDU 402, EDU 412, EDU 413, EDU 420, EDU 421, EDU 451 (9 credits)

*Group IV:* EDU 401 OR SOL 312 (3 credits)

**Option III – Education of the Gifted**

EDU 322, EDU 323, EDU 341, EDU 344, EDU 361, EDU 430, EDU 460, EDU 470

Students must choose an additional 18 credits as described below:

*Group I:* EDU 330 or EDU 331 (3 credits)

*Group II:* EDU 301, EDU 311, EDU 321, EDU 324, EDU 402, EDU 413, EDU 420, EDU 421, EDU 422 (12 credits)

*Group III:* EDU 401 or EDU 412 (3 credits)

**Free Electives**

**6 cr.**

## **The Degree of Bachelor of Arts in Education–Basic Education with Teaching Diploma**

The B.A. in Education - Basic Education focuses on preparing school teachers for Grade 1 to 9 to confront the issues of basic education. The official decree for this degree recognizes two separate degrees: a B.A. - Basic Education (99 credits) and a Teaching Diploma (21 credits).

### **Option 1: For students who plan on a teaching career in Education - Basic Education (120 credits)**

#### **Graduation Requirements (120 credits)**

Students must complete a total of 121 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements. The 121 credits are divided into:

**General Education Requirements** **33 credits**

**Core Requirements** **54 credits**

EDU 201, EDU 213, EDU 301, EDU 303, EDU 311, EDU 313, EDU 340, EDU 343, EDU 350, EDU 360, EDU 361, EDU 362, EDU 401, EDU 420, EDU 430, EDU 460, EDU 470, ENL 311

**Major Requirements** **18 credits**

EDU 330

*Track 1 (English and Social Studies):* EDU 351, EDU 354, EDU 431, EDU 434, EDU 480, EDU 481, EDU 484

*Track 2 (Mathematics and Sciences):* EDU 352, EDU 353, EDU 432, EDU 433, EDU 480, EDU 482, EDU 483

**Major Electives** **9 credits**

Three courses from a pool: EDU 321, EDU 322, EDU 342, EDU 344, EDU 412, EDU 413, EDU 422, ENL 322, MUE 335, MUE 446

**Free Electives** **6 credits**

### **Option 2: For students who wish to acquire a B.A. in Education - Basic Education without a Teaching Diploma (99 credits)**

#### **Graduation Requirements (99 credits)**

Students must complete a total of 99 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements. The 99 credits are divided into:

**General Education Requirements** **33 credits**

**Core Requirements** **33 credits**

EDU 201, EDU 301, EDU 303, EDU 311, EDU 313, EDU 340, EDU 342, EDU 343, EDU 350, EDU 361, EDU 362, EDU 430

**Major Requirements** **18 credits**

EDU 330

*Track 1 (English and Social Studies):* EDU 351, EDU 354, EDU 431, EDU 434, EDU 480, EDU 481, EDU 484

*Track 2 (Mathematics and Sciences):* EDU 352, EDU 353, EDU 432, EDU 433, EDU 480, EDU 482, EDU 483

**Major Electives** **9 credits**

Three courses from a pool: EDU 321, EDU 322, EDU 344, EDU 412, EDU 422, ENL 322 **6 credits**

**Free Electives** **6 credits**

**Option 3: For students who have obtained the 99-credit B.A. in Education - Basic Education and wish to acquire a Teaching Diploma (21 credits)**

**Courses** **21 credits**

EDU 213, EDU 311, EDU 360, EDU 401, EDU 420, EDU 460, EDU 470

---

## Undergraduate courses: Education

**EDU 101 Education for life (3.0); 3 cr.** As an introductory course in education, students will discuss and write about aims of education, curriculum development, learning and teaching, and assessment. Topics will also consider cultural, historical, and philosophical dimensions. Activities aim to promote critical thinking, reflection, and dialogue. For Freshman students only.

**EDU 201 Introduction to Education (3.0); 3 cr.** Introduces the history and philosophy of education, structure and components of the school, and the role of the teacher.

**EDU 202 Introduction to Education (2.0); 2 cr.** Introduces the history and philosophy of education, structure, and components of the school, and the role of the teacher. (In Arabic)

**EDU 212 Sociological Perspectives on Schools (3.0); 3 cr.** Aims to give students a thorough understanding of pupils and current procedures in the classroom. *Corequisite:* EDU 201.

**EDU 213 Human Growth and Development (3.0); 3 cr.** Introduces students to the field of developmental psychology and its influence on education. *Corequisite:* EDU 201.

**EDU 203 Lebanese Arabic Sign Language I (3.0); 3 cr.** Introduces the student to basic Lebanese Arabic sign language communication. The history of sign language will be covered as well as the important aspects of hearing impaired culture. Students will learn basic sign vocabulary, finger spelling, and numbers. Fluency in spoken Arabic language is required.

**EDU 214 Youth in Contemporary Society (3.0); 3 cr.** Aims at developing an awareness of the Lebanese adolescent society by focusing on psychological and social development of the adolescent. *Corequisite:* EDU 201.

**EDU 301 Introduction to Arts Education (3.0); 3 cr.** Involves both a practical and a theoretical approach to dance, music and visual art in the community. *Corequisite:* EDU 201.

**EDU 302 Introduction to the Education of the Mentally Disabled (3.0); 3 cr.** Involves the diagnosis, classification, learning potential, and general characteristics of the disabled child. *Corequisite:* EDU 201.

**EDU 303 Introduction to the Education of Students with Learning Disabilities (3.0); 3 cr.** This course introduces the student to the indicators of learning disabilities and the means of diagnosing children with learning disabilities. Methods of teaching students with learning disabilities will be practiced. Strategies to include students with disabilities in mainstream elementary classrooms will also be examined. Observation of inclusive classrooms will be required. *Co-requisite:* EDU 201

**EDU 311 Children's Literature (3.0); 3 cr.** Introduces criteria for selection of children's literature, children's reading interests and preparation of materials. *Corequisite:* EDU 201.

**EDU 313 Psychology of Education: Learning (3.0); 3 cr.** Learning and its relation to growth and development. Surveys the theories of learning and their pedagogical implications. *Corequisite:* EDU 201.

**EDU 314 Educational Psychology (3.0); 3 cr.** Examines the interrelationship between education and psychology, presents the theoretical and practical perspectives of teaching, and compares the Western to the Arab theories and views. (In Arabic)

**EDU 315 Literary Criticism (3.0); 3 cr.** Introduces a wide variety of literary disciplines and methods and applies these disciplines to selected ancient and modern texts. (In Arabic)

**EDU 322 Education of Talented and Gifted Students (3.0); 3 cr.** Offers theoretical background and practical concerns for educating exceptionally able students. *Corequisite:* EDU 313.

**EDU 323 Behavioral Problems of Exceptional Students (3.0); 3 cr.** Introduces teaching methods appropriate to the needs of students with emotional and behavioral problems. *Corequisite:* EDU 313.

**EDU 324 Counseling in Special Education (3.0); 3 cr.** Presents approaches to working with exceptional individuals and their parents in the school, home and community. *Corequisite:* EDU 313.

**EDU 325 The Needs of the Disabled (3.0); 3 cr.** Is designed to develop awareness of the educational needs of the disabled and the

competencies to meet those needs. *Corequisite:* EDU 313.

**EDU 330 Curriculum Development and Evaluation: Elementary (3.0); 3 cr.** Examines basic elements and foundations of a curriculum. Emphasis is on the elementary level. *Corequisite:* EDU 313.

**EDU 331 Curriculum Development and Evaluation: Secondary (3.0); 3 cr.** Same as EDU 330 but emphasizes the secondary level. *Corequisite:* EDU 313.

**EDU 332 Curriculum Development and Evaluation: Early Childhood (3.0); 3 cr.** Same as EDU 330 but emphasizes early childhood. *Corequisite:* EDU 313.

**EDU 333 Curriculum Development and Evaluation: the Disabled (3.0); 3 cr.** Same as EDU 330 but emphasizes students with learning disabilities. *Corequisite:* EDU 313

**EDU 340 Teaching Reading Skills (3.0); 3 cr.** This course focuses on the current philosophies and teaching approaches used to teach reading in the elementary school. Phonemic awareness, phonics instruction, vocabulary development, fluency and comprehension will be emphasized as they are considered critical elements in the development of literacy. Students will also explore the methods of teaching reading of English to students from a bi-lingual or tri-lingual background. Co-requisite EDU 201.

**EDU 341 Reading Skills for the Gifted (3.0); 3 cr.** Focuses on the special reading skills of gifted students. Current programs and teaching approaches are critically examined. *Corequisite:* EDU 313.

**EDU 342 Instructional Strategies for the Disabled (3.0); 3 cr.** Provides techniques for teaching the disabled, such as basic stimulus control, positioning, eating, toileting, etc. *Corequisite:* EDU 313.

**EDU 343 Classroom Management (3.0); 3 cr.** Examines the role of the teacher in a classroom situation: teacher-student interaction and variations in class activities. *Corequisite:* EDU 201.

**EDU 344 School Libraries (3.0); 3 cr.** Introduces library skills and provides students with ideas related to the structuring and enrichment of library material. *Corequisite:* EDU 201.

**EDU 345 Methods of Teaching Arabic Language and Literature (3.0); 3 cr.** Examines the most recent methods of teaching Arabic. Aims to develop the teachers abilities to motivate and inspire students. (In Arabic)

**EDU 350 Methods of Teaching: Elementary (3.0); 3 cr.** Provides principles and techniques of language, arithmetic, and science teaching in the elementary classes. *Corequisite:* EDU 313.

**EDU 351 Methods of Teaching English as Foreign Language (3.0); 3 cr.** Same as EDU 350 but focuses on the teaching of the four language skills at various learning stages. *Corequisite:* EDU 313.

**EDU 352 Methods of Teaching Mathematics (3.0); 3 cr.** Examines methods of teaching mathematics: educational objectives, mathematical logic and teaching aids. *Corequisite:* EDU 313.

**EDU 353 Methods of Teaching Science (3.0); 3 cr.** Examines methods of teaching science: educational objectives, basic concepts, lab skills and teaching aids. *Corequisite:* EDU 313.

**EDU 354 Methods of Teaching Social Studies (3.0); 3 cr.** Deals with different approaches to teaching history, geography and civics. *Corequisite:* EDU 313.

**EDU 355 Methods of Teaching: Early Childhood (3.0); 3 cr.** Methods and materials for the young child's learning: the use of manipulative and multi-sensory materials. *Corequisite:* EDU 313.

**EDU 356 Methods of Teaching: the Handicapped (3.0); 3 cr.** Methods for handicapped students: curriculum needs, teaching techniques and behavior management. *Corequisite:* EDU 313.

**EDU 357 Methodology of Teaching: Learning Disabilities (3.0); 3 cr.** Introduces dimensions of learning disabilities: identification, characteristics, development, habilitation. *Corequisite:* EDU 313.

**EDU 358 Education for Peace (3.0); 3 cr.** The main focus of the course will be a study of the educator's responsibility in educating for peace and in appropriately integrating peace components into Lebanese schools' curricula. Students will identify the premises and challenges of peace education programs, especially within the Lebanese culture.

**EDU 359 Curriculum Design (2.0); 2 cr.** Examines basic elements and foundations of the curriculum of Arabic language and literature in K-12 classes. (In Arabic)

**EDU 360 Instructional Technology (3.0); 3 cr.** The practical application of audio-visual materials, the operation and maintenance of equipment, and the construction of aids.

**EDU 361 Applications of Computers in Teaching (3.0); 3 cr.** The implications of computer application in the classroom. Students will learn software evaluation skills.

**EDU 362 Education and the Lebanese Law (3.0); 3 cr.** Studies the various laws in the Lebanese Constitution that determine the educational process in Lebanon.

**EDU 401 Intercultural Communication (3.0); 3 cr.** Introduces the comparative study of communication variables that influence interaction between persons of different social groups.

**EDU 402 Foundations of Counseling Services (3.0); 3 cr.** Studies the philosophy, theory, organization and administration of school and agency counseling services.

**EDU 411 Early Childhood Education (3.0); 3 cr.** Investigates the significance of early childhood years (0-8) in the education of children. A comparative study is made of early childhood education in Lebanon.

**EDU 412 Gender and Human Interaction (3.0); 3 cr.** Examines gender and communication and the relationship of gender to self-disclosure, self assertion, listening and empathy.

**EDU 413 Early Childhood General Health, Nutrition and Safety (3.0); 3 cr.** Investigates effective techniques for dealing with health, safety and nutrition in early childhood education.

**EDU 414 Writing Styles and Textual Analysis (3.0); 3 cr.** Surveys a variety of writing styles. It aims to develop the students' ability to write and analyze texts based on content and style. (In Arabic)

**EDU 420 Crisis Intervention (3.0); 3 cr.** Examines the crisis intervention services in community health, mental health, substances misuse, and child welfare.

**EDU 421 Children at Risk (3.0); 3 cr.** Identifies potential risks to which children may be exposed. Also shows how the teacher, school and community can cooperate with child to foster a positive sense of worth and ability.

**EDU 422 Learning and Behavioral Difficulties (3.0); 3 cr.** Presents adaptive teaching/learning procedures. Also prescribes instructional strategies and techniques.

**EDU 430 Tests, Measurement and Evaluation: Elementary (3.0); 3 cr.** Critically examines the basic principles and techniques of testing and evaluation on the elementary level. *Corequisite:* EDU 350.

**EDU 431 Tests, Measurement and Evaluation in English (3.0); 3 cr.** A critical examination of the basic principles and techniques of testing and evaluation in English. *Corequisite:* EDU 351.

**EDU 432 Tests, Measurement and Evaluation in Mathematics (3.0); 3 cr.** Same as EDU 431 but relates to the testing of mathematics. *Corequisite:* EDU 352.

**EDU 433 Tests, Measurement and Evaluation in Science (3.0); 3 cr.** Same as EDU 431 but relates to the testing of science subjects. *Corequisite:* EDU 353.

**EDU 434 Tests, Measurement and Evaluation in Social Studies (3.0); 3 cr.** Same as EDU 431 but relates to the testing of social studies. *Corequisite:* EDU 354.

**EDU 438 Tests, Measurement and Evaluation in Arabic (3.0); 3 cr.** Same as EDU 431 but relates to the testing of Arabic language.

**EDU 450 Law and the Disabled (3.0); 3 cr.** Discusses relevant laws pertaining to the disabled.

**EDU 451 Clinical Assessment in the School (3.0); 3 cr.** Studies the nature of psychological tests, standardization procedures, and types of scales and scores.

**EDU 460 Elementary Teaching Practicum I (1.2); 3 cr.** Guided and supervised practice in the application of elementary level teaching methods. Part I. *Corequisite:* EDU 430.

**EDU 461 English Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of English. Part I. *Corequisite:* EDU 431.

**EDU 462 Mathematics Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of mathematics. Part I. *Corequisite:* EDU 432.

**EDU 463 Science Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of science subjects. Part I. *Corequisite:* EDU 433

**EDU 464 Social Studies Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of social studies. Part I. *Corequisite:* EDU 434.

**EDU 465 Early Childhood Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but deals with teaching on the early childhood level. Part I. *Corequisite:* EDU 430.

**EDU 466 Teaching of the Disabled Practicum I (1.2); 3 cr.** Same as EDU 460 but deals with the teaching of the handicapped. Part I. *Corequisite:* EDU 356.

**EDU 468 Arabic Teaching Practicum I (1.2); 3 cr.** Same as EDU 460 but involves the teaching of the Arabic language.

**EDU 470 Elementary Teaching Practicum II (1.2); 3 cr.** Similar to EDU 460. Part II. *Corequisite:* EDU 460.

**EDU 471 English Teaching Practicum II (1.2); 3 cr.** Similar to EDU 461. Part II. *Corequisite:* EDU 461.

**EDU 472 Mathematics Teaching Practicum II (1.2); 3 cr.** Similar to EDU 462. Part II. *Corequisite:* EDU 462.

**EDU 473 Science Teaching Practicum II (1.2); 3 cr.** Similar to EDU 463. Part II. *Corequisite:* EDU 463.

**EDU 474 Social Studies Teaching Practicum II (1.2); 3 cr.** Similar to EDU 464. Part II. *Corequisite:* EDU 464.

**EDU 475 Early Childhood Teaching Practicum II (1.2); 3 cr.** Similar to EDU 465. Part II. *Corequisite:* EDU 465.

**EDU 476 Teaching of the Disabled Practicum II (1.2); 3 cr.** Similar to EDU 466. Part II. *Corequisite:* EDU 466.

**EDU 477 Practicum in Teaching Arabic (3.0); 3 cr.** Aims to develop students' ability not only to develop lesson plans but also to follow them across all school levels. (In Arabic)

**EDU 478 Arabic Teaching Practicum II (1.2); 3 cr.** Similar to EDU 468 Part II. *Corequisite:* EDU 468.

**EDU 480 Elementary Teaching Internship (1.0); 1 cr.** The student will choose a pedagogical issue, discuss its treatment/application in schools and present a written report.

**EDU 481 English Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of English as a foreign language.

**EDU 482 Mathematics Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of mathematics.

**EDU 483 Science Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of science subjects.

**EDU 484 Social Studies Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of social studies.

**EDU 485 Early Childhood Teaching Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on early childhood.

**EDU 486 Teaching of the Disabled Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on the teaching of the handicapped.

**EDU 487 Counseling and Guidance Internship (1.0); 1 cr.** Same as EDU 480 but with emphasis on counseling and guidance.

**EDU 488 Arabic Teaching Internship (3.0); 3 cr.** Same as EDU 480 but with emphasis on the teaching of Arabic.

---

## The Degree of Bachelor of Arts in Physical Education and Sport

The B.A. in Physical Education and Sport is designed to meet the needs of those who plan on pursuing careers as teachers, coaches, or trainers. Students majoring in Physical Education and Sport must also study for their Teaching Diploma (TD) in Physical Education. The B.A. in Physical Education will increase students' theoretical knowledge, develop students' practical skills in various sports activities, including sports required in international baccalaureate programs, instill a commitment to health and fitness, and prepare students to practice their skills and compete in the job market.

- Students must either pass PES 321 before taking major elective courses or register concurrently in PES 321 and other major elective courses;
- Courses are part lecture and part activity.

### Graduation Requirements

To graduate, students must successfully complete a total of 120 credits with a minimum overall GPA of 2.0/4.0 and a minimum average of 2.4/4.0 in the core and major requirements.

#### Degree Requirements (120 credits: Major courses 99 cr. & - TD 21 cr.)

<b>General Education Requirements:</b>	<b>30 cr.</b>
<b>Core Requirements</b> PES 204, PES 205, PES 250, PES 301, PES 321, PES 354, PES 358, PES 420, PES 421, PES 422, PES 426, PES 462, PES 492	<b>33 cr.</b>
<b>Major Electives</b> <ul style="list-style-type: none"><li>▪ 6 courses from the following pool: PES 326, PES 327, PES 328, PES 329, PES 330, PES 331, PES 332, PES 347</li><li>▪ 10 courses from the following pool: PES 322, PES 333, PES 334, PES 335, PES 336, PES 337, PES 338, PES 339, PES 340, PES 341, PES 342</li></ul>	<b>32 cr.</b>
<b>Free Electives</b>	<b>4 cr.</b>
<b>Teaching Diploma</b>	<b>21 cr.</b>

## **Minor in Physical Education and Sport (15 credits)**

The DETE currently offers a B.A. in Physical Education and Sports as well as a Teaching Diploma in the same field. A minor in PES offers students a basic understanding of major concepts in PES through classroom and field courses. PES is a domain which brings together sport science courses as well as courses whose objective it is to encourage physical fitness and wellness in others.

### **Curriculum Requirements:**

Students enrolled in the Physical Education Minor must complete **15 credits** of PES courses as follows:

PES 204 Foundations of Physical Education (3.0); 3 cr.  
PES 321 Physical Exercise (2.0); 2 cr.

#### **One 3-credit course**

PES 301 Anatomical Kinesiology (3.0); 3 cr.

**OR**

PES 358 Physiology of Exercise (3.0); 3 cr.

#### **One 3-credit course**

PES 421 Coaching (3.0); 3cr.

**OR**

PES 422 Biomechanics (3.0); 3 cr.

#### **One course from the pool of courses (individual sports) (2.0); 2 cr.**

PES 333 Swimming I; PES 322 Dancing; PES 335 Track and Field I; PES 336 Track and Field II; PES 337 Track and Field III; PES 329 Tennis; PES 330 Badminton; PES 331 Table Tennis;  
PES 332 Weight-lifting; PES 338 Combat Sports I; PES 339 Combat Sports II; PES 340 Gymnastics I

#### **One course from a pool of courses (team sports) (2.0); 2 cr.**

PES 326 Basketball; PES 327 Volleyball; PES 328 Football; PES 347 Handball

---

## Undergraduate Courses: Physical Education and Sport

**PES 204 Foundations of Physical Education (3.0); 3 cr.** This course examines the historical, philosophical, and sociological foundations of sport and serves as an introduction to the physical education, exercise and sport-related fields. The course will also incorporate contemporary trends and issues. This course should be taken during the first academic year.

**PES 205 Physical Therapy & Athletic Injuries (3.0); 3 cr.** The student will learn a wide variety of rehabilitation and physical therapy techniques in relation to injuries associated with sports activities, their prevention and care. The material will also cover basic first aid and CPR.

**PES 250 Motor Development & Motor Learning (3.0); 3 cr.** This course explores specific principles of learning and the control of movement and motor skills. Students will also study the neurophysiological activation of muscles, reflexes, etc. during movement.

**PES 301 Anatomical Kinesiology (3.0); 3 cr.** An understanding of human anatomy and basic mechanical principles related to efficient movement

**PES 311 Basketball (1.0); 1 cr.** Basic skills, rules, refereeing, training - theory and practice.

**PES 312 Volleyball (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 313 Football (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 314 Handball (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 315 Tennis (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 316 Racquet Sports (1.0); 1 cr.** (squash, table-tennis, badminton) basic skills, rules, refereeing, training - theory and practice.

**PES 317 Tae-Kwon-Do (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 318 Swimming (2.0); 2 cr.** Basic swimming strokes, diving, and swimming competitions.

**PES 319 Judo (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 320 Water-Polo (1.0); 1 cr.** Basic skills, refereeing, training - theory and practice.

**PES 321 Physical Exercise (2.0); 2 cr.** (Aerobics, stretching, etc.) basic skills, rules, training - theory and practice.

**PES 322 Dancing (2.0); 2 cr.** Beginning skills in dance techniques - classical and modern.

**PES 323 Weight-lifting (1.0); 1 cr.** Basic skills, rules, refereeing, training - theory and practice.

**PES 324 Track & Field (2.0); 2 cr.** Basic skills, refereeing, training - theory and practice.

**PES 325 Gymnastics (1.0); 1 cr.** Fundamentals of various types of gymnastics for men and women (classical and rhythmic).

**PES 326 Basketball (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching basketball, the rules, and refereeing.

**PES 327 Volleyball (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching volleyball, the rules, and refereeing.

**PES 328 Football (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching football, the rules, and refereeing.

**PES 329 Tennis (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching tennis, the rules, and refereeing.

**PES 330 Badminton (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching badminton, the rules, and refereeing.

**PES 331 Table Tennis (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching table tennis, the rules, and refereeing.

**PES 332 Weight-Lifting (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching weight-lifting and the rules.

**PES 333 Swimming I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching the different strokes (freestyle, backstroke, crawl), the rules, and refereeing.

**PES 334 Swimming II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching the different strokes (breaststroke, butterfly), the rules, and refereeing. *Prerequisite:* PES 333

**PES 335 Track and Field I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching running (sprint, 100m, 200m, endurance, etc.), the rules, and refereeing.

**PES 336 Track and Field II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching jumping (long jump, high jump, etc.), the rules, and refereeing.

**PES 337 Track and Field III (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching throwing (discus, shot-put, javelin, etc.), the rules, and refereeing.

**PES 338 Combat Sports I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching combat sports (Striking: Tae-Kwon-Do, Karate, etc.), the rules, and refereeing.

**PES 339 Combat Sports II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and

acquisition of techniques of teaching combat sports (Grappling: Wrestling, Judo, etc.), the rules, and refereeing.

**PES 340 Gymnastics I (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching gymnastics (floor techniques), the rules, and refereeing.

**PES 341 Gymnastics II (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching gymnastics (apparatus techniques), the rules, and refereeing. *Prerequisite:* PES 340

**PES 342 Winter Sports (2.0); 2cr.** Emphasis is placed on the development of fundamental skills and acquisition of techniques of teaching skiing and snowboarding. This is an accelerated course that will take place during the winter season over the course of a specific number of trips to ski resorts for intensive practical sessions. Priority is given to Physical Education majors.

**PES 343 Pilates and Yoga (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of the fundamental skills of Pilates and Yoga and the techniques of teaching them. Pilates will focus on increasing breathing capacity and improving postural alignment through simultaneous stretching and strengthening movements. Hatha Yoga is a vigorous cardiovascular workout which increases strength, flexibility, balance, conditioning, and endurance.

**PES 344 Cardio Fitness and Toning (2.0); 2cr.** This course is designed primarily for physical education majors. Emphasis is placed on the development of fundamental skills in cardiovascular workouts and acquisition of techniques of teaching. The course combines aerobic activities with muscle toning strength movements. Instruction will include the safe and effective use of fitness apparatus including, bench step, physio balls, resistance bands and hand weights.

**PES 345 Chess (1.0); 1 cr.** This course is designed to help students engage in cognitive processing mechanisms, and accordingly develop competence in the logical thinking needed to play chess.

**PES 346 Lifeguard Training (2.0); 2 cr.** This course introduces and develops skills and knowledge necessary to prepare individuals for lifeguard responsibilities. It teaches students to prevent, recognize, and respond to aquatic-related emergencies. Teaching methodology includes lectures, demonstrations, and instructional video with hands-on training and practice. Pre-requisite: Students must pass a swimming test.

**PES 347 Handball (2.0); 2 cr.** This course will provide the basic skills of team handball including fundamental strategies and rules. The course is also designed to provide physical education students with teaching skills and methods necessary for the instruction of handball. For Physical Education majors.

**PES 348 Basic Life Support and First Aid (2.0); 2 cr.** This course trains students in Basic Life Support skills and first aid care according to International Red Cross standards. It combines lectures and demonstrations with hands-on training and practice. Focus will be on bone fractures, joint dislocations, ligament sprains, muscle strain, major wounds, burns, basic airway management, bleeding control, and spinal dislocation.

**PES 354 Athletic Fitness Training (3.0); 3 cr.** This comprehensive course is designed to provide the student with the knowledge and skills needed to develop fitness programs for competitive athletes in different sports. The course focuses on advanced topics in training the aerobic and anaerobic systems, developing strength and power, planning and periodization, in addition to topics in sports nutrition and exercise physiology.

**PES 355 Methods in PE (3.0); 3 cr.** Planning, strategies, techniques, and methods of teaching PE.

**PES 358 Physiology of Exercise (3.0); 3 cr.** Physiological changes that occur as a result of exercise and work.

**PES 420 Theory of Fitness Coaching (3.0): 3 cr.** This course incorporates the basic components of fitness and wellness in order to better understand human health and well-being. Students will learn to design, implement and

evaluate personal fitness and wellness programs. Topics covered will include incorporating exercise into every lifestyle including youth, the elderly, expecting mothers. In addition, nutrition, weight management and stress management will be studied. The latest fitness and wellness research will also be analyzed and interpreted. *Prerequisite:* PES 358

**PES 421 Coaching (3.0); 3 cr.** Leadership, supervision, democracy and behavior in sports; also methods of coaching.

**PES 422 Biomechanics (3.0); 3 cr.** Improved teaching/coaching through biomechanical and anatomical analyses of sports and related activities.

**PES 424 Therapeutic Use of Exercise (3.0); 3 cr.** How to use exercise in physical therapy.

**PES 426 Adapted Physical Fitness (3.0): 3 cr.** Designed to promote knowledge and understanding of the needs and abilities of the special student in addition to the procedures and responsibilities of physical education for the special student. Emphasis will be placed on the development of methods to competently modify physical activities to suit students with various individual needs. *Corequisite:* PES 358.

**PES 430 Evaluation of PE (3.0); 3 cr.** Nature and use of a variety of tests - practical application and interpretation of results.

**PES 461 Teaching Practicum Elementary (3.0); 3 cr.** Application of PE and Sport methods in elementary schools.

**PES 462 Teaching Practicum Secondary (1.2); 3 cr.** Application of Physical education and sport methods in secondary schools. Aims at preparing candidates to address the requirements, needs, and issues in the physical education of secondary school pupils. The course will provide hands-on experience, observed and evaluated by the course instructor. *Prerequisite:* PES 461

**PES 492 Internship (1.0): 1 cr.** Supervised, practical experience in teaching physical education activities or with approved professionals in select athletic training settings. Student must submit final report. *Prerequisite:* Senior standing and department chair approval.

## The Degree of Bachelor of Arts in English Language

The B.A. in English Language:

- helps students obtain that mastery of the English language which is now necessary in most non-teaching careers;
- provides the necessary background required by those who intend to engage in teaching English language and/or literature; and
- prepares students to pursue graduate studies in language and/or literature.

### Graduation Requirements

Students majoring in English must successfully complete a total of 102 credits with an overall GPA of at least 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements. A minimum grade of “C” is required in ENL 213 and ENL 223.

### Degree Requirements (102 credits)

#### General Education Requirements

**33 cr.**

English students may not take LIR 214 to satisfy the GER requirement.

#### Core Requirements

**48 cr.**

ENL 301, ENL 311, ENL 312, ENL 313, ENL 314, ENL 316, ENL 415, ENL 416, LIR 214, LIR 215, LIR 216, LIR 217, LIR 305, LIR 306, LIR 315, LIR 316

#### Major Requirements from the following pool

**15 cr.**

ENL 315, ENL 317, ENL 321, ENL 322, ENL 324, ENL 411, ENL 412, ENL 413, ENL 414, ENL 417, ENL 421, ENL 430, LIR 323, LIR 324, LIR 325, LIR 411, LIR 412, LIR 421, LIR 422, LIR 423, LIR 424, LIR 425, LIR 426, LIR 427, LIR 428, LIR 430

#### Free Electives

**6 cr.**

---

### Minor in English (18 credits)

Students minoring in English must successfully complete a total of 18 credits with a minimum average of 2.0/4.0 in the minor courses. Students must earn a “B” or higher in ENL 213 to be eligible to register for English minor courses.

#### Option I: Language (18 cr.)

ENL 301

9 credits at the 300-level

6 credits at the 400-level

#### Option II: Literature (18 cr.)

LIR 214

3 credits at the 200-level

12 credits at the 300 and 400-levels

---

## Undergraduate Courses: English

**ENL 002 Intensive English II (12.0); 0 cr.** Designed to improve the students' level of English and to prepare for University. Emphasis on reading, writing, speaking and grammar. Students who score a "B" or above may register for ENL 110. Passing Grade is "C".

**ENL 105 College English I (5.0); 5 cr.** This course places emphasis on listening, speaking, reading, and writing skills that will enable students to succeed in other courses offered at NDU. The passing grade for this course (non-credit carrying) is C. Students who earn a "B" or above may register directly in ENL 213.

**ENL 110 College English II (3.0); 3 cr.** This course bridges the gaps for those students who need to reinforce the basic skills taught in ENL 105 in order to succeed in sophomore-level university courses. Emphasis is on consolidating research techniques and further development of academic reading and writing skills. The passing grade for this course (non-credit carrying) is "C". *Corequisite:* ENL 105 or Placement.

**ENL 111 Public Speaking (3.0); 3 cr.** Introduces Freshman students to the art of public speaking and communication in the English language. Emphasizes personal experience, informative and persuasive speaking. The course also aims to prepare for a successful transition into academic life. For Freshman students.

**ENL 213 Sophomore English Rhetoric (3.0); 3 cr.** Aims at developing the use of logic and reasoning in argumentation. A properly documented critical paper is required *Prerequisite:* ENL 105 or ENL 110 or placement.

**ENL 223 Communication Arts (3.0); 3 cr.** Designed to introduce the student to the art and science of speech making and communicating with others. *Corequisite:* ENL 213

**ENL 230 English in the Workplace (3.0); 3 cr.** Provides students with the practical technical skills required for professional communication. *Corequisite:* ENL 213.

**ENL 301 Introduction to the Study of Language (3.0); 3 cr.** An introduction to the study of language; its nature, structure, and development. *Corequisite:* ENL 213.

**ENL 311 Phonetics (3.0); 3 cr.** Study of articulatory phonetics with emphasis on English

sound systems. Practice in phonetic transcription. *Corequisite:* ENL 301.

**ENL 312 Morphology (3.0); 3 cr.** Word formation and the attempts to formulate a theory of word structure. *Corequisite:* ENL 301.

**ENL 313 Syntax (3.0); 3 cr.** Analysis of phrase and sentence structure in English and their immediate constituents and types. *Corequisite:* ENL 312.

**ENL 314 English Vocabulary (3.0); 3 cr.** A detailed study of meaning relationships, with a study of borrowings from other languages. *Corequisite:* ENL 312.

**ENL 315 Transformational Grammar (3.0); 3 cr.** Involves students in solving exercises in a transformational generative syntax of English. Chomsky's grammar models are included. *Corequisite:* ENL 313.

**ENL 316 Fundamentals of Discourse Analysis (3.0); 3 cr.** Aims at introducing students to the different structural and communicative levels of discourse: textual organization (reference, cohesion, coherence, etc.), shared beliefs (presupposition, implicature, given-new information structure, etc.) and conversational analysis (turn-taking, interruptions, etc.). *Prerequisite:* ENL 301.

**ENL 317 Language Acquisition Theories (3.0); 3 cr.** Studies the process by which language develops in humans. Theories concerning first language acquisition as well as second language acquisition are discussed.

**ENL 321 Semiotics (3.0); 3 cr.** A study of the various patterns of bodily activities, and/or gestures which different English speaking communities systematically use in order to communicate.

**ENL 322 Language and Culture (3.0); 3 cr.** A study of cultural matter i.e. customs, traditions, ways of thinking, taboos, etc. which influence 'meaning' in language use.

**ENL 324 Creative Writing (3.0); 3 cr.** A course in creative writing through practical experiment, discussion, and stylistic study of models. Students will practice various writing genres. *Corequisite:* ENL 213

**ENL 411 History of the English Language (3.0); 3 cr.** A study of the major phonological,

syntactic and lexical developments since 9<sup>th</sup> century. *Corequisite*: ENL 314.

**ENL 412 Phonology (3.0); 3 cr.** Studies phonological theory development. Emphasizes generative phonology of English. *Corequisite*: ENL 311.

**ENL 413 Advanced English Grammar (3.0); 3 cr.** Study of English grammar as dealt with by the traditional grammarians. *Corequisite*: ENL 313.

**ENL 414 Sociolinguistics I (3.0); 3 cr.** Treats language as a social phenomenon. Linguistic variations, social, and contextual factors are studied. *Corequisite*: ENL 314.

**ENL 415 Applied Linguistics (3.0); 3 cr.** Studies the application of modern linguistics to teaching. Includes contrastive analysis between English and Arabic and error analysis. *Corequisite*: ENL 314.

**ENL 416 Language Theories (3.0); 3 cr.** Studies the historical development of linguistic

theory with a critical analysis of the competing theories of language. *Corequisite*: ENL 411.

**ENL 417 Introduction to Critical Linguistics (3.0); 3 cr.** Looks at language from a functional systemic perspective. It utilizes linguistic techniques (tense, reference, deixis, transitivity, voice, theta roles, modality, etc.) in order to uncover implicit ideologies inherent in texts. Texts covered include scientific, religious, literary, political, and advertising texts. *Prerequisite*: ENL 301

**ENL 421 Varieties of English (3.0); 3 cr.** A systematic analysis of the major features/characteristics of the different 'styles' of English, i.e. commercial, scientific, legal, etc.

**ENL 430 Special Topics in Linguistics (3.0); 3 cr.** Investigation of special topics of current interest in Linguistics. May be repeated for credit with change of topic. *Prerequisite*: ENL 301.

---

## Undergraduate Courses: Languages

**CHI 201 Basic Chinese (3.0); 3 cr.** This course introduces students to basic Chinese conversation. Students practice everyday situations and learn how to read elementary Chinese. At the end of the course students will be able to give oral summaries.

**CHI 202 Intermediate Chinese (3.0); 3 cr.** This course is a continuation of Chinese 201. Emphasis is on improving conversational Chinese in addition to reading and writing.

**FRC 105 Freshman French I (3.0); 3 cr.** This course introduces the student to basic spoken and written French. Students will practice conversation on subjects of a daily nature. They will read and write on an elementary level. This course is designed for students who have no previous knowledge of the French language. For beginners only.

**FRC 110 Freshman French II (3.0); 3 cr.** This is an intermediate-level course in which students will improve their ability to hold conversations in French. They will read and write on an intermediate level; they will write paragraphs; summarizing and paraphrasing will also be practiced. Pre-requisite: placement test.**FRC 222 Sophomore French I (3.0); 3 cr.** Emphasizes writing critical analysis, and argumentation.

**FRC 222 Sophomore French I (3.0); 3 cr.** Refines the students' ability to write in French. Critical analysis, and argumentation will be practiced.

**FRC 223 Sophomore French II (3.0); 3 cr.** Emphasizes fluency in French. Students will present both extemporaneous and prepared speeches.

**FRC 231 French for Business (3.0); 3 cr.** This course aims to prepare students with a French education to work in a career setting which uses the French language as its language of correspondence and negotiation. Students will practice both oral skills of business presentations

and the written skills of report writing, resumé preparation, external and internal business correspondence. An aptitude test is obligatory before the "drop and add period."

**GEM 201 German I (3.0); 3 cr.** Practice in basic spoken German.

**GEM 202 German II (3.0); 3 cr.** Continuation of GEM 201. Emphasis on writing and reading.

**ITL 101 Introduction to Italian (3.0); 3 cr.** This course introduces the students to basic spoken and written Italian. Students will practice conversation on subjects of daily interest. They will read and write at the elementary level. For freshman students only.

**ITL 201 Italian I (3.0); 3 cr.** Practice in basic spoken Italian.

**ITL 202 Italian II (3.0); 3 cr.** Continuation of ITL 201. Emphasis on writing and reading

**LTN 201 Latin I (3.0); 3 cr.** Explanation of the different characteristics of the Latin language.

**LTN 202 Latin II (3.0); 3 cr.** Continuation of LTN 201. Emphasis on writing and reading.

**SPA 101 Introduction to Spanish (3.0); 3 cr.** This course introduces Freshman students to the Spanish language and civilization. Students will practice speaking, reading, and writing. Emphasis will be developing the ability to communicate with Spanish-speaker. For Freshman students.

**SPA 201 Spanish I (3.0); 3 cr.** Practice in basic spoken Spanish.

**SPA 202 Spanish II (3.0); 3 cr.** Continuation of SPA 201. Emphasis on writing and reading.

**SYR 201 Syriac I (3.0); 3 cr.** This course introduces students to the Syriac Language.

---

## Undergraduate Courses: Literature

**LIR 101 Introduction to Literature in English (3.0); 3 cr.** This introductory course is aimed at providing freshman students with an opportunity to appreciate literature and improve their English communication skills. Students will study significant literary genres, including fiction, poetry, and drama. Material covered will be representative of pre-Modern, Modern and Post-Modern literature originally written in English, and will include Women's, Children's, and Minority literature. For Freshman students.

**LIR 214 Introduction to Literary Genres (3.0); 3 cr.** Studies the essential features of poetry, fiction, and drama. Selections include representative texts by British, Irish, and American literary figures. *Corequisite:* ENL 213.

**LIR 215 Introduction to Literary Criticism (3.0); 3 cr.** Presents the basic principles of literary criticism from its beginnings with Plato to the end of the 19th century. *Corequisite:* ENL 213

**LIR 216 English Literature to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** Surveys the literary currents and movements of poetry and prose, excluding fiction and drama, from the Anglo-Saxon period to the end of the 19th century. *Corequisite:* ENL 213

**LIR 217 American Literature to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** Studies major American authors and movements from the Colonial period to the end of the 19th century. *Corequisite:* ENL 213

**LIR 305 Novel to the End of the 19<sup>th</sup> Century (3.0); 3 cr.** A study of the development of the novel to 1900. Selections will include representative novels by Defoe, Richardson, Austin, Dickens, the Bronte sisters, Eliot, and Hardy.

**LIR 306 Drama to the End of the 18<sup>th</sup> Century (3.0); 3 cr.** A study of the development of drama from its origins to 1800. Selections will include major representative works.

**LIR 315 Modern and Contemporary Novel (3.0); 3 cr.** Presents the major works of British and American novelists of the 20th century. Contemporary authors are emphasized.

**LIR 316 Lebanese Writers (3.0); 3 cr.** Studies major Lebanese writers and their impact on both the East and the West with emphasis on Lebanese immigrant literature.

**LIR 323 Orientalism and Post-Colonial Studies (3.0); 3 cr.** Defines Orientalism and Post-Colonialism, and traces their germination and development.

**LIR 324 Modern and Contemporary Poetry (3.0); 3 cr.** Presents the major works of British and American poets of the 20th and 21st centuries. Contemporary authors are emphasized.

**LIR 325 Science Fiction (3.0); 3cr.** Envisioning the advances of science through the exercise of creative imagination, this course on science fiction traces the evolution of its dominant themes, metaphors, and techniques, and its cultural significance. Material covered includes written text, film, and digital representations.

**LIR 411 Shakespeare (3.0); 3 cr.** Studies the major dramatic works of Shakespeare and his contemporaries.

**LIR 412 Modern and Contemporary Drama (3.0); 3 cr.** Presents the major works of British and American playwrights of the 20th and 21st centuries. Contemporary authors are emphasized. *Prerequisites:* LIR 214 and LIR 215.

**LIR 421 Modern and Contemporary Critical Theory (3.0); 3 cr.** Presents the major developments of modern and contemporary critical theory from its beginnings with Formalism, passing by New Criticism and Structuralism, to the latest developments in Post-Structuralist theory. Latest trends are stressed. *Prerequisites:* LIR 214 and LIR 215.

**LIR 422 Urban Studies [“The City as Literary Artefact”] (3.0); 3 cr.** Studies the representation of the city as literary artefact based on literary and critical theory paradigms. *Corequisite:* LIR 421

**LIR 423 Film and Media Studies (3.0); 3 cr.** Presents the juncture between literary theory and the latest developments in film and media studies. *Prerequisites:* LIR 214 and LIR 215

**LIR 424 Gender Studies (3.0); 3 cr.** Traces themes of gender in literature through the prism of a critical theory that addresses the feminine and masculine.

**LIR 425 Women Writers (3.0); 3 cr.** Studies the ways female writers have contributed to, challenged, and reshaped the literary tradition. Traces women writers' choice of themes and genres, the relationship between expectations for women writers and readers and what women wrote, and the changing social role of the woman author writing for herself and for others across several centuries of cultural change.

**LIR 426 World Literature (3.0); 3 cr.** This course is a critical study of world masterpieces in translation.

**LIR 427 Marketing Literature: The Best-Seller (3.0); 3 cr.** Literature as marketed through various institutions such as book prizes,

media advertising, reviews, and the role of critical assessment in the formation of canons and counter-canons are explored in connection with the phenomenon of the best-seller. Questions such as how and why best-sellers are produced, and how they influence and shape the existing narrative discourse are raised.

**LIR 428 Travel Literature (3.0); 3 cr.** This course explores the germination and development of travel writing and its influence on cross-cultural awareness; representations of discourse, landscape, and ethnicity; and movements across cultural landscapes through narratives embodied in novels, explorer journals, travelogues, and others.

**LIR 430 Special Topics in Literature (3.0); 3 cr.** Explores particular authors, topics, themes in depth. May be repeated for credit with change of topic. *Prerequisites:* LIR 214 and LIR 215.

---

## **The Degree of Bachelor of Arts in Translation and Interpretation**

The purpose of the B.A. in Translation and Interpretation is to prepare expert translators and interpreters to meet the present and future demands of translation in the fields of law, economics, politics, diplomacy, the humanities, media, and the arts.

The program is designed to refine students' linguistic skills in Arabic, English, and French. In this program, Arabic and English are the principal languages of translation.

Special skills include:

- Developing verbal and written messages;
- Developing proficiency in speech delivery with accurate pronunciation, intonation, tempo, and rhythm;
- Acquiring the latest methods of translation, summary, reporting, analysis, and interpreting;
- Integrating knowledge and experience in the use of modern translation and interpreting equipment and technology; and
- Developing intellectual and cultural formation.

Students may choose to emphasize either Translation or Interpretation. Once admitted to the program students are required to develop competence in the three languages: English, Arabic, and French. Students may be required to take remedial courses in these languages in which a "C" or above is required.

### **Graduation Requirements**

Students majoring in Translation and Interpretation must successfully complete a total of 108 credits with a minimum gradepoint average of 2.0/4.0 and a minimum average of 2.0/4.0 in the major requirements including the emphasis area.

### **Degree Requirements – Translation and Interpretation Emphasis (108 credits)**

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Core Requirements</b> ENL 314, TRA 201, TRA 211, TRA 212, TRA 301, TRA 302, TRA 311, TRA 312, TRA 331, TRA 401, TRA 402, TRA 403, TRA 413, TRA 421, TRA 422, INT 431, INT 432, ARB 302	<b>55 cr.</b>
<b>Translation Emphasis Requirements</b> TRA 431, TRA 432, TRA 440, TRA 480	<b>13 cr.</b>
<b>Interpretation Emphasis Requirements</b> INT 434, INT 437, INT 438, INT 439, INT 440, INT 480	<b>16 cr.</b>
<b>Electives</b> Translation Emphasis	<b>7 cr.</b>
Interpretation Emphasis	<b>4 cr.</b>

---

## Minor in Translation (16 credits)

Students minoring in Translation must successfully complete a total of 16 credits with a minimum average of 2.0/4.0 in the minor courses. Students in this minor would choose between two language options: Arabic/ English or Arabic/French. Students must earn a “B” or higher in the Arabic and French Assessment Exams and in ENL 213.

### Option I: Arabic/English (16 cr.)

TRA 201 Translation Theory and Methodology (3 cr.)

TRA 211 Translation of English Contemporary Texts (3 cr.)

TRA 301 Translation of English Documents (4 cr.)

TRA 331 Mechanical Translation (3 cr.)

TRA 401 Translation of English Business Texts (3 cr.)

### Option II: Arabic/French (16 cr.)

TRA 201 Translation Theory and Methodology (3 cr.)

TRA 212 Translation of French Contemporary Texts (3 cr.)

TRA 302 Translation of French Documents (4 cr.)

TRA 331 Mechanical Translation (3 cr.)

TRA 402 Translation of French Business Texts (3 cr.)

---

## Undergraduate Courses: Interpretation

**INT 431 Interpreting: English- French-Arabic I (3.0); 3 cr.** Aims to help students develop competence in consecutive interpretation needed at international conferences. Students learn the principles of consecutive interpretation and practice the basic skills. General themes are covered. Accuracy is emphasized. *Prerequisite:* TRA 421.

**INT 432 Interpreting: English- French-Arabic II (3.0); 3 cr.** Aims to help students develop competence in consecutive interpretation needed at international conferences. Students practice the basic skills. Themes related to the United Nations are covered. Accuracy is emphasized. *Prerequisite:* TRA 422

**INT 433 Interpreting: French-English I (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Students practice the basic skills needed for competence. Correct language is emphasized. General themes are covered. *Prerequisites:* INT 431 or INT 432.

**INT 434 Interpreting: English-Arabic II (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Students practice on specialized texts in economic, political science, and humanities. *Prerequisite:* INT 431.

**INT 435 Interpreting: French-Arabic II (3.0); 3 cr.** Aims to help students develop competence

in simultaneous interpretation needed at international congresses. Students practice on technical texts. *Prerequisite:* INT 432.

**INT 436 Interpreting: French-English II (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Students practice on technical texts. *Prerequisite:* INT 433.

**INT 437 Interpreting: Arabic-English I (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Correct language is emphasized. General themes are covered. Accuracy is emphasized. Students spend time both in class and in the booth. *Prerequisite:* INT 431.

**INT 438 Interpreting: Arabic-English II (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Students practice on specialized tests in economics, political science, humanities. Students spend time both in class and in the booth. *Prerequisite:* INT 437.

**INT 439 Interpreting: English-Arabic III (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Technical texts are covered. Students spend time both in class and in the booth. *Prerequisite:* INT 434.

**INT 440 Interpreting: Arabic-English III (3.0); 3 cr.** Aims to help students develop competence in simultaneous interpretation needed at international conferences. Technical texts are covered. Students spend time both in class and in the booth. *Prerequisite:* INT 438.

**INT 480 Interpreter Internship;(1.0); 1 cr.** Practical training in a professional setting at conferences using simultaneous interpretation supervised by the instructor. *Prerequisite:* INT 433.

---

### Undergraduate Courses: Translation

**TRA 201 Translation Theory and Methodology (3.0); 3 cr.** Provides students with a firm foundation of both translation and methodology. Students will study the major contributors to translation theory and will practice translation using the various methodologies.

**TRA 211 Translation of English Contemporary Texts (3.0); 3 cr.** Familiarizes students with different genres and contemporary literature English/Arabic. Students will be required to begin to develop a personal lexicon. *Corequisite:* TRA 201.

**TRA 212 Translation of French Contemporary Texts (3.0); 3 cr.** Familiarizes students with different genres and features of contemporary literature. Students will be required to begin develop a personal lexicon. French/Arabic. *Corequisite:* TRA 201.

**TRA 301 Translation of English Documents (3.2); 4 cr.** Develops competence in translating official, legal, and judicial English/Arabic texts. Emphasis is on United Nations documents. Basic research and translation of data will be covered. Students will be exposed to UN agencies; guest speakers and field trips will be required. *Corequisite:* TRA 212.

**TRA 302 Translation of French Documents (3.2); 4 cr.** Trains students in translating official, legal, and judicial French/Arabic texts. United Nations documents area emphasized. Students will be exposed to UN agencies; guest speakers and field trips will be required. *Prerequisite:* TRA 212.

**TRA 311 Translation of English Legal Documents (4.0); 4 cr.** Trains students in interpreting and translating English and Arabic texts which cover diverse areas of law. English/American legal system will be studied. Students will carry out basic comparative research on both systems. *Prerequisite:* TRA 301.

**TRA 312 Translation of French Legal Documents (4.0); 4 cr.** Trains students in interpreting and translating French and Arabic texts which cover diverse areas of law. Students will carry out basic comparative research on French and Lebanese systems of law. *Prerequisite:* TRA 302.

**TRA 331 Mechanical Translation and Interpretation (3.0); 3 cr.** Use of modern equipment in the field of translation and interpretation. *Prerequisites:* TRA 301 and TRA 302.

**TRA 401 Translation of English Business Texts (3.0); 3 cr.** Aims to train students in interpreting and translating English and Arabic texts which cover diverse areas of business, economics, accounting, banking. *Prerequisite:* TRA 301.

**TRA 402 Translation of French Business Texts (3.0); 3 cr.** Trains students in interpreting and translating French and Arabic texts which cover diverse areas of business, economics, accounting, banking. *Prerequisite:* TRA 302.

**TRA 403 Translation Practicum (3.0); 3 cr.** Offers intensive practice in translating contemporary English into French and vice versa. *Prerequisite:* TRA 402.

**TRA 413 Translation of English and French Films (2.0); 2cr.** Focuses on the translation of the literature and language (English, French and Arabic) of motion pictures and television. Students will learn the software required for subtitling. Field visits to television stations will be organized. *Prerequisite:* TRA 301.

**TRA 421 Translation of English Literature (2.0); 2 cr.** Offers intensive practice in translating English literary and artistic texts into Arabic. *Prerequisite:* TRA 301.

**TRA 422 Translation of French Literature (2.0); 2 cr.** Offers intensive practice in translating French literary and artistic texts into Arabic. *Prerequisite:* TRA 302.

**TRA 431 Translation of Cultural Texts I (4.0); 4 cr.** Focuses on intensive practice in translating Arabic cultural texts (historical, religious, philosophical, political, and contemporary ) into English and vice versa. *Corequisite:* TRA 421.

**TRA 432 Translation of Cultural Texts II (4.0); 4 cr.** Focuses on intensive practice in translating Arabic cultural texts (historical, religious, philosophical, political and

contemporary) into French and vice versa. *Corequisite:* TRA 422.

**TRA 440 Translation of Scientific and Medical Texts (4.0); 4 cr.** . Trains students in translating English French and Arabic texts which cover diverse areas of Science and Medicine. *Prerequisites:* TRA 401- TRA 402.

**TRA 480 Translation Internship (1.0); 1 cr.** Practical training in a professional setting supervised by the instructor. *Corequisite:* TRA 422.

## **The Degree of Master of Arts in English Language and Literature**

### **Literature Emphasis**

The M.A. in English Language and Literature, Literature Emphasis, is intended to crystallize students' expertise in English studies and to augment their exposure to contextual areas of the discipline. The techniques and fields of research are set to provide students with opportunities either to pursue further graduate studies or engage in research or teaching.

### **Graduation Requirements**

To satisfy the requirements for the Master of Arts in English Language and Literature Emphasis, the student must complete 36 credits with an overall average of 3.0/4.0 including submitting and defending a thesis. Over and above these requirements, a candidate must take a three non-credit course in a second European language. Students may be exempted from this requirement if they:

1. Sit for a proficiency test in the second European language and score 500 or above or
2. Submit proof of proficiency certificate from an acknowledged institute of education

### **Major Requirements**

ENL 601, LIR 605, LIR 662, LIR 699

**15 cr.**

### **Electives**

Students may select electives from the following:

LIR 604, LIR 606, LIR 607, LIR 608, LIR 609, LIR 610, LIR 612, LIR 613,  
LIR 615, LIR 616, LIR 617, LIR 618, LIR 619, LIR 620, LIR 626, LIR 627,  
LIR 628, LIR 629, LIR 630, LIR 634, LIR 635, LIR 636, LIR 637, LIR 640,  
LIR 682

**21 cr.**

---

## Graduate Courses: English Language and Literature, Literature Emphasis

**LIR 604 Literature and War in the 20<sup>th</sup> and 21<sup>st</sup> Centuries (3.0); 3 cr.** This course will explore contemporary literature that responds to and depicts war and violence including the World Wars, the Vietnam War, the Lebanese Civil War, the Palestinian/Israeli crisis and the Iraq War among others. The objective of this course is to explore the modalities of war and violence in a range of forms and contexts and the role they play in the construction/reconstruction of subjectivities and narratives. Writers will include Kurt Vonnegut, Virginia Woolf, Tim O'Brien, Ghada Al-Samman, Nuha Al-Radi, René Girard, Elaine Scarry and others.

**LIR 605 Critical/Literary Theory (3.0); 3 cr.** A major course which lays the ground for advanced interpretative studies and skills, Critical/Literary Theory addresses contemporary critical issues dealing with the ways in which literary texts are read in the context of an increasingly rich and complex multi-cultural and multi-disciplinary world.

**LIR 608 Feminist Literary Criticism (3.0); 3 cr.** This course will examine the ways in which developments in feminist criticism reflect trends in mainstream contemporary literature and culture. Topics studied may include Feminism and Colonialism, Feminism and Psychoanalysis, French Feminism, Marxist Feminism, and Eco-Feminism and writers will include Hélène Cixous, Julia Kristeva, Judith Butler, Luce Irigaray, Donna Haraway, Caroline Marchant, and Simone de Beauvoir.

**LIR 609 Postmodernism and Beyond: The Rise and Fall of Theory (3.0); 3 cr.** Postmodernism has been hailed as one of the most significant transformations in the interpretative history of humanity, and a body of principles and practices, known as "Theory," has stormed academia since the last quarter of the twentieth century. The most notable theoreticians of this peculiar interest have been centered mainly in Europe but also in the United States. Yet, at the beginning of the third millennium, voices have been raised against what is perceived as the hegemony of "theory," and attempts are being made, on the one hand, to break the dictatorship of postmodernist thought and, on the other hand, to delineate the features of the new age. Theorists include J. Hillis Miller,

Terry Eagleton, Fredric Jameson, Umberto Eco, and others.

**LIR 610 Postcolonial Discontents (3.0); 3 cr.** "What is English about English literature?" writes Salman Rushdie, effectively giving voice to a primary theme and preoccupation of postcolonial literary theory. In this course we will read both postcolonial theory and postcolonial literatures, so as to gain some appreciation of these forms of writing and critical inquiry. Novels include Malouf's *An Imaginary Life*, Harris' *Palace of the Peacock*, Rhys' *Wide Sargasso Sea*, Conrad's *Lord Jim*, Morrison's *Beloved*.

**LIR 613 Advanced Shakespearean Studies (3.0); 3 cr.** This advanced course deals with the latest trends in Shakespearean studies and criticism, such as playwrighting, theater, and performance.

**LIR 616 Romantic Narrative Poetry: A Seminar (3.0); 3 cr.** The course studies the Romantics' long narrative poetic works. It explores romantic narrative poetry as a reflection of the romantics' concern in the hero as a person of magnitude facing the mystifying and incomprehensible or as a common person living the tragic events of everyday life. The course pays particular attention to long narrative poetry as a replacement for the epic. Texts include: Wordsworth's *The Prelude*, *The Ruined Cottage*, and *Michael*, Coleridge's *Christabel* and *The Rime of the Ancient Mariner*, Byron's *Don Juan* and *Childe Harold's Pilgrimage*, Shelley's *Alastor* and *Epipsychidion*, and Keats's *Endymion*, *Isabella*, and *Hyperion*.

**LIR 617 Identity Through Writing: Women Writers of the Arab World (3.0); 3 cr.** This course will examine how Arab women have articulated and expressed their subjectivity, responded to cultural, social, political and familial demands and created a literary and feminist aesthetic. Authors include Naomi Shihab Nye, Ahdaf Soueif, Evelyne Accad, Etel Adnan, Margot Badran, Fadia Faqir, and Diana Abu-Jaber.

**LIR 618 Representations of the City in 20<sup>th</sup>-Century American Fiction (3.0); 3 cr.** The city has been, since Theodore Dreiser's *Sister Carrie*, one of the important loci of American fiction. As the city landscape developed, the

relationship between city-dwellers and their urban practices has evolved and produced a narrative which attempts to fictionalize the experience of living and moving in the city, as well as inscribing the self in the frame of the emerging polis. Authors include Thomas Pynchon, Paul Auster, Don DeLillo, Steven Millhauser, E.L. Doctorow, and others.

**LIR 619 Seductive Identifications (3.0); 3 cr.** Multicultural or ethnic minority literature has come to be recognized as an important aspect of the cultural landscapes of Australia, Canada, and the United States. In this course we will read both creative and critical literatures in English that define specific sites of multicultural engagement. Readings include Castro's *Birds of Passage*, Haikal's *Seducing Mr Maclean*, Kureishi's *The Buddha of Suburbia*, and the poetry of Antigone Kefala.

**LIR 620 Lord Byron and the Orient: A Seminar (3.0); 3 cr.** The course is an in-depth study of the Oriental peoples, cultures, traditions, sites, climates, themes, and colorings of Lord Byron's Eastern Tales: *The Bride of Abydos*, *The Giaour*, *The Corsair*, and *Siege of Corinth*. Short selections of other major works like *Lara*, *Childe Harold's Pilgrimage*, and *Don Juan*, which allude to the Orient, will be studied as well. Students will investigate Byron's Oriental scholarship and his authenticity in representing the various elements of the East.

**LIR 626 Visual Storytelling(3.0); 3 cr.** An unexplored literary genre, the graphic novel provides a unique interplay of words and images whereby the narrative is relayed through words accompanied by illustrative art. The course will examine the link between visuality and narrativity and will focus on meaning, agency, representation, semiotics, and myth. Students will study the evolution of the genre, its structure, language and impact on today's readers. Authors might include the Pulitzer-Prize winner Art Spiegelman, Raymond Briggs, R. Crumb, Marjane Satrapi, Paul Auster, Jean Baudrillard, Walter Benjamin, and Roland Barthes.

**LIR 627 Re-Creations of the Industrialized Past and Visions of the Virtual Future: The Influence of Steampunk and Cyberpunk (3.0); 3 cr.** The last two decades of the twentieth century have been marked by unprecedented advances in science, and fiction has been quick to incorporate the findings of what is called the "New Technologies" into its narrative

representations of the nature of reality, society, and the individual. Recreated memories of an advanced past and visions of a dystopian future, and imagined virtual worlds challenging our notions of what reality is, have been the centerpiece of the two new genres of steampunk and cyberpunk. The works of Bruce Bethke, William Gibson, Bruce Sterling, Pat Cadigan, Neal Stephenson, Jeff Noon, Greg Bear, and others are included.

**LIR 629 Ameen Rihani and Kahlil Gibran: A Seminar (3.0); 3 cr.** The course studies the English works of the Lebanese-American writers Ameen Rihani and Kahlil Gibran. Emphasis will be on *The Book of Khalid* and *The Prophet* and their enormous influence on building bridges between the East and the West. Those and other works like Rihani's essays and Gibran's prophetic narratives, which have become so well known and studied in the curricula of world universities, will be studied as advancing East-West cross-cultural integration.

**LIR 630 Contemporary Voices in Exile (3.0); 3 cr.** What is the relationship between exile and literary creativity? Does exile contribute to creative freedom or entrap the writer in nostalgia? Why do some writers choose to write in the language of their adopted country? The condition of exile has produced a distinctive literary voice where the dilemmas of language, identity, politics and diaspora are examined. This course will examine the effects of such dilemmas on writers living and writing in exile. Authors may include Amine Maalouf, Hanif Kureishi, Andrea Levy, Miroslav Jancic, Samuel Beckett, Salman Rushdie, Etel Adnan, Vladimir Nabokov and Chinua Achebe.

**LIR 635 Out-Posting Empire (3.0); 3 cr.** The works of Edward Said, Homi Bhabha and Gayatri Spivak among others, study postcolonial criticism of imperial culture. In this course we will trace the trajectory of their works. Some of the themes covered are: critique of textualism, engagement with the work of Foucault, and intellectual vocation.

**LIR 636 Western Images of the East (3.0); 3 cr.** This course studies the major Western figures, literary ones, artists, travelers, scientists, explorers, and so on, who projected the image of the East in their literary and scholarly works and in their travelogues and documents. Students study particularly, but not exclusively, Orientalists like Sir William Jones, Simon Ockley, Sir Henry Holland, Lady Mary Wortley

Montagu, Sir Richard Burton, Godfrey Higgins, John Lewis Burckhardt, Eugene Delacroix, and others.

**LIR 637 From Modernism to Postmodernism: Readings in 20<sup>th</sup> Century British and American Fiction (3.0); 3 cr.** This course explores the ways in which British and American fiction have developed between the first and second halves of the twentieth century. The passage from modernism to postmodernism has been most obvious in literary discourse and the study of British and American narratives in these two periods will help not only understand this epochal shift in consciousness but will also place these narratives in their social and cultural frame. Authors include Anthony Burgess, John

Fowles, Kurt Vonnegut, Norman Mailer, Thomas Pynchon, and others.

**LIR 640 Selected Topics and/or Figures (3.0); 3 cr.** This course aims at accommodating the students' particular research interests.

**LIR 662 World Literature (3.0); 3 cr.** A study of major literary works by non-Anglo-Saxon authors.

**LIR 682 Seminar in Selected Topics (3.0); 3 cr.** An in-depth analysis of selected topics and themes as delineated in literature.

**LIR 699 Thesis 6 cr.** The research for the master thesis must show the student's proficiency in approved topics in literature.

---

## **The Degree of Master of Arts in English Language and Literature**

### **Applied Linguistics and TEFL Emphasis**

The M.A. in English Language and Literature, Applied Linguistics and TEFL emphasis is designed to help students develop language teaching competence. Holders of the degree may choose to move on to careers such as lecturers in teacher training colleges, advisors in ministries of education, specialist inspectors, heads of departments, syllabus designers, materials and test writers etc. Others may wish to pursue further graduate studies and make a significant contribution to advanced research work.

### **Admission Requirements**

Preference is given to applicants with additional qualifications and professional experience (teaching). Applicants must provide evidence of a high level of proficiency in English before their application can be considered; a minimum of 600 in the EET (English Entrance Test) is required for admission. For those who take the GRE (Graduate Record Exam), proof of a satisfactory performance is required.

### **Graduation Requirements**

To satisfy the requirements for the M.A. in English Language and Literature, Applied Linguistics and TEFL emphasis, the student must complete a total of 36 credits with an overall average of 3.0/4.0 including submitting and defending a thesis.

### **Major Requirements**

These consist of the following: ENL 601, ENL 602, ENL 612, ENL 613, ENL 623, ENL 631, ENL 699

**24 cr.**

### **Electives**

Students may select electives from the following: ENL 611, ENL 621, ENL 622, ENL 624, ENL 632, ENL 633, ENL 641, EDU 681, EDU 682, EDU 683, EDU 684

**12 cr.**

---

## Graduate Courses: English Language and Literature Applied Linguistics and TEFL Emphasis

**ENL 601 Bibliography and Methodology of Research (3.0); 3 cr.** Studies the materials, tools, and methods of research.

**ENL 602 Intro. to Applied Linguistics and Lang. (3.0); 3 cr.** Introduces the fundamental concepts of language learning, and teaching.

**ENL 603 Linguistics (3.0); 3 cr.** A study of major trends and methodologies in linguistics.

**ENL 611 Analytical English Grammar (3.0); 3 cr.** Analyzes the problems of teaching grammar in light of current developments in the field.

**ENL 612 Psycholinguistics (3.0); 3 cr.** Emphasizes learners' strategies L1 and L2 acquisition and motivation.

**ENL 613 Sociolinguistics II (3.0); 3 cr.** Studies the links between sociolinguistic theory and L2 acquisition.

**ENL 621 Arabic Linguistics and Sociolinguistics (3.0); 3 cr.** Emphasizes Arabic phonology, semantics, and syntax as well as language varieties in the Lebanese community.

**ENL 622 Contrastive Analysis and Error Analysis (3.0); 3 cr.** A classroom-based study of L1 (Arabic) and L2 (English) along with detailed analysis of Lebanese learners' errors.

**ENL 623 Language Teaching Methodology (3.0); 3 cr.** Relates language-teaching theory to teaching aural/oral reading and writing skills. *Corequisites:* ENL 612, ENL 613.

**ENL 624 Discourse Analysis (3.0); 3 cr.** Emphasizes text analysis in order to produce relevant teaching material.

**ENL 631 Measurement and Evaluation (3.0); 3 cr.** Investigates linguistic tests and measurements and emphasizes test evaluation.

**ENL 632 Syllabus and Materials Design (3.0); 3 cr.** Studies syllabus design; EAP and ESP course designs are stressed. *Corequisite:* ENL 623

**ENL 633 Data Processing in L2 Teaching (3.0); 3 cr.** Emphasizes the use and design of computer programming for L2 learning.

**ENL 641 Field Methodology (3.0); 3 cr.** Considers the theory and practice of training teachers of English as a foreign or second language. *Prerequisite:* ENL 623.

**ENL 699 Thesis 6 cr.** Research for the master's thesis must show the student's proficiency in approved topics in applied linguistics.

---

## The Degree of Master of Arts in Education

The degree of Master of Education is offered to promote educational professionalism and to enhance the University's role in the field of education. The M.A. program concentrates on three areas: Special Education, School Management and Educational Leadership, and Educational Technology. The general educational objective of the program to better serve the community is met by offering necessary specializations and pioneering programs.

### Admission Requirements:

Candidates are expected to have completed the degree of Bachelor of Education, Bachelor of Arts in Education, or Bachelor of Arts with a Teaching Diploma from an accredited university. Candidates holding the degree of Bachelor of Arts or Sciences in a related field from an accredited university will be considered on an individual basis, pending the decision of the Department concerning special admission conditions.

### Graduation Requirements:

To satisfy the requirements for the degree of Master of Arts in Education, the student must complete a total of 36 credits with an overall average of 3.0/4.0, inclusive of a thesis.

### Degree Requirements (36 credits)

#### Major Requirements 15 cr.

Complete the following required courses:

EDU 610, EDU 611, EDU 622, EDU 699

#### Electives 12 cr.

Four out of the following courses

EDU 612, EDU 613, EDU 614, EDU 621, EDU 623, EDU 624.

#### Concentration Areas: 9 cr.

**1. Special Education:** The Special Education concentration prepares educators to work with students with special needs. The program emphasizes interaction between students, teacher, and school administrations.

- Three from the following courses: EDU 641, EDU 642, EDU 643, EDU 644

**2. School Management and Educational Leadership:** Educators who wish to pursue a career in school administration will be exposed to best practice in policy making, leadership skills, law and methodology.

- Three from the following courses: EDU 651, EDU 652, EDU 653, EDU 654

**3. Educational Technology:** Educators interested in applying modern technology to the classroom will benefit from this concentration. Courses focus on practical application of technology to enhance student learning.

- Three from the following courses: EDU 661, EDU 662, EDU 663, EDU 664

---

## The Degree of Master of Arts in Education - School Leaders' Option

The Professional degree of Master of Arts in Education is offered in the field of Educational Leadership to candidates who are presently working in the educational administrative domain as school principals, coordinators, department heads, or other positions of leadership.

### Admission Requirements

This program will consider applicants who have a minimum of three years of school administrative experience.

### **Graduation Requirements**

To satisfy the requirements for a Professional Master of Arts in Education, the student must complete a total of 33 credits with an overall average of 3.0/4.0.

### **Required Courses**

EDU 610, EDU 611, EDU 612, EDU 614, EDU 621, EDU 623, EDU 624, EDU 651, EDU 652, EDU 653, EDU 654

---

## **Graduate Courses: Education**

**EDU 610 Educational Research Methods (3.0); 3cr.** This course presents key concepts and issues in statistics and their use in educational research, including descriptive and inferential research. Both qualitative and quantitative research methodologies will be explored in relation to improving educational programming. Particular emphasis will be placed on developing skills in applying research to educational decision-making, including conducting needs assessment and analyzing, interpreting, and communicating educational data.

**EDU 611 Educational Models and Curriculum Design (3.0); 3cr.** This course introduces procedures and plans which incorporate social, political, economic, intellectual, and other values in determining what to include in a curriculum. It also examines the question concerning the nature and history of the "curriculum" concept by looking at both the content and pedagogy of important curriculums employed in the Ancient and Medieval worlds.

**EDU 612 Ethics and Politics in Education (3.0); 3cr.** This course addresses the inevitable tension that exists in education between the realm of politics and the realm of ethics. It examines concepts of power and communication especially as these relate to pressure groups and advisory bodies. The course seeks to overcome this tension by helping students to understand how it is possible to both ethical and politically astute at the same time. *Corequisite:* EDU 610

**EDU 614 Technology and Education (3.0); 3 cr.** This course emphasizes the impact of technology on the total school environment. Students critically analyze the role of technology in instruction and develop strategies for infusing technological resources into the curriculum and

the classroom, to improve the teaching-learning process. *Corequisite:* EDU 610

**EDU 621 Advanced Educational Psychology (3.0); 3cr.** This course presents an in-depth study in advanced psychological theories of learning and the relationship between the theories and instructional strategies. *Corequisite:* EDU 610

**EDU 622 Comparative Education (3.0); 3cr.** This course analyses educational systems as related to values and cultures; compares the Lebanese educational system to other Arab, European, and American systems.

**EDU 623 Advanced Educational Measurement (3.0); 3cr.** This course provides an advanced theoretical and practical training in techniques of test construction, evaluation and standardization, validation, reliability, item analysis, norm setting, criterion referencing, selection and interpretation of standardized tests. *Corequisite:* EDU 610

**EDU 624 Advanced Methodology (3.0); 3cr.** This course presents an in-depth analysis of current methods and techniques of instruction. *Corequisite:* EDU 610

**EDU 641 Special Education: Issues and Trends (3.0); 3cr.** This course attempts to define both the concept and practice of "special education" by examining its history and evolution in education. It analyzes the contemporary issues and trends in special education and critically examines many of the major "special education" categories.

**EDU 642 Special Education: Assessment and Treatment (3.0); 3cr.** This course focuses on traditional and contemporary methods of assessment and treatment as related to the standard categories of "special education".

**EDU 643 Motivation in Special Education (3.0); 3 cr.** This course examines motivational strategies that help to improve self-image, and that enhance learning and the desire to achieve. Examines motivational strategies regarding self-image, achievement, and the learning process.

**EDU 644 The Special Student and The Regular Classroom (3.0); 3cr.** This course studies ways of providing foundations for educational partnerships between regular and special educators/students. Examines some of the most recent and innovative methods used to meet the needs of special students.

**EDU 651 Leadership for School Improvement (3.0); 3cr.** This course defines leadership skills and abilities and develops the dynamics of team functioning, decision-making, problem-solving communicating, and self-improvement.

**EDU 652 Instructional Management and its Evaluation (3.0); 3cr.** This course studies the management and evaluation of instruction; emphasizes the use of systemic management and evaluation models by teachers.

**EDU 653 Administrative Leadership Skills (3.0); 3cr.** This course studies the theory of leadership in the different contexts of public and private schools.

**EDU 654 School Business Management and Facilities (3.0); 3cr.** This course presents guiding principles for developing financial programs. Studies sources of revenue and the management of school funds and facilities.

**EDU 661 Technology-Oriented Instructional Materials (3.0); 3 cr.** This course examines the production of instructional materials using technology as a tool. It uses basic and advanced techniques, materials and mechanics to accomplish such production.

**EDU 662 Issues and Implications of Telecommunications in Education (3.0); 3 cr.** This course focuses on creating virtual entities, developing a sense of community using online tools, the developing communication

infrastructure. Looks into how new technologies affect pupils in the school, the home, and the future job market. Studies the computer as a communication tool, whether online or offline, and looks into the advantages and disadvantages of utilizing this tool in the modern classroom.

**EDU 663 Developing Multimedia Productions (3.0); 3cr.** This course presents elements of instructional design and storyboarding techniques to translate instruction into various types of multimedia presentation. Improves skills, knowledge, and creativity used in video production. Assists students to plan, write, produce, and edit for educational and informational productions. Students discuss the potential, limitations, and techniques for effectively using the television, radio, distance learning, telecommunications, and interactive video.

**EDU 664 Information Retrieval Through Technology (3.0); 3cr.** This course develops search strategies and uses information retrieval technology to access sources. Focuses on developing media center retrieval systems.

**EDU 681 Seminar in Teaching Reading (3.0); 3 cr.** Recent trends and research in teaching reading to L2 learners are treated. *Prerequisite:* ENL 623.

**EDU 682 Seminar in Teaching Writing and Composition (3.0); 3 cr.** Recent trends and research in teaching writing to L2 learners. *Prerequisite:* ENL 623.

**EDU 683 Seminar in Teaching Literature (3.0); 3 cr.** Recent trends and research in teaching literature to L2 learners. *Prerequisite:* ENL 623.

**EDU 684 Seminar in Teaching ESP Courses (3.0); 3 cr.** Recent trends and research in teaching English for professional learner purposes to L2 learners. *Prerequisite:* ENL 623

**EDU 699 Thesis 6cr.** This course researches an issue directly related to the field of concentration with a fieldwork study

---

## The Degree of Master of Arts in Translation

The M.A. in Translation aims at further equipping the students with increased competence and expertise in the areas of translation and interpretation. It also prepares graduate students for further academic studies at the doctoral level.

The program serves the needs and the career goals of those already working in the field who may want to upgrade their knowledge in these areas.

### Admission Requirements

M.A. candidates must pass a written language proficiency test in French and Arabic. A grade of 70 or above is required in both exams. In addition, an interview in English, French, and Arabic is also required. If only a small deficiency in one of the three languages is detected, remedial courses will be required during the first semester. A “B” grade must be obtained in the remedial courses.

### Graduation Requirements

To satisfy the requirements for a Master of Arts in Translation/Interpretation, the student must complete 36 credits inclusive of thesis for the Translation emphasis with an over-all average of 3.0/4.0.

### Degree Requirements (36 credits)

#### Translation Emphasis

##### Major Requirements 24 cr.

TRA 610, TRA 620 or TRA 621, TRA 622, TRA 630, TRA 690, ENL 601

Plus

**8 credits** from the following pool: TRA 631, TRA 632, TRA 633, TRA 634, TRA 635, TRA 636, TRA 637, TRA 638, TRA 639

##### Electives 6 cr

Choose 2 from the following: ENL 611, LIR 605, LIR 662, IAF 641, IAF 621, IAF 605, INT 610, or any two 600 level Courses.

##### Thesis 6 cr

TRA 699 Thesis

#### Interpretation Emphasis

##### Major Requirements 30 cr.

Complete the following required courses: TRA 610, TRA 620, TRA 621, TRA 622, TRA 630, INT 610, INT 620, INT 621, INT 622

##### Electives 6 cr.

Choose 2 of the following: ENL 611, LIR 601, LIR 662, or any two 600 level BAD, COA or IAF courses.

---

## Graduate Courses: Translation

**INT 610 Consecutive and "A Vue" Translation ARB/ENL/FRC(3.0); 3 cr.** An advanced course with emphasis on language use.

**INT 620 Conference I ARB/ENL (4.0); 4 cr.** An advanced course with emphasis on U.N. agencies, education and development texts.

**INT 621 Conference II ARB/FRC (4.0); 4 cr.** Terminology and intensive practice in all aspects of medical translation and relevant scientific concepts.

**INT 622 Conference III ARB/ENL (4.0); 4 cr.** Terminology and intensive practice in science and technology related to Middle East development.

**TRA 610 Advanced English Writing (3.0); 3 cr.** Fine points of English writing including: clarity, accuracy style, proofreading and revision. It also a very useful resource to develop the practical writing skills to a very advanced level. This course builds upon the skills acquired in "English Writing Skills" to further develop students' critical thinking and academic writing competencies. The course devotes a good part of the semester to the skills of writing summaries, critiques, and syntheses; paraphrasing and using quotations. It then leads students through the process of writing a research paper.

**TRA 620 Linguistics for Translation Students (3.0); 3 cr.** This course familiarizes students with the problems of linguistic specificity and translation. The nature and structure of language, its role in society, the theory and methods of linguistics: phonology, syntax, semantics and lexicon as applied in translation.

**TRA 621 Comparative Stylistics for Translation (3.0); 3 cr.** Presentation and analysis of texts related to interlinguistic transfer. Intensive workshop approach treating both English/Arabic and French/Arabic texts. This translation-oriented contrastive grammatical and stylistic analysis of Arabic, French, English is extensively exemplified by expressions, phrases and whole texts combining descriptions with methodological guidelines for translation.

**TRA 622 Terminology ARB/ENL /FRC(3.0); 3 cr.** History of Terminology. The terminologist's task. Terminology's research methods. Use of documentation.

Practical work in term research and subject field research. Intensive workshop approach treating both English, French and Arabic texts.

**TRA 630 Computer Assisted Translation(3.0); 3 cr.** Computer aids for translation, desktop publishing, terminology management. Machine and machine-assisted translation. This course introduces students to Computer Assisted Translation (CAT) (highlighting its success and failure in comparison to human translation. In a first part, the course trains the students in the practical use of the computer assisted translation focusing on the problems, difficulties, advantages and shortcomings of this type of activity. In a second part, students are introduced to the latest translation software\* and how to use them. The advantages as well as the limitations of such programmes are discussed with a special reference to the translation of scientific and literary texts.

**TRA 631 Advanced Translation of Literature ARB/ENL (3.0); 3 cr.** Study and analysis of translated works. Translation into Arabic of a work, which was not previously translated. We focus on how we read and understand literature; how reading and writing literature influence identity, meaning and value; and how to develop strategies for reading, discussing, and writing about literary works in order to translate literary work properly.

**TRA 632 Advanced Translation of Literature ARB/FRC (3.0); 3 cr.** Study and analysis of translated works. Translation into Arabic of a work which was not previously translated. We focus on how we read and understand literature; how reading and writing literature influence identity, meaning and value; and how to develop strategies for reading, discussing, and writing about literary works in order to translate literary work properly.

**TRA 633 Advanced Legal Translation ARB/ENL (2.0); 2 cr.** Translation of highly specialized legal texts. Students gain an introduction to the theory and practice of Legal Translation, including the legal knowledge needed to make well-founded choices while translating. Furthermore, they are aware of the challenges involved in this particular area of specialist translation. Finally, students improve their translation skills and are able to use

appropriate terminology to discuss problems they encounter.

**TRA 634 Advanced Legal Translation ARB/FRC (2.0); 2 cr.** Translation of highly specialized legal texts. Students gain an introduction to the theory and practice of Legal Translation, including the legal knowledge needed to make well-founded choices while translating. Furthermore, they are aware of the challenges involved in this particular area of specialist translation. Finally, students improve their translation skills and are able to use.

**TRA 635 Advanced Business & Economic Texts ARB/ENL (2.0); 2 cr.** Translation of highly specialized business, economic, and administrative texts. Familiarize the student with current business practices, i.e., determining fees and negotiating contracts.

**TRA 636 Advanced Business & Economic Texts ARB/FRC (2.0); 2 cr.** Translation of highly specialized business, economic, and administrative texts. Familiarize the student with current business practices, i.e., determining fees and negotiating contracts.

**TRA 637 Advanced Medical Translation ARB/FRC/ENL (2.0); 2 cr.** Medical terminology and phraseology which would allow the translator to correctly translate medical texts. Relevant basic scientific concepts. Practice in translation in such areas as medical, pharmaceutical, communications, and science textbooks. Development of specialized glossaries in English, French & Arabic.

**TRA 638 Advanced Translation of Media ARB/ENL (2.0); 2 cr.** Translation of various

genres of media. This course introduces students to the linguistic varieties used in various media. It aims to develop a reasonable command of the language of media. It also offers students the opportunity to develop an understanding of cultural differences between English and Arabic and how to tackle them when translating. Translation strategies and media skills are given a reasonable emphasis.

**TRA 639 Advanced Translation of Media ARB/FRC (2.0); 2 cr.** Translation of various genres of media. Translation of various genres of media. This course introduces students to the linguistic varieties used in various media. It aims to develop a reasonable command of the language of media. It also offers students the opportunity to develop an understanding of cultural differences between English and Arabic and how to tackle them when translating. Translation strategies and media skills are given a reasonable emphasis.

**TRA 690 Internship (1.0); 1 cr.** A supervised practicum designed to allow students to put their knowledge of translation and terminology to work in an actual translation service, mainly, in a business firm, social service agency, or government office. Weekly discussions of specific texts and problems arising from the field work experience. Supplementary written and laboratory assignments.

**TRA 699 Thesis (6.0); 6 cr.** Research for the master's thesis must show the student's proficiency in approved topics in translation science.

---

**Doctor of Education (Ed. D.) in collaboration with Saint Louis University, USA**

NDU offers an Ed.D in collaboration with Saint Louis University, USA.

The program is made up of 44 credit hours, including two obligatory pre-requisite courses. Students go through the 3-year program as a cohort.

**Admission Requirements**

This program will consider applicants who have an M.A. in Education, or in a related field and who have experience in teaching. Students must submit their files to the NDU Admissions Office.

**Graduation Requirements**

To satisfy the requirements for an Ed.D, students must complete 44 credits with a 3.0 GPA, sit for written comprehensive exams, an oral examination, and complete and defend a doctoral project.

**Major Requirements**

EDU 615, EDU 620, EDU 601, EDU 616, EDU 619, EDU 630, EDU 639, EDU 640, EDU 647, EDU 650, EDU 655, EDU 656, EDU 673, EDU 685, EDU 697, EDU 698.

---

## Graduate Doctor of Education Courses (Ed.D )

### Pre-requisite Courses:

**EDU 615 Introduction to Inferential Statistics (3.0); 3 cr.** Survey of basic statistical methods including descriptive statistics, z and t test of means and proportions, chi-square analyses, correlation and regression analyses. Intended as a terminal course for upper division undergraduates and as a background course for graduate level courses in the program. **RMG 410 (SLU)**

**EDU 620 General Research Methods (3.0); 3 cr.** Prerequisite: REMET 410 or an equivalent introductory inferential statistics course. Survey of the techniques, methods and tools of research in the behavioral sciences and social sciences. General discussion of the research process followed by examination of several different study designs such as observational, experimental, descriptive and sample survey. Overview of different methods of data collection and analysis frequently used in research literature. **RMG 520 (SLU)**

### Program Course of Studies:

**EDU 601 Doctoral Residency (0.0); 0 cr.** Student will research and proceed with data collection under the supervision of the advisor. **EDL 601 (SLU)**

**EDU 616 Politics of Education (3.0); 3 cr.** An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school in society. **EDL 614 (SLU)**

**EDU 619 School/Community Relations (3.0); 3 cr.** A study of the nature, scope, principles and practices of public relations including organization and administration. **EDL 520 (SLU)**

**EDU 630 School Law (2.0); 2 cr.** Detailed examination of school laws, legal research, analysis of selected cases. **EDL 630 (SLU)**

**EDU 639 Seminar: Gateway Leadership Conference (2.0); 2 cr.** Designed for advanced degree students who will select a problem in educational administration for intensive study under the direction of the professor. **EDL 639 (SLU)**

**EDU 640 Human Resources Administration (3.0); 3 cr.** An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation and supervision. **EDL 640 (SLU)**

**EDU 647 Planning School Facilities (3.0); 3 cr.** Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees, bonding, staffing and equipping buildings. **EDL 647 (SLU)**

**EDU 650 Managing the District Curriculum (3.0); 3 cr.** Practice in using the processes of curriculum development through examination of existing programs, developing new segments of curriculum, making curriculum guide revisions or structuring the process of revision. **EDL 645 (SLU)**

**EDU 655 School District Administration/Leadership (3.0); 3 credits** Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state and local relations in education; reality in school administration. **EDL 611 (SLU)**

**EDU 656 Ethics of School Leadership (3.0); 3 cr.** Course centers on identifying, and analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. **EDL 620 (SLU)**

**EDU 673 Staff Development and Evaluation (3.0); 3 cr.** This course considers the importance and difficulty of motivating educators to seek life long personal improvement as reflective professional practitioners. Strategies of adult motivation and techniques of adult behavioral change are studied. Current systems of staff evaluation are analyzed and specific evaluative techniques and methods are practiced. **EDL 573 (SLU)**

**EDU 685 Internship-Superintendent (4.0); 4 cr.** Candidates for the doctorate and specialist degrees in school administration are required to intern with a practicing school administrator for

one semester. Advance permission required. Work includes all administrative areas encompassed in the responsibility of the school superintendent. **EDL 584 (SLU)**

**EDU 697 Research Topics in Educational Administration (3.0); 3 cr.** Study of research

methods and design applicable to research in Educational Administration. **EDL 697 (SLU)**

**EDU 698 Project/Thesis Guidance (1.0); 1 cr.** Student will receive one on one guidance from the thesis advisor concerning the outcome of their research. **EDL 696 (SLU)**

## DEPARTMENT OF MASS COMMUNICATION

---

### Associate Professors

Ajami, Joseph; Fakh, Khalid; St. Pierre, James

### Assistant Professors

Bou Zeid, Maria ; Chidiac, May ; Donerian, Vatche

### Lecturers

Khabbaz, Nicolas; Lahoud, Sam (Chair); Mady, Christy

---

## The Degree of Bachelor of Arts in Advertising and Marketing

The advertising sequence prepares students for careers in account handling, media planning and management, and creative roles in advertising agencies, in-house advertising, and in the media. The program also incorporates principles of marketing, consumer behavior, promotional strategy, and other pertinent courses.

### Graduation Requirements

Students pursuing this major must complete a total of 102 credit hours with a minimum cumulative GPA of 2.3/4.0 in their core and major courses. These 102 credits are divided as follows:

#### Degree Requirements (102 credits)

#### General Education Requirements

**33 cr.**

1. COA courses listed in the Cultural Studies and Social Sciences category do not satisfy GER requirements for Mass Communication students. These courses must only be taken as core or major courses.
2. Mass Communication students may satisfy their Philosophy requirement by taking COA 360 Media Ethics.
3. Mass Communication students may satisfy 3 credits of their Citizenship requirements by taking COA 350 Current Issues.
4. Journalism students may not take COA 350 to satisfy a GER requirement.
5. Mass Communication students must take STA 202 to fulfill the 3-credit requirement in Science and Technology.

#### Core Requirements

**18 cr.**

COA 201, COA 223, COA 252, COA 359, COA 362, PDP 201,

#### Major Requirements

**38 cr.**

ADM 216, ADM 341, ADM 352, ADM 453, ADM 481, ADM 490, FDP 201, FDP 214, COA 270, COA 316, COA 475, MRK 201, MRK 311, MRK 321

Students must choose 9 credits from the following pool:

**9 cr.**

ADM 351, COA 275, COA 311, COA 315, COA 350, COA 352, COA 360, COA 365, COA 368, COA 369, COA 499, JOU 210, JOU 325, JOU 340, JOU 370, JOU 460, MRK 313, STA 206

#### Free Electives

**4 cr.**

## Minor in Advertising and Marketing (18 credits)

The NDU Minor in Advertising and Marketing is comprised of 18 credits. Any student may elect to do a Minor in this area provided that he/she is in good academic standing that is if he or she has a GPA of 2.0/4 and above. A student can only count up to six credits which he/she may have taken from the list of the required courses for this "Minor" prior to electing a "Minor" in Advertising and Marketing. Minors must be declared at least one year before expected graduation date.

### Courses required:

ADM 216 Principles of Advertising	(3 cr.)
ADM 341 Media Planning and Analysis	(3 cr.)
ADM 352 Creativity and Copywriting	(3 cr.)
FDP 214 Basic Design for Advertising	(3 cr.)

### And

MRK 311 Consumer Behavior	(3 cr.)
---------------------------	---------

### Or

MRK 321 Promotional Strategy	(3 cr.)
------------------------------	---------

### And

ADM 351 E-Commerce	(3 cr.)
--------------------	---------

### Or

ADM 453 Global Advertising	(3 cr.)
----------------------------	---------

---

## Undergraduate Courses: Advertising

### ADM 216 Principles of Advertising (3.0); 3 cr.

This course introduces the first year advertising student to the field of advertising and its relationship to marketing and mass media. Basic theories of advertising are studied. Elements of successful ads are also analyzed. Local, regional and world advertising agency structures are examined. *Prerequisite:* ENL 105

**ADM 341 Media Planning (3.0) 3 cr.** Role of media in achieving marketing and advertising objectives. Examines channels of communication. Students study the process of planning an advertising campaign. A complete campaign including budget, personnel and strategies is required for the course. *Prerequisite:* ADM 216; STA 202

**ADM 351 E-Commerce (3.0) 3cr.** The focus of this course is on today's electronic market environment. Students are to develop proficiencies in interactive business and communication technologies and must have access to an e-mail account.

**ADM 352 Creativity and Copywriting (3.0); 3 cr.** The course studies theory and application of

the creative side of advertising. Students practice the various principles through designing and executing print, electronic and outdoor advertising. In class peer evaluation and analysis of ads is carried out. *Prerequisite:* ADM 216.;*Corequisite:* FDP 214.

**ADM 453 Global Advertising (3.0); 3 cr.** This course analyzes the history, development and current status of international advertising based on the cultural, economic, political and linguistic characteristics of the countries studied. Students are required to develop an innovative project with an international dimension. Importance of diversity to global advertising is stressed. *Prerequisite:* ADM 352; COA 362.

**ADM 481 Internship in Advertising (1.0); 1 cr.** Supervised work in the "real" world of advertising and/or marketing. *Corequisite:* ADM 453.

**ADM 490 Senior Study in Advertising (3.0); 3 cr.** Involves the conceptualization of an advertising campaign for a "real" client. Includes an exit exam. *Prerequisite:* COA 362; ADM 453.

---

## The Degree of Bachelor of Arts in Communication Arts

### Journalism Emphasis

This sequence prepares students to become reporters in various print media outlets. Students will also augment their journalistic skills with a variety of public relations courses that will broaden their communication skills and improve their career opportunities in different organizational and professional settings. Students will practice and refine their writing, reporting, and other journalistic skills. Each student admitted to the B.A program in Communications Arts/ Journalism sequence as of Fall 2011 must follow the new contract sheet, which appears in this catalogue.

### Graduation Requirements

Once admitted to the program, students are required to develop competence in both Arabic and English. They must also complete an internship at one of the media outlets in the Lebanese market. Students pursuing this major must complete a total of 102 credit hours with a minimum cumulative GPA of 2.3 / 4.0 in their major requirements. These 102 credits are divided as follows:

### Degree Requirements (102 credits)

#### General Education Requirements:

**33 cr.**

1. COA courses listed in the Cultural Studies and Social Sciences category do not satisfy GER requirements for Mass Communication students. These courses must only be taken as core or major courses.
2. Mass Communication students may satisfy their Philosophy requirement by taking COA 360 Media Ethics.
3. Mass Communication students may satisfy 3 credits of their Citizenship requirements by taking COA 350 Current Issues.
4. Journalism students may not take COA 350 to satisfy a GER requirement.
5. Mass Communication students must take STA 202 to fulfill the 3-credit requirement in Science and Technology.

#### Core Requirements:

**18 cr.**

COA 201; COA 252; COA 352; COA 359; COA 362; PDP 201.

#### Major Requirements:

**33 cr.**

JOU 210; JOU 310; JOU 320; JOU 323; JOU 370; JOU 480; JOU 490; COA 426, ARB 302, ARB--, ENL--

Students must select 9 credits from the following pool:

**9 cr.**

JOU 325; JOU 333 JOU 340; JOU 369; JOU 460; COA 368; COA 415; COA 425; IAF 231

#### Free Electives:

**9 cr.**

## Minor in Journalism (18 cr.)

The NDU Minor in Journalism is comprised of 18 credits. Any student may elect to do a Minor in this area provided that he/she is in good academic standing that is if he or she has a GPA of 2.0/4 and above. A student can only count up to six credits which he/she may have taken from the list of the required courses for this "Minor" prior to electing a "Minor" in Journalism. Minors must be declared at least one year before expected graduation date.

### Courses required:

COA 201 Mass Media Essentials	(3 cr.)
JOU 210 Mass Media Language	(3 cr.)
JOU 310 News Writing and Reporting	(3 cr.)
JOU 370 Newspaper Production	(3 cr.)
JOU 320 Copyediting and Headline Writing	(3 cr.)
And <b>One course</b> from the following pool:	
COA 252 Principles of Public Relations	(3 cr.)
COA 350 Current Issues	(3 cr.)
COA 352 Censorship and Responsibility in Media and Film (Media Law)	(3 cr.)
COA 360 Media Ethics	(3 cr.)
COA 367 Foreign Correspondence	(3 cr.)
COA 415 Broadcast News Operations	(3 cr.)
JOU 323 Web Journalism	(3 cr.)
JOU 325 Photojournalism	(3 cr.)
JOU 340 PR Techniques	(3 cr.)
JOU 450 Specialized Journalism	(3 cr.)

---

## Undergraduate Courses: Communication Arts Journalism Emphasis

**JOU 210 Mass Media Language (3.0); 3 cr.** Mass Media language. (3.0); 3 cr. Principles of effective journalistic writing for mass media. Emphasis on writing basic news stories focusing on grammar, structure, and style. *Corequisite:* ARB 212 or ARB 231.

**JOU 310 News Writing and Reporting I (3.0); 3 cr.** News Writing and Reporting. (3.0) 3 cr. The course builds on principles practiced in JOU 210. Emphasis is laid on the process of information gathering, reporting and writing for the mass media. The course stresses the elements of news, leads, and styles of advanced news stories. Students practice interviewing techniques. *Prerequisite:* JOU 210.

**JOU 320 Copy Editing and Headline Writing. (3.0) 3 cr.** This course focuses on the headline writing and editing news in order to produce clear, accurate, and vivid copy. *Prerequisite:* JOU 310.

**JOU 323 Web Journalism (3.0) 3 cr.** Journalism in the internet age is studied in this course. Blogging, podcasting, and citizen journalism will be examined and practiced. *Prerequisite:* JOU 210.

**JOU 325 Photojournalism (3.0); 3 cr.** Photojournalism. (3.0) 3 cr. Role of the photographer as a communicator and a member of the editorial team. Students use cameras and software to produce photographs for print and digital media. Ethical, legal, and stylistic aspects of photos are discussed. *Prerequisite:* PDP 201.

**JOU 333 News Analysis and Editorial Writing (3.0); 3 cr..** Guidelines and practices in editorial and news analysis writing. *Prerequisite:* JOU 210.

**JOU 340 Public Relations Techniques (3.0); 3 cr.** Public Relations Techniques. (3.0). 3 cr. The

use of different communication tools in reaching public audiences. Analysis and production of print, electronic, and oral messages that will help achieve organizational goals. Students carry out public relations events following the principles used by professionals in the field. *Prerequisite:* COA 252.

**JOU 369 Special Topics in Journalism. (3.0) 3 cr.** Variable content on different issues not covered in specific courses in the curriculum. Topics may include: Sports Reporting; Foreign Correspondence; Impact of Social Media, environment, among others. *Prerequisites:* Junior standing

**JOU 370 Newspaper Production (3.0); 3 cr.** Newspaper Production. (3 .0). 3 cr. Students shall produce a campus publication in which they incorporate their acquired journalistic skills. Hands-on experience in writing, editing, and laying out features, photos, and other news stories. *Co-requisite:* JOU 310.

**JOU 450 Specialized Journalism (3.0); 3 cr.** Different areas of journalism such as foreign affairs, sports, life-style, environment, and others. In Arabic. *Prerequisite:* JOU 310.

**JOU 460 Case Studies in Public Relations (3.0); 3 cr.** Evaluation and analysis of PR campaigns in real-life situations. *Prerequisite:* COA 252.

**JOU 480 Journalism Internship (1.0); 1 cr.** Journalism Internship. (3.0). 3 cr. Practical training in a professional print outlet. Reports required. *Prerequisite:* Senior standing.

**JOU 490 Senior Study (3.0); 3 cr.** Senior Study in Journalism. (3.0). 3 cr. A major final project in print journalism that examines in depth an area in the field. Oral presentation of project is required. *Prerequisite:* COA 362.

---

## The Degree of Bachelor of Arts in Communication Arts

### Radio and Television Emphasis

The Radio and Television program at NDU prepares students for opportunities in electronic media production, programming and "on-air" broadcasting, scriptwriting, directing, and film techniques. In addition to a variety of courses in social sciences, English, and other GER courses, the program stresses the skills that will help prepare Radio and Television students in their careers. Introductory and advanced instruction in audio and video techniques are supported by hands-on experiences in our well-equipped studio.

### Graduation Requirements

Students pursuing this major must complete a total of 103 credit hours with a minimum cumulative GPA of 2.3 / 4.0 in their major requirements.

The program culminates in a senior project that incorporates the skills acquired during the years spent at NDU. A "C" grade and above on this project is required for graduation. The 103 credits are divided as follows:

### Degree Requirements (103 credits)

#### General Education Requirements

33 cr.

1. COA courses listed in the Cultural Studies and Social Sciences category do not satisfy GER requirements for Mass Communication students. These courses must only be taken as core or major courses.
2. Mass Communication students may satisfy their Philosophy requirement by taking COA 360 Media Ethics.
3. Mass Communication students may satisfy 3 credits of their Citizenship requirements by taking COA 350 Current Issues.
4. Journalism students may not take COA 350 to satisfy a GER requirement.
5. Mass Communication students must take STA 202 to fulfill the 3-credit requirement in Science and Technology.

#### Core Requirements

9 cr.

COA 201, COA 359, COA 362

#### Major Requirements

37 cr.

COA 225, COA 226, COA 272, COA 273, COA 275, COA 276, COA 310, COA 311, COA 312, COA 315, COA 325, COA 330, COA 430, COA 480, COA 490.

Students must choose one group of the following concentration areas:

12 cr.

**Scriptwriting and Directing:** COA 435, COA 445, COA 455, COA 457

**Audio and Sound Production:** COA 436, COA 446, COA 456, COA 466

**Film and Video Techniques:** COA 437, COA 447, COA 455, COA 457

**Electronic News:** COA 415, COA 425, COA 426, COA 427

Students must choose 9 credits from the following pool:

9 cr.

ADM 216, COA 203, COA 204, COA 210, COA 213, COA 215, COA 216, COA 223, COA 252, COA 313, COA 320, COA 350, COA 355, COA 360, COA 365, COA 366, COA 367, COA 369, COA 370, COA 413, COA 416, COA 417, COA 475, COA 476, COA 499, CSC 202, CSC 277, CSC 343, FDP 201, FDP 214, JOU 210, JOU 310, JOU 340, JOU 460, MUS 211, MUS 221, MUS 331, MUS 475, PDP 201

---

**Minor in Radio and Television (17 cr)**

The NDU Minor in Radio and Television is comprised of 17 credits. Any student with a good academic standing that is if he/she has a G.P.A of 2.0/4 and above may enroll in this minor. He or she may only count six credits which he/she may have taken from the list of the R/TV Minor requirements while pursuing another major. Minors must be declared at least one year before expected graduation date.

**Courses required:**

COA 225 Lighting 1	(2 cr.)
COA 270 Studio Workshop	(1 cr.)
COA 275 Editing 1	(2 cr.)
COA 312 TV Production Techniques	(3 cr.)
COA 310 Scriptwriting	(3 cr.)

COA 330 Documentary and Non Theatrical Film (3 cr.)

**Or**

COA 311 Radio Programming (3 cr.)

And **One** course from the following:

COA 325 Directing and Acting Skills	(3 cr.)
COA 430 Television Drama	(3 cr.)
COA 457 Cinematography	(3 cr.)
COA 475 Computer Graphics and Animation	(3 cr.)

---

## Undergraduate Courses: Communication Arts Radio and Television Emphasis

**COA 201 Mass Media Essentials (3.0); 3 cr.** This course focuses on the study of various types of mass media. It surveys the historical, economic, regulatory, and other aspects of the mass media. *Prerequisite:* COA 105

**COA 203 Make up and Color (0.2) 1 cr.** Introduction to the basic principles of makeup for film and video, and to theatrical makeup application as it relates to camera.

**COA 204 Set Design (0.2); 1cr.** Basic techniques of set design for the stage and the TV. Emphasis on the use of imagery to support the dramatic intent of a particular production. Class project will engage students in using a variety of mediums to explore how architecture, the arrangement of space, and the elements of design are used dramatically. Also introduces the use of the virtual studio.

**COA 205 Archive Organization (1.0); 1 cr.** Teaches students the effective use of archive resources in a library setting.

**COA 210 Stage Acting (3.0); 3 cr.** Teaches acting for the stage, body movement, and basic physical warm-up techniques. Includes exploration of stage space, building characters, and acting situations through improvisation and text work.

**COA 213 History of Film (3.0); 3 cr.** Overview of history of motion pictures and their artistic, technological, and industrial development. Includes an introduction to major film movements, including their formation, development, aesthetic and thematic qualities, and to leading film artists.

**COA 215 History of the Theater (3.0); 3 cr.** Study of the history of the western theater from its origin till the 20th century. Major theater movements, schools, and genres, including their formation, development, aesthetic and thematic qualities; includes an introduction to leading theater artists. Also includes an overview of Asian and oriental theater.

**COA 216 Sacred Drama: Gods, Muses, and the Storyteller. (3.0); 3 cr.** What is the role, if not the duty, of the storyteller, especially when the storyteller is visited by a Muse or supernatural visitor and aided in the artistic adventure? This course answers the question with examples from poetry, theater, film, dance,

and art, with a study of the influence of mythology on the performing arts and on arts in general.

**COA 223 Speech Communication (3.0); 3 cr.** Trains students in researching, organizing and delivering various types of speeches. *Prerequisites:* COA 201.

**COA 225 Lighting I (2.0); 2 cr.** Theoretical and practical use of lighting in TV studio productions: drama, talk shows, and news. *Corequisite:* COA 272.

**COA 226 Lighting II (1.2); 2 cr.** Continuation of COA 225 with emphasis on cool lighting and outdoor lighting for video and film camera. *Prerequisite:* COA 225

**COA 252 Public Relations (3.0); 3 cr.** History, principles and practices of public relations with emphasis on publicity, public opinion and crisis management. *Prerequisite:* COA 201

**COA 270 Studio Workshop I (1.0); 1 cr.** Functions and operations of radio and TV equipment. Students will spend 80 percent of their time working directly with the equipment and developing solid familiarity with cameras, digital technology, and other useful tools. Essential for subsequent R/TV courses. Intended for ADV/MRK students.

**COA 272 Workshop in Audio and Video (2.0); 2 cr.** Teaches students image and sound techniques, function, and operations of radio and TV analog and digital equipment.

**COA 273 Workshop in Audio, Video and Film (2.0); 2 cr.** Continuation of COA 272. A workshop on sound, camera, and editing equipment, in addition to working with 16mm film and 35mm Camera and the techniques used in shooting and developing films. *Prerequisite:* COA 272.

**COA 275 Editing I (2.0); 2 cr.** Provides students with the basic skills needed for working on different types of editing systems- Linear and Non-Linear. Topics include basic setup, adjusting and customizing preferences, and various editing and trimming techniques, among others. *Corequisite:* COA 272 only for students majoring in R/TV.

**COA 276 Editing II (2.0); 2 cr.** Continuation of COA 275. This course provides students with an

overview of off-line and on-line video editing, music editing (an ability to apply music choices in creating soundtrack), editing theory, paper editing, working with editors, and possible post production pathways. It will also introduce students to the potential of digital technologies in the creation of television programs, the production of graphics, digital special effects, and the uses of high-end compositing systems. *Prerequisite:* COA 275.

**COA 310 Scriptwriting (3.0); 3 cr.** Students will study film terms and formats, work with treatment, scenario and shooting scripts, analyze film and television clips, shorts, tapes, and full-length films with emphasis on understanding the writer's perspective. Numerous writing assignments and exercises will be assigned with the intent of developing a student's ability to write for a visual medium. Students must write a script of a short film or video.

**COA 311 Radio Programming (3.0); 3 cr.** Audio production concepts and techniques using audio laboratory studio equipment. Practical experience in producing, editing, and other aspects of radio programming emphasized. Students visit local radio stations.

**COA 312 TV Production Techniques (3.0); 3 cr.** Introduction to multi-camera studio production and location video recording. Explores directing techniques, operation of studio and control room, conceptualization, basic scriptwriting, audio board operations, and lighting in a studio setting. *Prerequisites:* COA 275.

**COA 315 World Cinema Survey (3.0); 3 cr.** Overview of world cinema including American (north and Latin), European, Asian, African, Middle Eastern, and Lebanese cinema. Includes historical review and their influence on global cinema.

**COA 316 TV Production Techniques for Advertising (3.0); 3 cr.** This course introduces advertising and marketing students to the tools, techniques, and production skills essential to conceive, design, edit, and produce real-life television commercials and radio spots in a studio setting. Students will be involved in hands-on practice executing original storyboards. Oral presentations are required. *Corequisite:* COA 270

**COA 320 The Film Director (3.0); 3 cr.** An introductory study on the work of the director,

from the scriptwriting to the staging process, including pre-production, production, and postproduction. Also covers work with actors, and managerial responsibilities. *Prerequisite:* COA 275.

**COA 325 Directing and Acting Skills (3.0); 3 cr.** Teaches acting and directing actors and the director-actor relationship, with focus on different methods and styles of acting, in relationship to the script and the characters. Includes building of a character, creating a role, and performing in front of an audience and in front of a camera. *Corequisite:* COA 310.

**COA 330 Documentary and Non-Theatrical Film (3.0); 3 cr.** A study of non-theatrical films, such as documentary, news, educational and public relations films, video clips, etc. Involves shooting and editing reports and a video clip. Students will also produce a short documentary by the end of the semester. *Corequisite:* COA 312

**COA 350 Current Issues (3.0); 3 cr.** In this course students will be introduced to local, regional, and international events and issues that are affecting the world today. The role and responsibility of the world citizen will be emphasized as the class conducts research on, develops understanding of, and examines the coverage given by the media, to various issues. Class discussions and presentations of various political, economic, and social issues constitute a sizable bulk of the course's material. Topics may include: Globalization, Environmental concerns, Terrorism, Nuclear Proliferation, World hunger, drugs, the relationship between developing countries and developed countries.

**COA 352 Censorship and Responsibility in Media and Film (3.0); 3 cr.** A study of different types of censorship and their relationship to moral codes, religions, politics, laws, and society. Overview of media law in Lebanon.

**COA 359 Mass Media and Society (3.0); 3 cr.** Interactive relationship between media and society. Relationships among the media, the individual, the group, society, and the culture. Issues discussed include: Impact of media messages; stereotyping; Media and Religion; Rock Music, and impact of Advertising among others. *Prerequisite:* COA 201. Prerequisite is waived for non-majors.

**COA 360 Media Ethics (3.0); 3 cr.** Analysis of ethical issues pertaining to the media: Dubious methods in news gathering, conflict of interests,

invasion of privacy, and shocking pictures, among others.

**COA 362 Mass Communication Research (3.0); 3 cr.** Students will become familiar with research design, data collection analysis, and the various quantitative and qualitative means of measurement of public opinion and hypothesis testing of media-related issues. Students will practice conducting a focus group and interpreting the results. They will write and conduct a questionnaire. A fully formatted, documented research paper incorporating the principles of the course is required. May not be taken concurrently with COA 490. *Prerequisite:* STA 202.

**COA 365 Talk Shows (3.0); 3 cr.** Preparing, hosting, and executing a TV program that deals with various issues in front of a live audience. *Corequisite:* COA 312 or by permission.

**COA 366 Diction and Presentation (3.0); 3 cr.** Arabic and English. In this course students will learn how to speak for different types of programs. They will do exercises on pronunciation in Arabic and English, and they will learn the phonetics of both languages.

**COA 367 Foreign Correspondence (3.0); 3 cr.** The role of the foreign correspondent in news gathering. The history of foreign correspondence, techniques, roles, and other tips. *Prerequisite:* COA 201.

**COA 368 International Communication (3.0); 3 cr.** Mass media systems of the world. Flow of information, and role of media in the development of the Third World. *Prerequisite:* COA 201.

**COA 369 Selected Topics I (3.0); 3 cr.** Rotating topics in audio, video and, film production. Representative topics include music for film and television, digital audio effects, documentary production, lighting for cinematography, and directing for film. Other topics may be recommended by the department. *Prerequisite:* By permission.

**COA 370 Selected Topics II (3.0); 3 cr.** Individual study topics on audio, video, and film production to be proposed by students or instructors, and approved by the department prior to commencing work. Other non-technical topics may be offered. *Prerequisite:* By permission

**COA 415 Broadcast News Operations (3.0); 3 cr.** Gathering, preparation, and presentation of a generic broadcast news product. Teaches students the process of directing news in all its phases, including equipment operation and crew management (camera operators, anchors, VTR operator, prompter, character generator, etc.). *Prerequisite:* COA 312 or by permission

**COA 416 Film Analysis and Aesthetics (3.0); 3 cr.** Structure, composition, design, and effects are studied through close frame-by-frame examination of motion pictures. Focuses on a particular director (Godard, Hitchcock, Altman, Losey, Bergman...), period, or style (film noir, suspense....) and studies how meaning is structured and perceived in the screen image. Includes close examination of the ways scholars, critics, and filmmakers have explained and discussed the materials used to make movies and how these materials may be used to construct films and produce meaning. Experiences of the viewer, critic, and community are discussed in addition to the role of aestheticians and theorists.

**COA 417 Comparative Cinema (3.0); 3 cr.** Compares trends, genres, and directors of various nations. Investigates several genres: the documentary, science-fiction, dramatic, comic, political, and romantic films. Covers early animation and special effects, serials, avant-garde, surrealism, "poetic realism," fantasy, etc.

**COA 425 Writing and Reporting for the Electronic Media (3.0); 3 cr.** Principles and practices of news-writing and reporting for the electronic media. Includes an overview of the major forms of writing, news styles, news gathering, and news evaluation.

**COA 426 Electronic News Gathering (3.0); 3 cr.** Shooting, editing and producing for the electronic news media. Lecture and lab course provides students with experience as producers and directors for news programs. Also includes an overview of ENG equipment as well as EFP (Electronic Field Production) techniques and equipment and digital video production on location. *Prerequisite:* COA 312

**COA 427 Media and Information Society (3.0) 3 cr.** Introduces the latest technologies in the news field; online news reporting, web journalism, blogging; electronic publishing, design and techniques of electronic publishing using a journalistic approach. *Corequisite:* COA 426.

**COA 430 TV Drama (3.0); 3 cr.** This course involves both the theory and the practical elements needed to shoot, direct, and edit a TV dramatic production. Students shoot before a live audience. Final project requires a complete tv drama beginning with the original script to the final tape. *Prerequisite:* COA 310.

**COA 435 Writing for TV and Film (3.0); 3 cr.** An advanced inquiry into the art of investigating, structuring, and writing original screenplays. Mastery of researching and developing authentic characters, as well as generating solid story plot devices using professional screenplay style. Different film genres and story techniques will also be explored, in addition to the process of literary adaptation and how to adapt a play, novel, or short story into a feature-length film. *Prerequisite:* COA 310.

**COA 437 Lighting for Film (3.0); 3 cr.** Operations with camera, lighting, and grip equipment as they apply to different film forms (narrative, documentary, experimental), genres, and styles. In-class and outside class group assigned filming exercises. Film screenings and field trips to complement class lectures, demonstrations, and discussions. *Prerequisite:* COA 226.

**COA 445 Directing Actors for Camera (3.0); 3 cr.** Directing actors through exploration of equipment used in media performance: blue screen acting, ear prompting, teleprompting, and microphone applications in voice performance and voice over. Continued exploration and skill-building of techniques used in performance before the camera including but not limited to advanced character development, make-up techniques, and special problems in character preparation for feature film. *Prerequisite:* COA 325.

**COA 446 Theory of Sound (3.0); 3 cr.** This course focuses on sound theory, sound as media, and the relationship between sound and image. These topics will be examined through reading and writing assignments, screenings and listening sessions, in-class presentations, recording assignments. Concepts of different theorists in sound will be introduced to students. Workshops on sound recording and sound editing may be held during the second half of the semester based on the technical requirements of student projects. This class encourages a critical, creative approach to the medium, non-traditional solutions, and awareness of the history of sound

technology and media production. *Prerequisite:* COA 311, senior standing.

**COA 447 Lighting Design and Techniques (3.0); 3 cr.** Lighting design for stage and video design, organization, graphic representation of lighting for stage, video and film production. Laboratory work on actual stage presentations, video productions, and film shoots. Venues include performing arts stages, video studios, and sound stages along with shooting on location. *Prerequisite:* COA 226

**COA 455 Directing Techniques and Aesthetics (3.0); 3 cr.** An advanced study of the job of a director, beginning with an artistic identity, to the screen craft and how to deal with the directing process through all the production stages. *Prerequisites:* COA 310, COA 312.

**COA 456 Sound Design and Postproduction (3.0); 3 cr.** A comprehensive technical examination of the role of sound as an emotional motivator and major storytelling component in both fiction and nonfiction films. Covers location and sound recording, track building, mix preparation, music editing and scoring, and the spectrum of postproduction technologies. Introduces current digital innovations in the field and in postproduction, and provides a workshop for solving ongoing editing and track-building problems. *Corequisite:* COA 446.

**COA 457 Cinematography (3.0); 3 cr.** Cinematographic techniques for film and video. Analysis of cinematographic styles, including qualities of camera movement and composition, lenses, and lighting as expressive tools. Explores aesthetics, techniques, and responsibilities of the cinematographer. Hands-on experience shooting scenes with film and video cameras, lighting, and grip equipment. *Prerequisite:* COA 226.

**COA 466 Sound for Animation (3.0); 3 cr.** The principles of sound track design to accompany the unique properties of the animated image. Techniques of musical synchronization and lip-synched character.

**COA 475 Computer Graphics and Video Animation (3.0); 3 cr.** Applying computer graphics in developing video animation projects. Includes the use of computer animation as applied to a variety of art media. Principles of movement and timing, lighting, cinematography, and multi-plane dimensionality as applicable to computer and traditional drawn animation. Drawn representation of telephoto or wide-angle lens perspective and depth of field.

**COA 476 Compositing (3.0); 3 cr.** Explores basic and intermediate aspects of compositing, animating, and creating special effects and motion graphics with compositing software. The student learns to add effects, enhance the look of existing footage, and create entire animations from inception. Practical application and use of compositing software in the commercial world.

**COA 480 Internship for Radio, TV, and Film; 1 cr.** Supervised off-campus work experience in a job that relates to the student's career objectives. *Prerequisite:* Senior Standing.

**COA 490 Senior Study; 3 cr.** Overview of film production phases and procedures. Senior project presentation. May vary according to concentration choice. *Prerequisite:* senior standing. A "C" grade or above is required.

**COA 499 Independent Study (3.0); 3 cr.** Advanced topics in mass communication chosen to meet individual student needs and interests, supervised by assigned instructors. *Prerequisite:* senior standing or permission by the head of the department.

---

## The Degree of Master of Arts in Media Studies

The department of Mass Communication offers the Master's of Arts degree in Media Studies with a choice of concentration in the areas of Advertising, Journalism, and Electronic Media.

The program provides students with conceptual and analytical tools and practical experience in order to prepare them to pursue careers in communication, to further academic enhancement at the doctoral level, and to help those already working in those fields upgrade their knowledge in their chosen area of study.

### Admission Requirements:

The program admits students holding Bachelor degrees in any of the areas listed above as well as those holding degrees in other majors.

Students from non related majors must take and pass a number of preparatory courses which the department deems necessary to pursue a Master of Arts in Media Studies. A student must obtain at least a "B" grade in any remedial course.

Candidates should have a GPA of 3.0. Applicants with a GPA between 2.8 and 3.0 may be admitted on a probationary basis. They must achieve a GPA of 3.0 in their first semester in order to continue in the program.

Candidates must also submit three letters of recommendation, an updated C.V., and a personal statement explaining their educational goals and reasons for selecting this area of study. Other university graduate admission requirements may apply as specified in this catalog.

### Graduation Requirements:

All students must take a total of 15 credits in the general field of Mass Communication in addition to 15 credit hours in the concentration area. The remaining three credits will be selected from a pool of courses offered by the program or by another program at NDU after securing the approval of the chair.

Students must write a 6-credit thesis to bring the total to 39 hours required for graduation.

Students must maintain an overall GPA of 3.0/4.0 for the 39 credits required to graduate.

Students must repeat any course on which they earned a "C-" grade or less.

### Degree Requirements (39 credits)

<b>Core Courses</b>	<b>15 cr.</b>
COA 610, COA 652, COA 680, COA 681, and JOU 631	
<b>Major Requirements - Advertising</b>	<b>21 cr.</b>
ADM 620, ADM 621, ADM 650, ADM 651, ADM 681.	15 cr.
ADM 690 (Thesis)	6 cr.
<b>Major Requirements – Electronic Media</b>	<b>21 cr.</b>
COA 611, COA 620, COA 630, COA 650, COA 651	15 cr.
COA 690 (Film or Thesis)	6 cr.
<b>Major Requirements - Journalism</b>	<b>21 cr.</b>
JOU 610, JOU 620, JOU 621, JOU 630, JOU 650	15 cr.
JOU 690 (Thesis)	6 cr.
<b>Free Electives</b>	<b>3 cr.</b>

**Note:** The 6-hour thesis may be replaced with a major TV, video, or film production for those who select Electronic Media as their area of emphasis. Arrangements will be made with the student's advisor and the department.

---

## Graduate Courses: Media Studies

**ADM 620 Advertising & Marketing Management (3.0); 3 cr.** The course examines the general array of agency personnel and studies the functions of each department including the duties and responsibilities of key decision-makers in the agency.

**ADM 621 Seminar in Integrated Marketing Communication (3.0); 3 cr.** The course applies the theories of integrated communication tools such as marketing, advertising, public relations, e-commerce, and others. It also looks at IMC's usage, management, and limitations.

**ADM 650 Advanced Media Planning (3.0); 3 cr.** Discussion of up-to-date media planning theories and concepts and their implications in the modern media systems. Studies the effects of horizontal and vertical media planning.

**ADM 651 Advanced Creative Strategy in Advertising (3.0); 3 cr.** Social science findings as guides for effective creative process by devising advertising message content using various creative approaches. Advanced writing and production of advertising messages for various media. Use of consumer behavior concepts in shaping advertising messages and improving media selection.

**ADM 660 Independent Study (3.0); 3 cr.** Topic takes into consideration the instructor's specialization and the student's interest. Requires completion of research paper. *Prerequisite:* written proposal and approval of instructor and department.

**ADM 681 Seminar in Advertising and Society (3.0); 3 cr.** Role of advertising in cultural, economic, and communication contexts. Actual campaigns and their implications in the modern world. Also includes the study of linguistics and semantics in advertising.

**ADM 690 Thesis (6.0); 6cr.** Specific research on a significant topic selected by the candidate upon consultation with advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

**COA 610 Theories of Mass Communication (3.0); 3 cr.** Studies various theories that explain the origins, developments, uses, abuses and effects of communication messages and explains the relationship between theoretical concepts and their application. Areas of study include media and violence, agenda-setting theory, uses and gratifications approach, etc.

**COA 611 Issues in Communication Technology (3.0); 3 cr.** Study of new technology and its actual and potential repercussions on media messages, the communication process and on society at large. Issues include restructuring and redefining the mass media and the characteristics of the emerging technologies.

**COA 620 Comparative Broadcasting (3.0); 3 cr.** A study of global electronic media systems. A comprehensive examination of rules governing the regulations and flow of programming between nations. Also study of the new satellite and transmission systems.

**COA 630 Broadcast Station Management (3.0); 3 cr.** Study of the problems of management, programming, sales, promotion, and marketing. Exploration of issues such as decision-making, news evaluation, budgeting in both commercial and noncommercial broadcast media.

**COA 631 Media and Politics: (3.0); 3 cr.** The impact of mass media on the political process especially in democratic societies. The interplay of influence between the two. Role of media consultants is also examined. *Prerequisite:* COA 610.

**COA 650 Advanced Video Production (3.0); 3 cr.** Examination of aesthetic decisions and skills in the planning and production of television programs: initial research through writing, to final production. Students are expected to develop and execute several programs for television.

**COA 651 Advanced Electronic Newsgathering and Reporting (3.0); 3 cr.** Real life experiences in gathering, writing, editing, and presenting news for the electronic media. Also, website reporting and various sources of news and information will be examined. *Prerequisite:* COA 650.

**COA 652 Advanced Research Methods in Mass Communication (3.0); 3 cr.** Techniques for study of communication content and messages, audiences and effects. Emphasis on research methods, and the data gathering, sampling and the application of those methods in Mass Communication and Advertising. *Corequisite:* COA 610.

**COA 660 Independent Study (3.0); 3 cr.** Topic takes into consideration the instructor's specialization and the student's interest. Requires completion of research paper. *Prerequisite:* written proposal and approval of instructor and department.

**COA 680 Seminar in Mass Communication Law and Ethics (3.0); 3 cr.** Study of legal and ethical controls of media such as government's regulations of the media and other Lebanese "taboos." Codes of ethics and traditional societal or self-imposed guidelines that govern the performance of the media will be addressed. Incorporated in this course is the Catholic church's stand on the legal and ethical functions of the mass media. *Corequisite:* COA 610.

**COA 681 Seminar in Cross-Cultural Communication (3.0); 3 cr.** The study of the impact of culture, norms, languages and values on the shaping and the perception of communication messages within and across national and international boundaries. Issues may include verbal and non-verbal communication, and others. *Prerequisite:* COA 610.

**COA 682 Seminar on the Lebanese Media (3.0); 3 cr.** An in-depth survey of the Lebanese media (both print and broadcast). Areas include history, economics, and trends. The course examines current figures and issues peculiar to the Lebanese media.

**COA 690 Thesis (6.0); 6 cr.** Specific research on a significant topic in the field selected by the candidate upon consultation with advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

**JOU 610 Newsroom Management (3.0); 3 cr.** Internal management of newspaper operation, status of personnel, and effects of technological developments.

**JOU 620 The Art of Interviewing (3.0); 3 cr.** Techniques and tools of gathering information from news sources.

**JOU 621 Editorial Operation (3.0); 3 cr.** Discussion of decision-making process in the newsroom. Various elements influencing the day-to-day operation of the print media. Roles of owners, and gatekeepers are examined. *Corequisite:* JOU 610.

**JOU 630 PR Programs and Campaigns (3.0); 3 cr.** Overall planning and operation of PR programs by various industries and institutions. Analysis and discussion of specific problems in real-life cases.

**JOU 631 International Public Relations (3.0); 3 cr.** Discussion of the role of public relations in the new age of global marketing and communication. Issues include global campaigns, international corporate PR, and cyberspace PR.

**JOU 650 Advanced Reporting and Newswriting (3.0); 3 cr.** In-depth reporting: theory and practice. Investigative and interpretative reporting. Also examines most recent means of gathering information and data needed to produce thorough, well-written journalistic work. *Corequisite:* JOU 620.

**JOU 680 Seminar in Selected Topics (3.0); 3 cr.** Discussion of various topics such as freedom of press, media and gender, media and religion, and other topics.

**JOU 690 Thesis (6.0); 6 cr.** Specific research on a significant topic selected by the candidate upon consultation with the advisor. *Prerequisites:* COA 652 and passing a minimum of 21 credit hours.

## DEPARTMENT OF SOCIAL AND BEHAVIORAL SCIENCES

---

<b>Professors</b>	Alam, Edward, Eid, Mansour (Chair); Rihani, Ameen
<b>Associate Professors</b>	Fahed, Ziad; Matar, Suhail; Salameh, Doumit; Yaacoub, Youssef
<b>Assistant Professors</b>	Antaby, Georges (Fr.); Azoury, Pamela ; El- Doaihi, Jamil; El-Khoury, Akram (Fr.); Karam, Clovis; Rahme, Chady Sarkis, Walid
<b>Senior Lecturers</b>	Abou-Jawdeh, Simon; Wehbe, Boulos ( Fr.)

---

### **Minor in Arabic Language and Literature (15 credits)**

In order to complete a minor in Arabic Language and Literature, the student must take the two courses below:

ARB 212 Applied Arabic Grammar  
ARB 231 Technical Arabic

#### **Two from the following pool:**

ARB 211 Appreciation of Arabic Literature  
ARB 224 Arabic Literature & Human Thought  
ARB 317 Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> Century)  
ARB 333 Modernism in Abbasid Poetry

#### **One of the following courses:**

ARB 302 Practice in Uses of Arabic  
ARB 423 The Evolution of the Critical Movement in Lebanon  
ARB 415 The Arabic Modernization Movement

**Total number of credits = 15 credits**

---

## Undergraduate Courses: Arabic Language and Literature

**ARB 101 Arabic Essay Reading and Writing I (3.0); 3 cr.** Concentrates on the essay, its development and its various types. For Freshman students.

**ARB 102 Arabic Essay Reading and Writing II (3.0); 3 cr.** Continuation of ARB 101. *Prerequisite:* ARB 101 or placement. For Freshman students.

**ARB 211 Appreciation of Arabic Literature (3.0); 3 cr.** Addresses essential characteristics of literature as well as literature themes, schools, and genres. *Prerequisite:* Sophomore Standing.

**ARB 212 Advanced Arabic Grammar (3.0); 3 cr.** Designed to improve students' command of Arabic grammatical structures and their application in discourse. *Prerequisite:* Sophomore Standing.

**ARB 224 Arabic Literature and Human Thought (3.0); 3 cr.** This course studies the relationship between philosophical thought of selected Arab and Lebanese writers and the

philosophical concepts in Arabic literature from "al Jahiliyah" until the present. Students will analyse and discuss the various philosophical views and theories in the passages studied.

**ARB 231 Technical Arabic (3.0); 3 cr.** Designed to train students in using proper Arabic linguistic tools pertaining to various technical, scientific, and professional settings. *Prerequisite:* Sophomore Standing.

**ARB 302 Practice in Uses of Arabic (3.0); 3 cr.** is a course in the use of the Arabic language. It provides insight into the connections and relations between various forms of specialized knowledge, and the full range of expressions which the Arabic language permits. Course includes Advertising, Journalism, Radio/TV language varieties.

**ARB 317 Themes of Modern Arabic Literature in Lebanon (20<sup>th</sup> Century) (3.0); 3 cr.** Cultural effects and literary evolution are studied through selected texts.

---

## The Degree of Bachelor of Arts in Psychology

Advisor: Yaacoub, Youssef, Ph.D.

The psychology program offered by the SBS Department at NDU provides students with three essential fields of concentration:

- Clinical Psychology
- Educational Psychology
- Industrial Psychology

The psychology program at NDU is specifically developed to promote the ability to deliver service skills within the community. At the B.A. level, students will not be qualified to function independently as a private psychologist; however, they will be able to cope with work in a community setting.

- The program will train a student to be aware of problems that exist and of the possible approaches to resolve them. Using psychological assessment, strategies, and methods of intervention, the student will work within the community, continuously evaluating the ways to create better adjustment within it in relation to psychological, physical, social, political, and religious domains.

### Admission Requirements

For a student to be admitted to the program, a grade of “C” or above is required in the following courses: PSL 201, STA 202, ENL 213, ENL 223.

### Graduation Requirements

In order to graduate, a student must meet the General Education Requirements, and successfully complete a total of 106 credits with a minimum GPA of 2.0/4.0, and a minimum average of 2.3/4.0 in the major and concentration requirements. Electives may be chosen from other concentration courses within the major of Psychology or from the different majors offered by the University

### Degree Requirements (97 credits)

#### General Education Requirements

**30 cr.**

1. Psychology students must take 30 credits of GERs.
2. Psychology students will be required to take only 3 credits from the Cultural and Social Sciences category other than PSL 201.
3. Psychology students must take STA 202 to fulfill the 3-credit requirement in Science and Technology.

#### Major Requirements

**36 cr.**

PSL 201, MAT 202, PSL 211, PSL 217, PSL 317, PSL 319, PSL 321, PSL 411, PSL 413, PSL 415, PSL 417, PSL 481

#### Free Electives

**1 cr.**

#### Concentration – Clinical

**30 cr.**

PSL 310, PSL 315, PSL 213, PSL 230, PSL 382, PSL 484, PSL 215, PSL 345, PSL 320, PSL 323

**Concentration – Industrial****30 cr.**

PSL 322, BAD 201, PSL 362, PSL 323, PSL 332, BAD 317, PSL 386, PSL 215, BAD 427, PSL 424

**Concentration – Educational****30 cr.**

PSL 313, PSL 315, PSL 213, PSL 324, EDU 422, EDU 350, EDU 330 (EDU 331, EDU 332 or EDU 333), PSL 385, EDU 362, PSL 345

**Minor in Psychology (18 cr.)**

A minor in psychology is merited upon successful completion of 18 credit hours in psychology. The passing grade per course is “C”.

Students majoring in a bachelor degree and who have already passed Psychology 201 with a “C” are required to take 15 credits of Psychology from the courses listed below.

The program of the minor in Psychology consists of the six courses below:

- PSL 201 Introduction to Psychology
- PSL 211 Psychology of the Young Child
- PSL 217 Personality Psychology
- PSL 319 Abnormal Psychology
- PSL 345 Counseling Psychology
- PSL 481 Undergraduate Seminar in Psychology

---

## Undergraduate Courses: Psychology

**PSL 101 Principles of Psychology (3.0); 3 cr.** Introduces students to the basic concepts of psychology. Topics include learning, memory, motivation, and habits. For Freshman students.

**PSL 201 Introduction to Psychology (3.0); 3 cr.** Offers a critical survey of general topics, principles, and findings of modern psychology.

**PSL 211 Psychology of the Young Child (3.0); 3 cr.** Covers the study of the individual from conception through the early school years. Emphasis is placed on the child between 3 and 5 years old.

**PSL 213 Psychology of Learning (3.0); 3 cr.** Introduces various principles and theories of learning and memory. *Prerequisite:* PSL 201.

**PSL 215 Social Psychology (3.0); 3 cr.** Explores the perceptions and attributions of social influences e.g., prejudice, love, aggression, attitude, etc. The construction of the Self in a social context is emphasized. *Prerequisite:* PSL 201

**PSL 217 Psychology of Personality (3.0); 3 cr.** Examines personality theories, methods and applications to social and clinical concerns. Classic theories of personality are discussed including psychoanalytic, behavioral, trait, humanistic, cognitive and social roles are explored and evaluated. *Prerequisite:* PSL 201.

**PSL 230 Theories of Psychotherapy (3.0); 3 cr.** Places an emphasis on understanding the theories and techniques of psychotherapy. Topics considered will involve individual, family, and group therapy. *Prerequisite:* PSL 201

**PSL 310 Psychology of the Family (3.0); 3 cr.** Explores relations between the individual and the family within a community. Focus is placed on diverse family patterns due to social class, race, ethnicity, and gender within a historical and sociopolitical context. By examining epidemiological, cross cultural, and clinical data, a student is introduced to intervention techniques to reduce malfunction and/or abusive situations. *Prerequisite:* PSL 201.

**PSL 313 Psychology of Adolescence (3.0); 3 cr.** Introduces theories and research on social, cognitive, sexual and identity development in adolescence in order to promote a healthier adult. Implications within the community are focused on. *Prerequisite:* PSL 201.

**PSL 315 Sensation and Perception (3.0); 3 cr.** Examines the basic knowledge and theories concerning the central nervous system, mainly the brain, its functions and disorders and relates them to the higher cognitive functions of the human being. The brain's functions are linked to psychological disorders and pharmacology. *Prerequisite:* PSL 201, PSL 217

**PSL 317 Cognitive Psychology (3.0); 3 cr.** Addresses the theoretical and experimental foundations for current understanding of how humans acquire and use knowledge. Piaget, Bruner, and Uygotsky theories of cognitive growth are studied. Topics discussed include the development of language, reasoning, problem solving, creativity, and intelligence. *Prerequisite:* PSL 201.

**PSL 319 Abnormal Psychology (3.0); 3 cr.** Introduces abnormal behavior and resulting disorders. Emphasis is on theories, etiology, classifications and various modalities of treatments. *Prerequisites:* PSL 201, PSL 217.

**PSL 320 Psychopathology (3.0); 3 cr.** Focuses on psychological and/or organic determinants of behavior disorders. *Prerequisite:* PSL 319.

**PSL 321 Experimental Psychology (3.0); 3 cr.** Introduces the research process in psychology. Topics include methodology, data collection, descriptive statistics, analysis, and report writing. *Prerequisites:* STA 201, PSL 213 or PSL 317.

**PSL 322 Industrial Psychology (3.0); 3 cr.** Applies a socio-psychological approach to an individual in a work setting. Topics discussed include management in an organization to promote productivity, change, role definition, and leadership qualities. *Prerequisites:* PSL 201.

**PSL 323 Deviance (3.0); 3 cr.** Focuses on the psychopathological behavior in its social context. Questions about normality and abnormality studied. Topics include juvenile delinquency, rape, substance abuse, psychopathis, sociopathis, sexual pathologies such as all the paraphilias (fetichism, exhibitionism...). Forensic psychology and criminal profiling are also tackled. *Prerequisite:* PSL 201, PSL 217.

**PSL 324 Educational Psychology (3.0); 3 cr.** Introduces basic principles of psychology

applied to the field of education. Topics include learning and instruction, motivation, classroom management, and testing and evaluation. *Prerequisite:* PSL 201.

**PSL 332 Personnel and Human Factors in the Work Community (3.0); 3 cr.** Addresses the human capabilities, needs, and limitations within a system. Concentration on job analysis, satisfaction, testing, training, group dynamics, leadership and social influence, motivation, equipment design. Consumer behavior and its effect on productivity and work quality within the community are examined. *Prerequisite:* PSL 322.

**PSL 345 Counseling Psychology (3.0); 3 cr.** Prevention of psychological crisis is the focus of the course. Practices of the various schools of psychology are explored such as behaviorism, psychoanalysis, phenomenology, rational emotive therapy, Existentialism and other contemporary theories. *Prerequisites:* PSL 217.

**PSL 362 Psychology of Work and Law (3.0); 3 cr.** This course provides an introduction to the application of psychological methodology and research on practical and applied problems. Areas concerned include marketing, advertising, management, and law. Psychological human factors serve as background to this course. *Prerequisite:* PSL 201

**PSL 382 Practicum I: Clinical (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 385 Practicum I: Educational (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 386 Practicum I: Industrial (1.3); 3 cr.** Provides a student with supervised work experience within his/her concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* junior/senior standing.

**PSL 411 Stress Causes, Consequences and Management (3.0); 3 cr.** Introduces the concept of stress in a bio-psycho-social approach. The founders are studied. Its scope is expanded to the

impact of stress on the immune system: the psycho-neuro-immunology, stress outcomes and coping are also covered. *Prerequisite:* PSL 201.

**PSL 413 History and Systems of Psychology (3.0); 3 cr.** Surveys the major schools of psychology; introducing the major psychologists and approaches within the field to give students an understanding of how psychology development into a science. *Prerequisite:* PSL 201.

**PSL 415 Intelligence Testing (3.0); 3 cr.** Allows the student to gain knowledge of the skills needed in administering, scoring and interpreting intelligence tests. Test focus will be on WAIS for adults, WAIS for children, and the Stanford Binet. *Prerequisites:* STA 202, PSL 211, PSL 317.

**PSL 417 Personality Assessment (3.0); 3 cr.** Allows the students to gain knowledge of the skills needed to use the various instruments in assessing personality. Emphasis is on research and methodological steps in evaluating an individual's personality. *Prerequisites:* STA 202, PSL 217, PSL 319.

**PSL 424 Community Psychology (3.0); 3 cr.** Concentrates on the interaction between individual and environment. Emphasis is placed on various models of intervention as they relate to both individual and community needs. Topics include poverty, prejudice, diversity, change, personal space, crowding, territoriality, and social stress. *Prerequisites:* PSL 215, PSL 322.

**PSL 481 Undergraduate Seminar in Psychology (3.0); 3 cr.** This course focuses on selected topics in psychology, varying from year to year depending on student, community and curriculum needs and on availability of professionals in relation to selected topics. Senior Standing.

**PSL 484 Practicum II: Clinical (1.3); 3 cr.** Provides students with supervised work experience within their concentration. Specific duties during the internship will be determined by the department and the institution supervisor. *Prerequisite:* Junior or Senior standing.

**PSL 491 Special Topics in Psychology (3.0); 3 cr.** This course is designed to be given to a student either independently or in a group setting. Topic reading and research is supervised by a faculty member. *Prerequisites:* STA 202, PSL 321, senior standing.

---

### Undergraduate Courses: Human Thought

**HUT 305 Human Thought to 1500 (3.0); 3 cr.** Traces the development of human thought from the initial stage of thinking to the end of the 16th century.

issues/challenges which man faced and is facing from the Reformation to the present.

**HUT 306 Human Thought from 1500 to the Present (3.0); 3 cr.** Introduces the

---

### Undergraduate Courses: Philosophy

**PHL 101 Introduction to Philosophy (3.0); 3 cr.** Covers the history of philosophical thought by providing a preview of the major works of prominent philosophers, such as Plato, Aristotle, Augustine, Aquinas, and Descartes, to name a few. For Freshman students.

right for me or for anyone? What is beneficial? Is God a factor in making such decisions? This course aims to improve thinking about the considerations that may count as reasons for and against the moral judgments students are tempted to make. For Freshman students.

**PHL 111 Introduction to Ethics (3.0); 3 cr.** This is a philosophy course that introduces students to ethical (moral) thinking. It also highlights the fact that we are moral agents, i.e. we are endowed with a sense of responsibility, and with a capacity to choose and make decisions. We address things and actions as good or bad, and judge decisions as right or wrong. We also feel obligated to be just and honest. We face life problems we need to examine (euthanasia, genetic engineering, among others) and make a decision. Decisions may be made based on different factors: looking for what is

**PHL 211 Logic and the Scientific Method (3.0); 3 cr.** Explores the methods of enquiry practiced by the natural, social, and behavioral sciences.

**PHL 311 Ethics and the Modern World (3.0); 3 cr.** Offers a general analysis of major schools in ethics, by defining each school's concept of right and wrong, good and bad, and its consequent approach in providing solutions to selected ethical problems. Texts directly related to major schools are treated. *Prerequisite:* ENL 213.

---

## Undergraduate Courses: Religion

### **REG 101 Introduction to Religion (3.0); 3 cr.**

This course offers an elementary comprehensive approach to the characteristics of religions that have influenced history: The major concept(s) of what man is; the essential need man has for religion; the meaning, function, and objective(s) of religion; the different approaches to salvation; religion's basic constituents; the different concepts of God in relation to man and to the universe; the different forms of communication between man and God(s)... and finally the ever rising focal importance of religion, and therefore of God, in human life. For Freshman students.

### **REG 212 Religion and Social Issues (3.0); 3 cr.**

This course introduces the contributions of the three major monotheistic religions to reach a better understanding of the relationship of the human being to the universe: God, Human Being and Nature. The mainstream beliefs of the three religions will be examined through an overview of major issues relevant to the religions studied.

**REG 213 Catholicism (3.0); 3 cr.** This course offers studies on the Catholic doctrine regarding both faith and morals. *Prerequisite:* ENL 105.

**REG 215 World Religions (3.0); 3 cr.** This course explores the variety of ways people have articulated their connections with the sacred. Major religious traditions are addressed, namely, Christianity, Judaism, Islam, Hinduism, Buddhism, Confucianism, and Taoism. Ancient religious cultures such as the Mesopotamian, Persian, and Egyptian are also covered.

### **REG 313 The Maronites: Faith and Cultural Heritage (3.0); 3 cr.**

This course is an introduction to the cultural heritage of the Maronite people. It addresses Maronite theology and spirituality in the context of secular, social, and ecclesiastical history from ancient through contemporary times, with a particular emphasis on the question of Maronite identity, while highlighting contributions of the Maronite faith and cultural heritage to the development of the region.

### **REG 314 Marriage and Family in the Catholic Church (3.0); 3 cr.**

This course will examine traditional and contemporary views of marriage and family in the light of Catholic theology and doctrine. An inquiry into the sacramental nature of marriage will shed light upon the Catholic view of the Family as "a little Trinity" and "a domestic Church". The course will therefore attempt to present the Catholic teaching on marriage and the family based on basic Trinitarian and Ecclesiological Catholic truths. Investigation into the question of the nature of the human being as man and as woman founded on Patristic exegesis of Sacred Scripture will inform deeply the content of the course. A particular emphasis will be given to the ancient and contemporary Syriac-Maronite contributions to the Catholic view of marriage and the family on both the theological and practical levels.

---

## Undergraduate Courses: Sociology

### **SOL 101 Essentials of Sociology (3.0); 3 cr.**

This course introduces students to the basic theories and theoretical perspectives of sociology. Areas included are family and gender roles, work and occupations, race and ethnicity. Students will also study their own community beginning with the student community of their own class. For Freshman Students.

**SOL 201 Introduction to Sociology (3.0); 3 cr.** Designed to introduce students to the basic

principles that govern social relationships and scientific points of view.

**SOL 301 Introduction to Anthropology (3.0); 3 cr.** Introduces fundamental concepts of anthropology. Discusses the nature of man, culture, and society.

**SOL 313 Family Violence and Child Abuse (3.0); 3 cr.** Integrates current knowledge about family violence from the areas of psychology, sociology, social work, and law enforcement.

---

## The Degree of Master of Arts in Psychology-Educational Psychology

### Mission Statement

The M.A. program in Psychology at NDU offered by the Department of Social and Behavioral Sciences in the Faculty of Humanities is designed to offer students with a theoretical and practical understanding of the principles of psychology within the framework of the area of concentration. Consequently, it trains the students to perform psychological services so as to function competently in a variety of applied settings such as to work in community health units, healthcare organizations, hospitals, schools, universities, industries, medical systems, counseling centers, governmental agencies, and military services.

- Master's degree in Educational Psychology: A program that focuses on the application of psychology to the study of the behavior of individuals in the roles of teacher and learner, the nature and effects of learning environments, and the psychological effects of methods, resources, organization and non-school experience on the educational process. It includes instruction in learning theory, human growth and development, research methods, and psychological evaluation;
- Students accepted in the program must fulfill the 36 credit-hours required or the 30 credit-hours course work in addition to a 6 credit-hours thesis. The GPA must not be less than a "B" grade or 3.00/4.00. Students, in case of failure in one of the courses, are given one chance to repeat the course work. A second failure will result in the expulsion of the student from the program. Following registration a three years time limit is given to the students to complete his/her degree. Students are not allowed to repeat more than two courses.

### Admission Requirements

The minimum requirements for admission to the M.A. program in Educational Psychology are:

1. A Bachelor's degree in psychology or its equivalent from an accredited university; a Bachelor degree in any other major will be evaluated separately.
2. A cumulative undergraduate GPA of a minimum GPA 2.75, as long as they satisfy the general admission requirements for graduate studies of NDU.
3. A personal statement of background, goals and values.
4. Three professional recommendations from instructors of the student's B.A. program.
5. A personal interview at the discretion of the department.

### Transfer

Credits from accredited universities can be transferable according to the following conditions:

- Acceptance by the Admission Office at NDU;.
- Any course whose grade is below 80, i.e. "B" is not transferable. This is according to the NDU grading policy and the NDU Bylaws;
- Only nine credit-hours are granted to the new student provided that the transferable course/s is/are transferred from an accredited university and correspond/s to the NDU course requirements.

## Degree Requirements (36 credits)

<b>Core Courses</b> PSL 601, PSL 602, PSL 609	<b>9 cr.</b>
<b>Track Option</b> PSL 699 or PSL 692 and PSL 695	<b>6 cr.</b>
<b>Major Courses</b> PSL 610, PSL 622, PSL 631, PSL 642, PSL 662, PSL 682	<b>18 cr.</b>
<b>Elective</b>	<b>3 cr.</b>

---

### Graduate Courses: Psychology

**PSL 601 Professional Counseling Skills (3.0); 3cr,** The course provides practical experience in developing basic clinical skills, such as effective inquiry, empathic listening, helping responses, and interpretation. Emphasis on matching therapist style with client characteristics; students are trained to work with clients of diverse backgrounds and in different settings.

**PSL 602 Assessment & Psychometric Methods (3.0); 3cr,** The course reviews the fundamentals of testing and assessment skills in administering and interpreting standardized tests in the areas of personality assessment and intelligence testing. Special emphasis will be on Rorschach, TAT, MMPI, WAIS-III, WISC-III and Kauffman ABC.

**PSL 609 Research Method and Designs (3.0); 3cr,** With the goal of gaining competence in critical evaluation of published research; this course will provide training in the application of research techniques to problems in psychology and human services. Quantitative and Qualitative research design, conducting, reporting and analyzing assessment and program evaluation.

**PSL 610 Developmental Psychology (3.0); 3cr,** The course studies the human lifespan development; a foundation for understanding principles and concepts of physical, cognitive, personality, emotional and social development from conception through death. It also introduces developmental disabilities.

**PSL 622 Theory of Learning and Cognitive Processes (3.0); 3cr,** The course explores theoretical areas of learning and cognition, including cognitive psychology, memory, information processing, attention, problem solving, learning strategies and reinforcing as well as the design of classroom learning situation.

**PSL 631 Psychoeducational Assessment (3.0); 3cr,** The course focuses on administering, scoring and interpreting standardized instruments and tests to assess cognitive abilities, learning behaviors, emotional disturbances, social maladaptive and sensory motor functioning of school- age children with emphasis on psychoeducational diagnosis.

**PSL 642 Practicum I (3.0); 3cr** Educational Psychology (to be approved by the advisor).

**PSL 662 Consultation, Intervention and Prevention (3.0); 3cr,** The course builds a framework for educational psychologists to address the concepts, processes and issues related to the practice of school-based consultation as an intervention technique of educational psychologists.

**PSL 682 Seminar in Educational Psychology (3.0); 3cr,** This course is a forum for student to put together knowledge and ideas across the subdisciplines of psychology and an impetus for expansion of thinking. It includes but not limited to: *Socio-developmental*: issues relating to education, topics include; role theory, attitude theory formation and change, transitions from

home to school, Elementary/Secondary, High School/University to work. *Instructional Psychology*: it includes designing, implementing and evaluating learning strategies and programs from preschool to high school. *Instructional Decision Making*: focuses on direct and indirect approaches to interact and help students, teachers and families to reduce behavioral and academic problems. Assists students with developmental disabilities. *Contemporary Educational Problems and Motivation*. *Developing Human Potentials*: techniques that emphasize human relation skills, self-image, values, and stress management.

**PSL 692 Practicum II (3.0); 3cr.** Educational Psychology (to be approved by the advisor).

**PSL 695 Practicum III (3.0); 3cr.** Educational Psychology (to be approved by the advisor).

**PSL 699 Thesis (6.0); 6cr.** to be approved by the advisor.

---

**Summer Arabic Program**  
**sbs@ndu.edu.lb or summerarabic@ndu.edu.lb**

**Program Objective**

Making the Arabic language (colloquial, formal, and written) accessible to students in the most efficient and beneficial way possible.

**Program Overview**

This program engages students in the culture of contemporary Lebanon, one of the world's most dynamic countries. Participants study at NDU, Lebanon, where the SAP program is set for teaching formal and colloquial Arabic at the preliminary, preparatory, intermediate, and advanced levels. Intensive personalized classroom instruction is supplemented by review sessions, individual tutorials, and daily practice with Lebanese conversation partners chosen mostly from NDU students and staff. Group excursions in Lebanon give students insight into Lebanese culture, society, and lifestyle, and provide students with opportunities to use their language skills with native speakers.

**Program Duration**

5 weeks: Classes begin the first week of July.

**N.B.** Credits acquired in the SAP Sessions are transferable

**Admission Requirements:**

Anyone who is interested in the program is kindly requested to submit the following documents:

- Application form (downloaded from website [www.ndu.edu.lb](http://www.ndu.edu.lb) under Summer Arabic Program – Faculty of Humanities);
- Official transcript of grades (if applicable);
- Arabic language teacher's recommendation (if applicable);
- Writing sample from the most recent Arabic course (if applicable);
- Non-refundable application fee of US\$30 (check order made payable to Notre Dame University-Louaize, Lebanon);
- Application Deadline is June 15<sup>th</sup>.

---

## Courses: Summer Arabic Program (SAP)

### The SAP is made up of 4 levels:

#### Level I (Preliminary Arabic):

**ARB 100 Emphasis A: The Formal Language; 3 cr.** Designed to initiate non-Arabic-speaking students to the study of standard Arabic, the course aims at enabling foreign students to use and properly pronounce simple Arabic words and to listen, speak, read and write simple sentences. This course also offers a preliminary approach to Arabic grammar. Beginners need not have any previous knowledge of Arabic.

**ARB 104 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3 cr.** Emphasis is placed on the elementary means of expression, the basics of pronunciation, and the knowledge of articulation. The course initiates speech and dialogue through audiovisual aids, periodic stays with families, programmed visits to industrial plants, shops, markets, cafes, and sight-seeing in groups or individually. Developing elementary vocabulary, learning proper pronunciation, getting the feel of the language. No previous knowledge of Arabic is required.

#### Level II (Preparatory) :

**ARB 203 Emphasis A: The Formal Language; 3 cr.** This course introduces basic vocabulary and sentence structure in standard Arabic, and focuses on developing basic skills of listening, speaking, reading, and writing simple sentences that are used frequently. Designed to help non-Arabic speaking students study standard Arabic, the course aims at enabling foreign students to use simple Arabic words and basic phrases, to listen, speak, use and compose sentence structures, and to acquire the basics of Arabic grammar. *Prerequisite:* ARB 100 or equivalent.

**ARB 202 Emphasis B: The Spoken (Colloquial) Language-The Lebanese**

**Dialect; 3cr.** In this course the emphasis is placed on the basic means of expression and the basics of pronunciation and articulation. It introduces the students to speech and dialogue and to the description of facts and recounting of events through audiovisual aids, periodic stays with families, programmed visits to industrial plants, shops, markets, cafes, and sight-seeing in groups or individually, etc. Developing a basic vocabulary, learning proper pronunciation, getting the feel of the language. *Prerequisite:* ARB 104 or equivalent.

#### Level III (Intermediate):

**ARB 205 Emphasis A: The Formal Language; 3 cr.** This course is designed to improve student's writing and reading skills through the following approaches: in-depth applied study of grammar and parsing (قواعد النحو والاعراب); familiarity with figures speech and of style; development of advanced skills in pronunciation. The course aims at improving the student's linguistic competence in preparation for further Arabic studies. *Prerequisite:* ARB 203 or equivalent.

**ARB 204 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect; 3 cr.** This course develops basic language skills used in day-to-day conversation. Exercises focus on structured practice in vocabulary, listening, and articulating. The content themes include: shopping, answering or making telephone calls, visiting a doctor, looking for a job, giving a present, attending wedding ceremonies, enjoying local cuisine, taking holidays, etc... Provides students with a rich package of selected vocabulary suitable for different occasions, helps students to adapt to social settings appropriate for different occasions. *Prerequisite:* ARB 202 or equivalent.

**Level IV (Advanced Arabic):**

**ARB 225 Emphasis A: The Formal Language**

**3 cr.** This course focuses on further language skills in simple modern written styles through reading and writing together with improving fluency in oral communication. It includes the study of Arabic prose and poetry texts. Oral presentations and written reports are required. The aim of this course is to improve students' ability to read, write, and understand correct, simple and practical modern Arabic.  
*Prerequisite:* The successful completion of Preparatory and Intermediate Arabic or their equivalents.

**ARB 226 Emphasis B: The Spoken (Colloquial) Language-The Lebanese Dialect;**

**3 cr.** In this course the student will practice holding conversations on common daily concerns. The content themes include: shopping, answering or making telephone calls, visiting a doctor, looking for a job, giving a present, learning adequate behavior at social occasions (etiquette for weddings, birthday parties, regular daily visits, enjoying local cuisine, taking holidays, etc.) The aim of this course is to give students the opportunity to develop their communication skills in the spoken language in order to achieve spontaneity in speech and a smooth social integration.



**FACULTY OF  
NATURAL AND  
APPLIED SCIENCES  
(FNAS)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

Eid, George M., Ph.D.

FNAS Building, 3rd floor, Room S 301

Tel: 09-218950/1/2 (Extension 2109), Direct line: 09-208700

E-mail: fnas@ndu.edu.lb

geid@ndu.edu.lb

### **Department of Mathematics & Statistics**

Ghalayini, Bassem, Ph.D.

FNAS Building, 3rd floor, Room S 314

Tel: 09-218950/1/2 (Extension 2110), Direct line: 09-208712

E-mail: mathematics@ndu.edu.lb;

bghalayini@ndu.edu.lb

### **Department of Computer Science**

Maalouf, Hoda, Ph.D.

FNAS Building, 3rd floor, Room S 315

Tel: 09-218950/1/2 (Extension 2117), Direct line: 09-208719

E-mail: cs@ndu.edu.lb

hmaalouf@ndu.edu.lb

### **Department of Physics & Astronomy**

Sabra, Bassem, Ph.D.

FNAS Building, 3<sup>rd</sup> floor, Room S311

Tel: 09-218950/1/2 (Extension 2116), Direct line : 09-208730

E-mail: astrophysics@ndu.edu.lb

bsabra@ndu.edu.lb

### **Department of Sciences**

Kabrita-Bou Serhal, Colette, Ph.D.

FNAS Building, 3rd floor, Room S 317

Tel: 09-218950/1/2 (Extension 2112), Direct line : 09-208728

E-mail: sciences@ndu.edu.lb;

ckabrita@ndu.edu.lb

### **Actuarial Sciences Program**

Freiji-Bou Nassif, Claudia, M.S.

FNAS Building, 3<sup>rd</sup> floor, Room S 337

Tel: 09-218950/1/2 (Extension 2096), Direct line: 09-208708

E-mail: cnassif@ndu.edu.lb

### **Freshman Science Program**

Sattout, Elsa, Ph.D.

FNAS Building, 3<sup>rd</sup> floor, Room S 340

Tel: 09-218950/1/2 (Extension 2619), Direct line: 09-208738

E-mail: esattout@ndu.edu.lb

# FACULTY OF NATURAL AND APPLIED SCIENCES

## FACULTY PROFILE

The FNAS provides students at the undergraduate and graduate levels with a modern and comprehensive education in all fields of natural and applied sciences. This education develops both their theoretical knowledge and technical competence within the comprehensive objective of helping them build a rich cultural identity, sound citizenship, irreproachable morality and firm faith, in conformity with the University mission. Our full-time faculty members are predominantly Ph.D. holders who are engaged in research, teaching, curriculum development, and academic administration. Curricula are constantly adjusted to meet acknowledged academic standards and to go along with new advances in didactics and research. The FNAS subscribes to a sizable number of scholarly journals to keep up with new scientific, technological, pedagogical, and cultural developments. The science laboratories and the computer center are endowed with modern equipment that is regularly upgraded.

## MISSION, VISION AND VALUES

### Mission

Consistent with the mission statement of NDU, the Faculty of Natural and Applied Sciences (FNAS) addresses itself to meet the needs of undergraduate and graduate students in the scientific disciplines and improve the scientific literacy of NDU students. The FNAS is committed to develop and disseminate scientific and technological knowledge through quality teaching, research, and outreach activities. The FNAS guides students to be ethical, innovative, lifelong learners, and leaders in their professions and communities.

### Vision

The Faculty of Natural and Applied Sciences will be a reputable locus of educational and intellectual excellence in the exact sciences, fostering creative learning systems, building a solid research tradition, sustaining an environment that supports the education of the whole person, and promoting a culture of joyful quest of the ultimate truth (*Gaudium de Veritate*) about man and nature.

### Values

The Faculty of Natural and Applied Sciences shares the following values that reflect its culture and priorities and are inspired by the core values to which the whole NDU community is dedicated:

- Academic Excellence: Whether in education or in research, we seek academic excellence as a landmark of our curricula, believing in a fruitful connection between good research and creative classroom instruction;
- Lifelong Learning: We are committed to inculcate lifelong learning and the concept of continuous self-development;
- Intellectual Freedom: We respect the right of all to pursue knowledge freely, scholarly, ethically, and critically;
- Integrity: We believe in equity and honesty and aspire to incorporate these values in every aspect of our personal and academic lives;
- Dialogue: We encourage constant dialogue between officers, faculty and students, and are under obligation to listen to the concerns and critiques of our students;

- **Accountability:** We accept the responsibility of being accountable for our actions, and are dedicated to a transparent and efficient use of resources;
- **Service:** We value the virtue of service as a golden path towards becoming true leaders and as the fullest expression of our humanity;
- **Diversity:** We value the diversity of religious, ethnic and cultural backgrounds among our students, our faculty and our staff within the vision and framework set by the apostolic constitution “Ex Corde Ecclesiae” on Catholic universities (August 15, 1990);
- **Faith:** We believe that faith in God, who manifested His love to the entire human family in Jesus Christ, shapes our profound commitment to serve the University and the community.

## **ACADEMIC DEPARTMENTS AND DEGREE PROGRAMS**

The FNAS consists of the following departments:

- Department of Computer Science
- Department of Mathematics and Statistics
- Department of Physics & Astronomy
- Department of Sciences

### **The Undergraduate Program**

Each undergraduate program offered at the FNAS is composed of three components:

- General Education Requirements (GER)
- Core and Major Requirements
- Free Elective Requirements

### **Undergraduate Degrees**

The **Department of Computer Science** offers undergraduate programs leading to the degrees of:

- BS in Business Computing (94 credits)
- BS in Business Computing (concentration: Management Information Systems) (94 credits)
- BS in Computer Science (94 credits)
- BS in Computer Science (concentration: Information Technology) (94 credits)
- BS in Computer Science (concentration: Computer Graphic & Animation) (94 credits)
- BS in Geographic Information Systems (91 credits)

The **Department of Mathematics and Statistics** offers undergraduate programs leading to the degrees of:

- BS in Actuarial Sciences (94 credits)
- BS in Mathematics (94 credits)

The **Department of Physics & Astronomy** offers an undergraduate program leading to the degree of:

- BS in Physics (95 credits)

The **Department of Sciences** offers undergraduate programs leading to the degrees of:

- BS in Biology (92 credits)
- BS in Chemistry (92 credits)
- BS in Environmental Science (92 credits)

The Department of Sciences also offers a **Freshman Science** program. This program leads to a certificate that is equivalent to the official Lebanese Baccalaureate Part II (Scientific Strands).

### **Minors**

As of the academic year 2008 - 2009, the FNAS launched five minors in:

- Mathematics
- Actuarial Sciences
- Applied Statistics
- Geographic Information Science
- Physics
- Biology

The first three minors are offered by the Department of Mathematics and Statistics, the fourth by the Department of Computer Science, and the last by the Department of Physics & Astronomy.

### **Graduate Programs and Degrees**

The FNAS offers graduate programs in computer science and mathematics that lead to the degrees of:

- Master of Science (MS) in Astrophysics (Joint degree with USJ)
- Master of Science (MS) in Computer Science.
- MS in Mathematics.
- MS in Biology
- MS in Financial Mathematics

This graduate program has two options: a “*course-work*” option and a “*thesis*” option.

## **POLICIES AND PROCEDURES**

### **Admission Requirements**

For admission requirements to the degree of B.S., refer to the section under the title of “Undergraduate Admission” of this Catalog.

### **Graduation Requirements**

To receive the degree of B.S. in Computer Science, a student must fulfill all requirements of the degree program, complete all required courses with an overall GPA of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the University. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying their graduation.

### **FNAS Degree Programs at a Glance**

The following table encapsulates, in alphabetical order, all programs of study offered by the FNAS along with the corresponding total number of credits required:

<b>Programs of Study</b>	<b>Degrees, Minors &amp; Certificates</b>	<b>Credits</b>
Actuarial Sciences	BS	94
Applied Statistics	BS	90
	Minor	18
Biology	BS	92
Biology	Minor	17
Biology	MS	36
Business Computing	BS	94
Business Computing (MIS)	BS	94
Chemistry	BS	92
Computer Science	BS	94
	MS	30
Computer Science (IT)	BS	94
Computer Science (CGA)	BS	94
Environmental Science	BS	92
Freshman Science	Certificate	Min. of 30
Geographic Information Systems	BS	91
Geographic Information Systems	Minor	15
Actuarial Sciences	Minor	18
Mathematics	BS	90
	MS	33
Mathematics	Minor	15
Financial Mathematics	MS	33
Physics	BS	95
Astrophysics	MS	36
Physics	Minor	16

## DEPARTMENT OF COMPUTER SCIENCE

---

<b>Professor:</b>	Chedid, Fouad (on leave 2012-13)
<b>Associate Professors:</b>	Farhat, Hikmat; Khair, Marie; Maalouf, Hoda (Chair)
<b>Assistant Professors:</b>	Aoun, Rosy; Challita, Khalil; El-Khalidi, Khaldoun; Hage, Hicham; Hawi, Nazir; Samaha, Maya
<b>Lecturers:</b>	Maroun, Bachir (NLC); Sawma, Victor

---

### Mission of the Department

The mission of the Department of Computer Science is to offer high-quality education in the computing fields and an environment conducive to research for both students and faculty. Our programs provide graduate and undergraduate students with theoretical and applied knowledge, and adopt a liberal arts education approach that promotes lifelong learning and ethical growth. The Department is dedicated to maintaining its current innovative programs and establishing new ones to uphold its status as an important national and regional center for discovering and applying new knowledge and technologies.

---

### Bachelor of Science in Computer Science

#### Degree Requirements (94 credits)

<b>General Education Requirements</b>	<b>27cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English</i> (6 cr.)	
ENL 213 And	
ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic</i> (3 cr.)	
ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion</i> (3 cr.)	
REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy</i> (3 cr.)	
ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	3 cr.
- One course from the category <i>Cultural Studies and Social Sciences</i> (3 cr.)	
HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	3 cr.
- One course from the category <i>Citizenship</i> (3 cr.)	
HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science</i> (3 cr.)	
CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
- One course from the subcategory <i>Natural Sciences</i> (3 cr.)	
AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>24 cr.</b>

CSC 212, CSC 213, (CSC 219 or CSC 222), CSC 313, MAT 211, MAT 213, MAT 215, MAT 224

**Major Requirements**

**37cr.**

CSC 218, CSC 311, CSC 312, CSC 316, CSC 325, CSC 414, CSC 423, CSC 425, CSC 426, CSC 431, CSC 480, CSC 490

Choose one course from the following list: CSC 301, CSC 305, CSC 306, CSC 318, CSC 323, CSC 385, CSC 387, CSC 412, CSC 417, CSC 422, CSC 432, CSC 463, CSC 485, MAT 325, MAT 339. 3 cr.

**Free Electives**

**6 cr.**

## Bachelor of Science in Computer Science

### Information Technology (IT) Emphasis

#### Degree Requirements (94 credits)

<b>General Education Requirements</b>	<b>27cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English</i> (6 cr.) ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic</i> (3 cr.) ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion</i> (3 cr.) REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy</i> (3cr.) ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	3cr.
- One course from the category <i>Cultural Studies and Social Sciences</i> (6 cr .) HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	6 cr.
- One course from the category <i>Citizenship</i> (3cr.) HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science</i> (3 cr.) CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
- One course from the subcategory <i>Natural Sciences</i> (3 cr.) AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>21 cr.</b>
CSC 212, CSC 213, (CSC 219 or CSC 222), CSC 313, MAT 211, MAT 215, STA 210.	
<b>Major Requirements</b>	<b>40 cr.</b>
CSC 218, CSC 226, CSC 305, CSC 312, CSC 316, CSC 385, CSC 414, CSC 425, CSC 446, CSC 463, CSC 480, CSC 490.	
Choose two courses from the following list: CSC 301, CSC 306, CSC 318, CSC 323, CSC 325, CSC 387, CSC 412, CSC 417, CSC 422, CSC 423, CSC 432, CSC 485, MAT 325, MAT 339.	6 cr.
<b>Free Electives</b>	<b>6 cr.</b>

## Bachelor of Science in Computer Science

### Computer Graphics and Animation (CGA) Emphasis

#### Degree Requirements (94 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3 cr.)</i> REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	<b>3cr.</b>
- One course from the category <i>Cultural Studies and Social Sciences (3cr .)</i> HUT 305, HUT 306, MUS 210, FAP 203, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PDP 201, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	<b>3 cr.</b>
- One course from the subcategory <i>Citizenchip (3 cr.)</i> HIT 201, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	<b>6 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210.	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>24 cr.</b>
CSC 212, CSC 213, CSC 313, MAT 211, MAT 215, MAT 227, FAP 211, ARP 223.	
<b>Major Requirements</b>	<b>37 cr.</b>
CSC 231, CSC 277, CSC 278, CSC 279, CSC 343, CSC 375, CSC 412, CSC 422, CSC 430, CSC 443, CSC 480, CSC 490.	
Choose one course from the following list: CSC 273, CSC 306, CSC 318, CSC 323, CSC 325, CSC 385, CSC 387, CSC 423, CSC 432, CSC 435, CSC 463, CSC 485	<b>3 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>

## **Bachelor of Science in Business Computing**

### **Degree Requirements (94 Credits)**

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3cr.)</i> REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	<b>3 cr.</b>
- One course from the category <i>Cultural Studies and Social Sciences (3 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	<b>3 cr.</b>
- One course from the category <i>Citizenship (3 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	<b>6 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>28 cr.</b>
CSC 216, CSC 217, CSC 226, CSC 480, ACO 201, ECN 211, MAT 205, MAT 214, STA 206, STA 207	
<b>Major Requirements</b>	<b>33 cr.</b>
CSC 301, CSC 305, CSC 306, CSC 417, CSC 435, CSC 446, CSC 490, ECN 212, MIS 431.	
Choose two courses from the following list (6 cr.)	<b>6 cr</b>
CSC 218, CSC 219, CSC 231, CSC 301, CSC 316, CSC 318, CSC 323, CSC 385, CSC 387, CSC 423, CSC 426, CSC 485, MIS 333, MIS 345, MIS 434, MIS 442.	
<b>Free Electives</b>	<b>6 cr.</b>

---

## Bachelor of Science in Business Computing

### Management Information Systems (MIS) Emphasis

#### Degree Requirements (94 credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English</i> (6 cr.)	
ENL 213 And	
ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic</i> (3 cr.)	
ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion</i> (3 cr.)	REG 212, REG 213, REG 313, REG 314
- One course from the subcategory <i>Philosophy</i> (3 cr.)	ENS 205, PHL 211, PHL 311, POS 345
<b>C - Cultural Studies and Social Sciences</b>	3 cr.
- One course from the category <i>Cultural Studies and Social Sciences</i> (3 cr.)	HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212
<b>D - Citizenship</b>	3 cr.
- One course from the category <i>Citizenship</i> (3 cr.)	HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337
<b>E - Science and Technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science</i> (3 cr.)	CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210
- One course from the subcategory <i>Natural Sciences</i> (3 cr.)	AST 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, HEA 201, NTR 201, PHS 207, GIS 211
<b>Core Requirements</b>	<b>27 cr.</b>
ACO 201, BAD 201, BAD 425, BAD 429, BAD 453, ECN 211, ECN 212, MRK 201, STA 206	
<b>Major Requirements</b>	<b>34 cr.</b>
MIS 216, MIS 310 or CSC 301, MIS 330 or CSC 226, MIS 333, MIS 341 or CSC 306, MIS 345, MIS 420 or CSC 305, MIS 431, MIS 434, MIS 442, CSC 480, CSC 490	
<b>Free Electives</b>	<b>6 cr.</b>

---

## Undergraduate Courses: Computer Science

**CSC 201 Computers and Their Use (3.0); 3 cr.** This course introduces the difference and interface between hardware and software. It prepares the students, to use computers as a tool.

**CSC 202 Computers for Visual Arts (3.0); 3 cr.** This course introduces the basic concepts of computers and prepares visual arts students to the use of the state-of-the-art software packages for their projects.

**CSC 204 Programming Logic (3.0); 3 cr.** This is a language independent course that focuses on programming logic. Students learn to develop essential tools for problem solving such as hierarchy charts, pseudocode, and flowcharts. It places special emphasis on concepts such as visual, event-driven, and object-oriented programming. The course serves as a strong and thorough preparation for a sequence of up to date computer programming courses.

**CSC 212 Program Design and Data Abstraction I (3.0); 3 cr.** This course is an introduction to computer programming using C++. Topics include problem solving using computers; structural programming; control structures; arrays; functions; pointers; recursion; data abstraction; classes; introduction to object-oriented programming paradigm.

**CSC 213 Program Design and Data Abstraction II (3.0); 3 cr.** This course is a continuation of CSC 212. Emphasis is placed on the object-oriented features of C++. Topics include classes; operator overloading; inheritance; virtual functions; polymorphism; stream I/O; templates; file processing. *Prerequisite:* CSC 212.

**CSC 216 Computer Programming I (3.0); 3 cr.** This course is an introduction to computer programming using Visual Basic. Topics include problem solving using computers, object-oriented, event-driven programming (OOED), form and control properties, variables, assignments statements, arithmetic, control structures, arrays, functions, subs, and modules.

**CSC 217 Computer Programming II (3.0); 3 cr.** This course is a continuation of CSC 216. Topics include security and files in Visual Basic (VB), using VB to work with databases, using VB to create graphics, and creating objects in VB. *Prerequisite:* CSC 216.

**CSC 218 Principles of Communication Systems (3.0); 3 cr.** Spectral analysis, random variables and processes, introduction to queuing theory, analogue communication, digital communication, analogue to digital conversion, digital-modulation techniques, representation of noise, demodulation techniques, introduction to information theory. *Prerequisite:* CSC 212.

**CSC 219 Digital Computer Fundamentals (3.0); 3 cr.** Fundamentals of logic design, the design of switching circuits using small and medium scale integrated devices. Flip flops, counters, decoders, multiplexes, and registers.

**CSC 222 Computer Organization and Assembly Language (3.0); 3 cr.** Machine level architecture, functional units, memory, debugging, input/output structures, storage systems, instruction sets, machine cycle, assemblers, macroassemblers and microprocessors.

**CSC 226 Database Programming for Business (3.0); 3cr.** This course covers the concept of database and database modeling using ER and EER. The procedure of transforming the conceptual model to logical model (relational) is introduced, the SQL language, the relational algebra and the database design.

**CSC 231 Multimedia Applications (3.0); 3 cr.** An Introduction to the multimedia world and a preparation to some of the well known software packages. *Prerequisite:* CSC 212 or CSC 216.

**CSC 270 Computer Aided Engineering Design (0.3); 1 cr.** Introduction to computer aided drawing. Applications of existing CAD software to engineering problems.

**CSC 273 Workshop in Computer Aided Architectural Design (1.4); 3 cr.** Aims at applying CAD concepts in developing architectural projects.

**CSC 277 Software Packages for Computer Graphics I (0.3); 3 cr.** Introduction to 3-D studio program to students in computer graphics.

**CSC 278 Software Packages for Computer Graphics II (0.3); 3 cr.** This course covers the tools available in Alias/Wavefront's Maya software for the creation of 3D digital animation.

**CSC 279 Software Packages for Computer Graphics III (0.3); 3 cr.** This course is mostly training on 3<sup>rd</sup> party software or plugins for

makor applications in the market (Autodesk 3D studio max, Autodesk Maya...). *Prerequisite:* CSC 277.

**CSC 301 Management Information Systems (3.0); 3cr.** This course is an introduction to the fundamentals of information technologies and to the strategic opportunities and challenges presented by these technologies. The topics covered in this course are strategic uses of information systems, information technology in business: hardware, software, telecommunications. Data and knowledge management, artificial intelligence and expert systems. *Prerequisite:* CSC 216 or CSC 212.

**CSC 305 System Analysis and Design (3.0); 3cr.** Business systems as tools for solving information flow problems within the framework of a structured methodology. Case studies provide the students with practical applications. *Prerequisite:* CSC 226 or its equivalence.

**CSC 306 Web Design (3.0); 3cr.** This course teaches the design of Web sites through an advanced software package. The course takes the students stage-by-stage through the design of specific sites, ranging from personal sites to creating and managing a corporate intranet. Emphasis on advanced topics such as scripting, databases, and the design of site interaction. *Prerequisite:* CSC 217 or CSC 213.

**CSC 311 Theory of Computation (3.0); 3 cr.** Strings and languages, regular sets, finite automata, Kleene's theorem, languages and grammars, Chomsky classification, Turing machines, complexity. *Prerequisites:* CSC 213 and MAT 211.

**CSC 312 Computer Architecture (3.0); 3 cr.** Von Neumann architecture, machine instructions and formats, addressing techniques, microprogramming, fast arithmetic, advanced memory and I/O practices. *Prerequisite:* CSC 219 or CSC 222 or EEN 220.

**CSC 313 Data structures using C++ (3.0); 3cr.** The course will introduce students to the use of Abstract Data type and Data Structures. Topics include: Linked Lists and Recursion, Stacks, queues and their applications, Trees, Balanced trees (AVL, Red-Black) and their implementations, Maps and Hashing, Priority Queues, Heaps, Huffman coding, Graphs vocabulary and implementation, Backtracking. *Prerequisite:* CSC 213.

**CSC 314 Programming Languages (3.0); 3 cr.** A comparative study of programming languages: syntax, semanticist and implementation. Students will also have to learn and gain working familiarity with the ANSI Standard C programming language. *Prerequisite:* CSC 212.

**CSC 316 Computers Security and Their Data (3.0); 3 cr.** This course covers the main concepts of computer security specially, the ones concerned with the latest technology. Encryption (symmetric & asymmetric), and the most important protocols using encryption are introduced. Also, program security, viruses, operating system security, network security and firewalls are explained. *Prerequisite:* CSC 217 or CSC 213.

**CSC 318 Geographic Information Systems (3.0); 3 cr.** Principles techniques and applications of geographic information systems.

**CSC 323 Object-Oriented Programming Using C++ (3.0); 3 cr.** Abstract data types, classes, objects basic properties, inheritance, polymorphism and dynamic binding, multiple inheritance, object-oriented software engineering, modeling and prototyping. *Prerequisite:* CSC 213 or CSC 217.

**CSC 325 Analysis of Algorithms (3.0); 3cr.** An introduction to the analysis of the efficiency and accuracy of algorithms. Dynamic Programming. Greedy Algorithms. Graph Algorithms. Selected topics. *Prerequisite:* CSC 313.

**CSC 343 Character Animation (0.3); 3 cr.** This course introduces the professional tools required for building and animating 3D characters. *Prerequisite:* CSC 277.

**CSC 371 Workshop in Advanced Programming (0.3); 1 cr.** Language laboratory with projects requiring the proper choice of data structures, control structures, and tools of software based on solid theoretical computing concepts. Laboratory 2 hours per week, tutorial 1 hour per week.

**CSC 372 Mathematical Software Packages (1.0); 1 cr.** Introduction to computer programming and simulation using mathematical software packages such as Matlab, Maple, Mathematica.

**CSC 375 Computer Modeling and Simulation (3.0); 3 cr.** Introduction to basic concepts of simulation modeling: data acquisition, model construction and validation, experimentation,

implementing the results. Discrete systems simulation using Matlab software. *Prerequisite:* CSC 213 or CSC 217.

**CSC 376 Applied Security lab (1.2); 1 cr.** This course applies the theoretical concepts of encryption by building or using some security packages. It studies and compares different security features of the current commercial anti-virus and anti-intrusion software, operating systems, database management systems, firewalls and risk analysis packages. *Prerequisite:* CSC 316

**CSC 385 Internet Computing (3.0); 3 cr.** The topics covered in the course include Introduction to Internet, WWW, XHTML, Javascript, MySQL, Apache, PHP, and XML. *Prerequisite:* CSC 213 or CSC 217 or CSC 220.

**CSC 387 Advanced programming using Java (3.0); 3cr.** From C++ to Java, interfaces, inner classes, I/O system, Templates/Generics. Creating Windows & Applets, 2D and 3D painting, Multiple Threads, Java Database Connectivity (JDBC), Java Networking: Client/Server Architecture, Servlet, Java Server Page (JSP). *Prerequisite:* CSC 213.

**CSC 412 Introduction to Computer Graphics (3.0); 3 cr.** Video basics, raster scan graphics, Bresenham algorithm, viewports, geometric forms and models, polygon filling and antialiasing, halftoning, convex boundaries, interior and exterior clipping, hidden lines and hidden surfaces. *Prerequisite:* CSC 213 or CSC 320.

**CSC 414 Applied Operating Systems (3.0); 3 cr.** Fundamental concepts that are applicable to a variety of operating systems. Detailed case studies of Unix, Linux and Windows NT systems. *Prerequisite:* CSC 312.

**CSC 415 Introduction to Operating Systems (3.0); 3 cr.** Topics include operating system concepts; system calls; interprocess communication; race condition; mutual exclusion with/without busy waiting; semaphores; monitors; the problem deadlock; process scheduling; memory management, file systems; security; I/O. *Prerequisites:* CSC 312.

**CSC 417 Advanced Programming Technologies (0.3); 3 cr.** This course covers advanced programming topics using Visual Basic.NET. This includes databases, Web applications, XML, Web services, mobile applications. *Prerequisite:* CSC 213 or CSC 217.

**CSC 422 Introduction to Image Processing (3.0); 3 cr.** Image perception, sampling and quantization techniques, image transforms, image enhancement techniques like noise reduction, blurring, sharpening, edge detection, and contrast enhancing. *Prerequisite:* CSC 213 or CSC 220.

**CSC 423 Software Engineering (3.0); 3 cr.** Techniques of software development, testing, and management. *Prerequisite:* CSC 213 or CSC 217.

**CSC 425 Data Communications and Computer Networks (3.0); 3 cr.** Topics include data communications; transmission media; asynchronous/synchronous transmission; error control; data link control protocols; LAN types and protocols; high-speed LANs; MANs; bridges; WANs; packet/circuit switched data networks; internetworking; Internet IP. *Prerequisites:* CSC 218 or CSC 312.

**CSC 426 Principles of Database Systems (3.0); 3 cr.** The objective of this course is to introduce the fundamental concepts necessary for designing, using and implementing database systems. The course will study data modeling by understanding the concepts data schema, data representation, relations and attributes, normalization, data description language, data definition language and data manipulation languages. The course will also provide an introduction to the next generations systems and basically OODBS. Also the course will cover a number of issues that are important in the design of DBMS including recovery, consistency, security, integrity and query optimization. *Prerequisite:* CSC 213 or CSC 217.

**CSC 430 Computer Graphics and Animation (3.0); 3 cr.** Topics include: mathematical techniques for curve and surfaces; color systems; fractals hidden lines and hidden shad up; surface mapping and ray tracing; techniques of animation. *Prerequisite:* CSC 412 or its equivalence.

**CSC 431 Compiler Design (3.0); 3 cr.** Principles and practices in the design of programming language compilers. Topics: lexical analysis, parsing theory (LL, LR, and LALR parsing), symbol tables, type checking, common representations for arrays, runtime conventions for procedure calls, storage allocation for variables, and generation of code. Students construct two compilers as the programming projects: the first is a simple

predictive parser and the second is a rather large project using Lex and Yacc. *Prerequisites:* CSC 311.

**CSC 432 Introduction to Artificial Intelligence (3.0); 3 cr.** Basic concepts of artificial intelligence, predicate calculus, proof by refutation (Oring algorithm), natural language processing, game trees, heuristic, introduces two programming languages LISP and PROLOG. *Prerequisite:* CSC 213.

**CSC 433 Applied Artificial Intelligence (3.0); 3 cr.** The aim of this course is to introduce Game-related Artificial Intelligence fundamental concepts: Intelligent agents, Heuristic Search, Planning, Uncertainty and Decisions Making (Fuzzy Logic), Learning (Genetic Algorithms). *Prerequisites:* CSC 213.

**CSC 435 Operating Systems and Networks (3.0); 3 cr.** This course provides an introduction to the concepts underlying operating systems and computer networks. Detailed studies of Unix, Linux, Windows NT, Ethernet and TCP/IP protocols. Senior Standing.

**CSC 443 Computer Games Design (3.0); 3 cr.** In this course, the student learns about the main components that are required to design a computer game. The work includes project design activities where the students will be expected to make use of existing programming tools. *Prerequisites:* CSC 343.

**CSC 446 Applied Database Systems (3.0); 3 cr.** This course is intended to be a practical study of the fundamentals of current database technologies and database management systems. Wide range of topics will be covered including uses of databases, database architecture, design, real world implementations, security and integrity issues, performance and concurrency. *Prerequisite:* CSC 221 or CSC 226 or CSC 426.

**CSC 463 Advanced Software Development (3.0); 3 cr.** This course addresses advanced

topics in programming using the relatively new programming language C#.NET, a part of the .NET IDE envelope. The language is intriguing and is intended to programming, using an object-oriented approach, Internet applications with emphasis on Windows interfaced packaged software. It is an integration language that agrees well with almost any other application across the internet. *Prerequisite:* CSC 213.

**CSC 475 Network Programming Lab (1.2); 1 cr.** Applied networking and distributed computing in Java. Networking with sockets. TCP/IP, Multicast, HTTP, RMI, Finger, and ping clients and servers. Multiprotocol chat systems & whiteboards. *Prerequisite:* CSC 425.

**CSC 476 Database Programming lab (1.2); 1 cr.** This course applies the theoretical concepts of database design using a specific application on a commercial database management system. The general concepts of this DBMS including transaction handling, optimization, recovery, and security are checked and compared with other commercial DBMS. *Prerequisites:* CSC 426 or CSC 446.

**CSC 480 Internship 1 cr.** Assigned work at an industrial establishment. The grade will be based on employer's evaluation, written report and oral discussions. *Prerequisite:* Senior Standing.

**CSC 485 Seminar (3.0); 3 cr.** This course is designed to provide students an opportunity to study some topics in computer science that have not been included in the curriculum. *Prerequisite:* Senior Standing.

**CSC 490 Senior Study 3 cr.** Assigned project supervised by a faculty member. The grade will be based on project evaluation and individual oral presentation. *Prerequisite:* Senior Standing.

---

## Undergraduate Courses: Management Information Systems

**MIS 201 Management Information Systems (3.0) ; 3 cr.** This course is designed to expose students, regardless of their field of study, to the major principles of Management Information Systems (MIS). It will help students to understand the role of information technology in the digital economy and to succeed in its emergence.

**MIS 216 Computer Programming for Business (2.2); 3 cr.** Introduction to developing business application programs using a visual programming language as a tool. Programming fundamentals, effective GUI styles, access to databases will be taught using a lecture/lab combination during which students will experience hands-on programming.

**MIS 310 Business Information Systems (3.0); 3 cr.** The course will prepare students to learn ways that organizations improve their business practices through the use of computer technology. It introduces the fundamentals of information technology as well as the current and future challenges resulting from those technologies in businesses. Topics covered include databases, competitive advantage using information systems, internet technologies, IT security, and introduction to the concepts of enterprise resource planning systems (ERP), customer relationship management systems (CRM), and supply chain management systems (SCM).

**MIS 330 Data Management (2.2); 3 cr.** This course introduces the concepts and principles of database management from a business information system approach. The focus is on issues and principles of managing organizational data. The course discusses the components of relational database and information systems and trains students on designing, analyzing, understanding, correcting, implementing and testing a database application for a real world situation/example of business of their choice. Prerequisite: Junior Standing.

**MIS 333 Business Intelligence (3.0); 3 cr.** This course examines computer-based information systems which support decision makers: Decision Support Systems (DSS), GDSS, Data Warehouses, Expert Systems, and Executive Information Systems. Students will explore the

development, implementation, and application of these systems and how these systems can be applied to current business problems. Prerequisite: MIS 330 or CSC 226 or CSC 426.

**MIS 341 Web Applications & Development (2.2); 3 cr.** This course focuses on the design of business applications in the Web environment. Topics include corporate portal, client-server and web applications. Students will understand the principles of distributed applications, learn how to set up a web server and build web applications. Several tools, software packages, and example web applications will be demonstrated. Prerequisite: MIS 330.

**MIS 345 Data Security and Network Administration (3.0); 3 cr.** This course gives an in-depth examination of topics in the management of information technology security including security management, business continuity & disaster recovery, data communication protocols and networking standards. Students will understand the different information communication technologies (ICT) that underlie the Internet and Mobile technology. Prerequisite: MIS 310 or CSC 301.

**MIS 420 System Analysis for Business Applications (3.0); 3 cr.** This course explores the process of identifying and analyzing a business process. It describes the tools and techniques used in building information systems and in the implementation of systems analysis. Students will practice the System Development Life Cycle (SDLC) and Rapid Application Development (RAD) by learning how to gather user requirements for a new information system and translating those requirements into a formal specification for a computer designer. Prerequisite: Senior Standing.

**MIS 431 Enterprise Computing Systems (2.2); 3 cr.** This course helps students learn ways in which organizations may use enterprise systems to accomplish strategic and tactical goals. It focuses on the features of an ERP system and examines the strategic use of ERP systems both inside and outside of the firm in the context of the highly dynamic e-commerce business environment. The use of ERP systems in conjunction with e-business will be featured. Prerequisite: Senior Standing.

**MIS 434 Project Management for Information System (3.0); 3 cr.** This course presents an integrated view of the concepts, skills, tools, strategies and techniques involved in the management of information systems projects. Project formulation, including development of scope, design options, integration with other projects and project development plans will be applied. Prerequisite: MIS 420 or CSC 305.

**MIS 442 Knowledge Management (3.0); 3 cr.** This course focuses on the critical role of

managing knowledge in organizations today. It shows how KM technologies work to strengthen the effectiveness of an organization and how KM perspective is contributing to the understanding of management in a knowledge society under high-level of uncertainty and complexity. Topics include knowledge creation and transfer, tacit and explicit knowledge, KM strategy preparation, and CRM & SCM projects creation using KM. Prerequisite: Senior Standing

---

## Bachelor of Science in Geographic Information Systems

### Degree Requirements (91 credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 And ENL 223 Or ENL 230 - One course from the subcategory <i>Arabic (3cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B - Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3cr.)</i> REG 212, REG 213, REG 215, REG 313, REG 314 - One course from the subcategory <i>Philosophy (3cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	<b>3 cr.</b>
- Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	<b>3 cr.</b>
- Two courses from the category <i>Citizenship (6 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	<b>6 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, CSC 202, MIS 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, - One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207 <i>Students majoring in Geographic Information Systems are not allowed to count GIS courses within the pool of required GER courses.</i>	
<b>Core Requirements</b>	<b>28 cr.</b>
CSC 216, CSC 217, CSC 226, CSC 417, CSC 435, CSC 480, MAT 215, STA 210 Choose two courses from the following list: CSC 218, CSC 219, CSC 231, CSC 273, CSC 301, CSC 305, CSC 306, CSC 316, CSC 323, CSC 385, CSC 387, CSC 423, CSC 463, CSC 485, GIS 411, MIS 333, MIS 345, MIS 434, MIS 442.	
<b>Major Requirements</b>	<b>30 cr.</b>
CEN 250, CEN 251, CSC 446, GIS 211 or CSC 318, GIS 311, GIS 321, GIS 331, GIS 352, GIS 441, GIS 452, GIS 490	
<b>Free Electives</b>	<b>6 cr.</b>

---

## Minor in Geographic Information Systems (15 credits)

The main goal behind starting a minor in Geographic Information Science is to provide students from different backgrounds with the capacity to apply GIS in their area of knowledge and to enhance their skills in a rapidly expanding market of computer-based technology.

Geographic Information Systems includes Geographic Information Systems, Global Positioning Systems and Remote Sensing:

- A Geographic Information Systems (GIS) is a computer-based tool for mapping and analyzing things that exist, and events that happen on earth. GIS technology is a special case of information systems where database consists of features, activities, or events that are definable in space as points, lines, or areas;
- Global Positioning System (GPS) is a satellite system that allows users to collect precise geographic data for use in mapping;
- Remote sensing refers to any technique whereby information about objects and the environment is obtained from a distance with the aid of aircrafts and satellites.

The multidisciplinary nature of the geographic information systems allows students from any field of study—i.e. whose majors include engineering, natural and applied sciences, business, management, marketing, public administration, social sciences, political science, architecture, education, and others—to declare this minor.

### Admission Requirements

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### Pool of Courses

CSC 318 or GIS 211; GIS 311; GIS 331 or GIS 352; GIS 331 or GIS 441; GIS 321 or GIS 452

### Graduation Requirements and Suggested Schedule

To satisfy the graduation requirements of a minor in Geographic Information Systems, a student must pass **five courses** from the pool of courses as follows:

- First semester (2 courses; 6 credits): CSC 318 or GIS 211; GIS 352
- Second semester (2 courses; 6 credits): GIS 311; GIS 441
- Third semester (1 course; 3 credits): GIS 321 or GIS 452 or GIS 411

“D” is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

---

## Undergraduate Courses: Geographic Information Systems

**GIS 211 Principles of Geographical Information Sciences (3.0); 3 cr.** An introduction to Geographical Information System, data structure and information, topology, attributes and database organization, map basics and cartographic representations, and Remote Sensing & GPS.

**GIS 311 Desktop GIS (3.0); 3 cr.** Topics include spatial data entry, data format and structure, maps and raster image registration and rectification, data base design and management, spatial data analysis (vector representation), and handling all types of geographical data with Arc Info Workstation. *Prerequisite:* (GIS 211 or CSC 318)

**GIS 321 Spatial analysis and Modeling (3.0); 3 cr.** Introduction to spatial analysis, vector spatial analysis, network analysis, raster spatial data development, raster analysis, surface modeling, 3-D analysis. *Prerequisite:* GIS 311.

**GIS 331 Implementations of GIS (3.0); 3 cr.** This course focuses on applications in vector data analysis and manipulation, network analysis, spatial analysis, surface modeling, 3-D modeling, and field trips. *Prerequisite:* CSC 217.

**GIS 341 Cartography and Automated Mapping (3.0); 3 cr.** Elements of thematic cartography, cartographic theory, and cartographic projections. Properties of photogrammetric and remotely sensed images; photography, elements of map, photograph, and image interpretation.

**GIS 352 Theories of Remote Sensing (3.0); 3 cr.** Concepts of Remote Sensing, physics of

Remote Sensing, introduction to air photo interpretation, photogrammetry, Remote Sensing sensors and platforms, digital image processing, and overview of applications of remote Sensing.

**GIS 411 Geodetic Science and Satellite Positioning (3.0); 3 cr.** Description of the geodetic mode of the Earth. Relationship between terrestrial observations and grid coordinates. Use of satellites for navigation and positioning. History and review of satellite positioning systems. Measurement techniques using gps. Future trends in satellite positioning technology.

**GIS 441 Cartography, Geodesy and GPS (3.0); 3 cr.** This course introduces the nature of cartography, basic geodesy, map projections, scaling, referencing and coordinate systems, cartographic perception and design. It also describes Global Positioning System (GPS), map data collection and design.

**GIS 452 Advanced Remote Sensing (3.0); 3 cr.** This course focuses on hands on applications of Remote Sensing data collection, data preparation and processing, image distortion, radiometric and geometric corrections, image enhancement and classification, image mosaicking, space triangulation, and digital representation of relief stereoscopy. *Prerequisite:* GIS 352.

**GIS 490 Senior Project (3.0); 3 cr.** Assigned project supervised by a faculty member. The grade will be based on project evaluation and individual oral presentation. *Prerequisite:* Senior Standing.

---

## **Master of Science in Computer Science**

### **Admission Requirements**

In addition to the University graduate admission requirements, candidates are expected to have a sufficient background in computer science and mathematics. Those who do not meet these requirements may be given provisional admission pending satisfactory completion of some undergraduate courses. The credits earned for these courses will not be counted towards the 30 credits required for the degree of Master of Science (M.S.) in computer science.

### **Graduation Requirements**

To satisfy the requirements for the degree of M.S. in Computer Science, the student must complete a total of 30 credits with an overall average of at least 3.0/4.0.

### **Degree Requirements (30 Credits)**

- |  |               |
|--|---------------|
| <b>1- Complete the following four required courses:</b><br>MAT 661, CSC 616, CSC 623, CSC 626  | <b>12 cr.</b> |
| <b>2- Complete two elective courses from the following pool</b><br>CSC 611, CSC 622, CSC 632, CSC 645, CSC 647, CSC 670, CSC 685, MAT 662, STA 614 | <b>6 cr.</b>  |
| <b>3- Complete two elective courses from the following pool</b><br>CSC 603, CSC 605, CSC 615, CSC 625, CSC 636, CSC 670, CSC 685                   | <b>6 cr.</b>  |
| <b>4- Complete the MS thesis requirements</b><br>CSC 691 and CSC 692   | <b>6 cr.</b>  |

---

## **Regulations concerning the “thesis courses” of the Master of Science in Computer Science**

### **Master Thesis**

Students may register for the thesis (CSC 691 & CSC 692) upon the completion of at least 18 credits with an overall average of at least 3.0/4.0 and after receiving the approval of both the department chairperson and the thesis advisor.

### **Duration of Work**

The work for the thesis is expected to be completed within a period of two semesters. Otherwise, the student shall register for one credit every semester thereafter.

### **Jury for the Oral Defense**

After receiving a written note of completion along with four bound copies of the master thesis from the master thesis advisor, the department chairperson shall appoint the jury for the oral defense and its chairperson, and shall distribute to each member one copy of the master thesis. The jury shall consist of the master thesis advisor and two full-time faculty members.

**Schedule for the Oral Defense**

The oral defense for the master thesis shall be scheduled by the jury chairperson one month from the date of the appointment of the jury at the latest.

**Evaluation and Grade**

Bound master thesis copies are required for the evaluation. The jury shall evaluate the work for the master thesis and assign the appropriate grade by a majority vote. In case of a tie, the committee chairperson shall have the casting vote.

**Final Copy of the Master Thesis**

The student shall submit four bounded copies of the approved final copy of the master thesis to the jury chairperson who, in turn, shall distribute them to the Library, Faculty, Department, and to the thesis advisor.

---

## Graduate Courses: Computer Science

**CSC 603 Objected-Oriented Applications (3.0); 3 cr.** Emphasizes the use of Object-Oriented Architectures and Components in order to build business to business and business to client applications. The multi-tier architecture will be studied in depth through Enterprise Java Beans (EJB) specifications. The development environment is Jbuilder 4 of Borland.

**CSC 605 System Analysis and Design (3.0); 3 cr.** Emphasizes the design aspects of systems development, including logical and physical design, implementation, resting and operation. State-of the art system development process, methods and tools are presented.

**CSC 606 Operating Systems and Security (3.0); 3 cr.** This is a hands-on system vulnerabilities like stake and heapoverflows, return to libc attacks etc... Attack counter measures such as stack guard and address space randomization are discussed. The students are expected to write their own exploits in addition to applying known exploits in a controlled linux/x86 environment. Viruses and worms are covered along with defenses like disinfection, integrity checking and sandboxing.

**CSC 611 Advanced Theory of Computation (3.0); 3 cr.** Topics include: primitive recursive functions, Church thesis, recursive and recursively enumerable sets, time and space complexity measures, the classes P and NP-completeness, and hierarchy of complexity.

**CSC 612 Advanced Computer Graphics (3.0); 3 cr.** Topics include: mathematical techniques for curve and surfaces; color systems; fractals hidden lines and hidden shad up; surface mapping and ray tracing; techniques of animation.

**CSC 613 Computer Vision and its Applications (3.0); 3 cr.** Focuses on computer techniques for understanding and interpreting visual data, physics of vision, boundary detection of objects, region growing, analysis of texture and motion, and analysis on objects in scenes.

**CSC 614 Modeling and Simulation in OOP (3.0); 3 cr.** Encapsulation, use of inheritance (including multiple inheritance), collections and iterators, run-time typing identification, exception handling. Some aspects of distributed and parallel object-oriented systems.

**CSC 615 Advanced Computer Architecture (3.0); 3 cr.** Early systems, parallelism and parallel processing, vector processors, array processors, associative processors, VLIW architecture, memory and I/O subsystems, networking. Case Study: RISC architecture.

**CSC 616 Advanced Database Systems (3.0); 3 cr.** Topics include: Data modeling using ER model; relational model; relational algebra; SQL; functional dependencies and normalization; query processing and optimization; distributed database design procedure; distributed query optimization concurrency control; recovery; integrity and security; data warehouse and data mining.

**CSC 621 Advanced Compiler Design (3.0); 3 cr.** The course will cover some of the core-topics, already studied in CSC 431 (or in some equivalent course at another university), but with more details and rigor. Some of the topics are: lexical analysis, parsing theory (LL, LR, and LALR parsing), symbol tables, type checking, common representations for arrays, runtime conventions for procedure calls, storage allocation for variables, generation of code, and code optimization.

**CSC 622 Advanced Analysis of Algorithms (3.0); 3 cr.** The course will cover some of the core-topics, already studied in CSC 325 (or in some equivalent course at another university), but with more details and rigor. In addition, we will present a selection of advanced topics, mainly the theory of NP-completeness and algorithms for parallel computers.

**CSC 623 Advanced Software Engineering (3.0); 3 cr.** Advanced Topics in software engineering are covered including: formal methods, cleanroom software engineering, component-based development, client/server software engineering, web engineering, reengineering, computer-aided software engineering.

**CSC 625 Advanced Operating Systems (3.0); 3 cr.** Special emphasis on distributed computing, and the services provided by distributed operating systems. Important topics include naming, security, remote procedure call, networks, concurrency, transactions, parallel computing, shared memory, message passing, and scale.

**CSC 626 Computer Communications and Networks (3.0); 3 cr.** Computer communications and layered network architecture; implementation and configuration of local Area Network (LANs), and Wide Area Network (WANs), TCP/IP, Internetworking and network management.

**CSC 631 Multimedia Systems (3.0); 3 cr.** This course provides the background needed for the design and development of computer-based systems that combine text, still images, sound, animation, and full motion video. The course will examine design methodologies used in planning these systems, and authoring languages used to create such systems.

**CSC 632 Artificial Intelligence (3.0); 3 cr.** Principles of problem solving and planning and machine learning systems. Introduction to current State-of-the art expert systems and expert systems tools.

**CSC 633 Digital Image Processing (3.0); 3 cr.** Image perception, sampling, quantization techniques, transforms, enhancement techniques, like noise reduction, blurring, sharpening, edge detection, and contrast enhancing, image restoration and analysis.

**CSC 636 Computer Security (3.0); 3 cr.** This is a graduate course on computer security. The emphasis is on formal model and the foundations of computer security. Topics include: access control and protection models. Security, confidentiality and integrity policies are also discussed and representative models like Bell-LaPadula, Biba and Chinese wall are chosen as examples. Information flow, auditing and vulnerability analysis are also covered.

**CSC 645 Neural Networks for Computing (3.0); 3 cr.** Introduction to neural networks algorithms, adaptive behavior, associative learning. Applications to cognitive information processing and control and signal processing.

**CSC 647 Decision Support Systems (3.0); 3cr.** Decision Support Systems (DSS) help users in solving problems and in reaching a decision based on available data, knowledge bases, and decision models. This course will expose students to theoretical DSS concepts, and to practical issues. Students will gain hands on experience by creating a real world DSS. Topics include: DSS analysis, modeling, and development; data warehousing, mining and OLAP; knowledge management (acquisition, validation, representation) and inference techniques.

**CSC 670 Selected Topics in Computer Science (3.0); 3 cr.** Topics of current interest in computer science.

**CSC 685 Readings in Computer Science (3.0); 3 cr.** Designed primarily for those students wishing to study a particular area in computer science under the supervision of a faculty member.

**CSC 690 Master Thesis in Computer Science 6 cr.** The research for the master thesis must show the student's proficiency in approved topics in computer science.

**CSC 691 Master Thesis in Computer Science I 3 cr.** The research for the master thesis must show the student's proficiency in approved topics in computer science.

**CSC 692 Master Thesis in Computer Science II 3 cr.** Continuation of CSC 691.

## DEPARTMENT OF MATHEMATICS AND STATISTICS

---

<b>Professor:</b>	Eid, George M.
<b>Associate Professors:</b>	Ghalayini, Bassem (Chair); Haddad, , John; Jajou, Amer F.; Keirouz, Malhab; Maalouf, Ramez; Saliba, Holem
<b>Assistant Professors:</b>	Assaad, Joycel Hage, Ré-mi; Hosry, Aline; Nakad, Roger; Rached, Ziad; Sabiini, Guitta
<b>Senior Lecturers :</b>	Freiji-Bou Nassif, Claudia ; Hajjar-Muça, Theresa ; Saadé, Ban

---

### Mission of the Department of Mathematics

The main mission of the Department of Mathematics and Statistics is to provide high quality instruction at both the undergraduate and graduate levels. The Department offers a number of degree programs and a range of courses that enable students to pursue graduate degrees or to work in jobs that require a high degree of mathematical skills. Moreover, the Department is committed to enhancing and developing its research output and to supporting other professional activities

### Programs of Study

The Department offers programs in Mathematics, Actuarial Sciences, and Applied Statistics leading to the degrees of:

- BS in Mathematics (90 Credits)
- BS in Actuarial Sciences (94 Credits)
- MS in Mathematics (33 Credits)

The Department also offers the following minors:

- Minor in Actuarial Sciences (18 credits)
- Minor in Mathematics (15 Credits)

## The Undergraduate Program

Our undergraduate program is designed to prepare students for graduate studies in Mathematics and in mathematics related fields such as Applied Mathematics, statistics, Actuarial Sciences and Financial engineering. The program main potential employers are organizations concerned with risk such as Insurance companies, banks, actuarial consultancy and statistical agencies.

---

### Bachelor of Science in Actuarial Sciences

**Academic Advisor:** Mrs. Claudia Freiji Bou Nassif

#### Actuarial Sciences Mission Statement

The mission of the Bachelors of Actuarial Science program at NDU is:

- To produce graduates who can contribute significantly to the financial security of individuals and corporations through proper training on how to identify, quantify, assess and manage risk;
  - To provide students with a curriculum aligned in content and rigor with the learning outcomes of the Society of Actuaries. Such program prepares our graduates to successfully write at least three of the preliminary exams of the SOA, leading towards professional designations from international actuarial societies;
  - To provide students with the theoretical background needed to qualify them to pursue graduate level education in Actuarial Science or related fields.
- 

Actuarial Sciences is a field concerned with the applications of mathematics and statistics to long-term financial problems. These problems are frequently associated with life / casualty insurance and pension provision. An actuary has to:

- Assess risks
- Project mortality rates
- Take account of economic factors
- Determine levels of premiums on long-term contracts
- Forecast short- and long-term benefits and contributions for environments such as social security, pension funds, insurance companies, and banks

The B.S. degree in Actuarial Sciences prepares students for careers as:

- Assistant Actuaries in the insurance and reinsurance industries
- Analysts of risk and uncertainty regarding potential financial losses
- Underwriters in insurance companies and government agencies
- Consultants in financial and investment corporations

Students enrolled in the B.S. degree will be prepared to take a series of examinations in actuarial science leading to ASA and ACAS designation under the American Society of Actuaries (ASA) and Casualty Actuarial Society (ACAS). They also would benefit from VEE (Validation by Educational Experience) approved credits for Economics, applied statistics and corporate finance required for the attainment of the above mentioned designation.

#### Admission Requirements

For admission requirements to the degree of B.S. in Actuarial Sciences, refer to the section entitled “Undergraduate Admission” of this catalog.

## Graduation Requirements

To receive the degree of B.S. in Actuarial Sciences, a student must fulfill all requirements of the degree program, complete all required courses, accumulate a total of 94 credits with an overall GPA of at least 2.0/4.0 and a minimum GPA of 2.0/4.0 in both the core and major requirements, and clear all accounts with the University. Candidates for degrees are reminded that grades of "I" assigned during the last semester to courses required for graduation will result in delaying of graduation.

### Degree Requirements (94 credits)

#### General Education Requirements 27 cr.

##### A - Communication Skills in English and Arabic 9 cr.

- Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B - Philosophy and Religion 6 cr.

- One course from the subcategory *Religion (3cr.)*

REG 212, REG 213, REG 215, REG 313, REG 314

- One course from the subcategory *Philosophy (3cr.)*

ENS 205, PHL 211, PHL 311, POS 345

##### C- Cultural Studies and Social Sciences 3 cr.

- One course from the category *Cultural Studies and Social Sciences*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212

##### D- Citizenship 3 cr.

- Two courses from the category *Citizenship*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

##### E - Science and Technology 6 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, MIS 201, STA 202, STA 210

##### OR

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, BIO 201, NTR 201, PHS 207

*Students majoring in Actuarial Sciences are not allowed to count ACS courses within the pool of required GER courses.*

##### F) Study and Learning Skills 0 cr.

##### Core Requirements 33 cr.

ACO 201, ACO 202, ECN 211, ECN 212, MAT 206, MAT 213, MAT 215, MAT 224, MAT 235, CSC 212 or CSC 216, STA 312

##### Major Requirements 28 cr.

ACS 300, ACS 310, ACS 314, ACS 324, ACS 330, ACS 424, ACS 450, MAT 325,

STA 315, STA 370

**Free Electives**

**6 cr.**

**Minor in Actuarial Sciences (18 credits)**

This minor introduces students to the mathematical foundation of risk assessments under an insurance context. It suits students majoring in Business, Computer Science, Mathematics, or Engineering interested in developing their understanding of future risk evaluation.

**Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

**Pool of Courses**

ACS 310; ACS 314; ACS 324, MAT 205 or MAT 206; MAT 213; MAT 325 or MAT 326; STA 207 or STA 210.

**Graduation Requirements and Suggested Schedule**

To satisfy the graduation requirements of a minor in actuarial sciences, a student must pass **six courses** from the pool of courses listed above.

Students with a deficient background in mathematics can exclude ACS 324, while students with a sufficient background in mathematics can take the 3 ACS courses and 3 other math courses from the pool.

“D” is the passing grade for each course, and the minor should be completed with a minimum GPA of 2.0.

---

## Undergraduate Courses: Actuarial Sciences

**ACS 300 Actuarial Problem Solving (1.0); 1 cr.** This course is designed specifically to help students prepare to sit for the Society of Actuaries Exam P/1. Problems from previous actuarial exams and other relevant sources are tackled in class focusing on techniques and shortcuts used to enhance problem solving skills under time pressure. *Corequisite:* MAT 325 or MAT 326.

**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’etre” 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 or MAT 325 or MAT 326 or STA 207..

**ACS 314 Actuarial Mathematics I (3.0); 3 cr.** Introduces the basis of actuarial Mathematics. Topics include Risk Aversion and the different Utility functions; Survival distribution for future lifetime as well as curtate future lifetime random variable; Force of Mortality and its relation to the survival function; Life tables and their use in calculating probabilities of survival; Expectation of future lifetime (Complete and Curtate); Assumptions regarding Fractional ages; Special Laws of Mortality (Gompertz, Makeham, etc); Ultimate Life tables; Life Insurance payable at the moment of death (continuous) or at the end of year of death (discrete); Term Insurance; Deferred Insurance and Endowment Insurance;

Varying Benefit Insurance (Increasing/Decreasing); Relation between expected present value of a benefit paid at the moment of death and that payable at the end of the year of death. *Prerequisite:* (MAT 325 or MAT 326) and (MAT 206 or MAT 205).

**ACS 324 Actuarial Mathematics II (3.0); 3 cr.** This course assesses Life Annuities (paid in advance, in arrears or Continuous) for a whole life, term or deferred period. Annuities with Level or Varying payments done annually or mthly; Net Premium Determination through the equation of Equivalence for fully continuous, discrete and monthly payments; Apportionable premiums; Accumulation type Benefits; Net Premium Reserves (fully continuous, Discrete and semi-continuous) Prospective and Retrospective Reserves; Reserves at fractional durations; Differential Equations for fully continuous reserves. *Prerequisite:* ACS 314.

**ACS 330 Insurance Law and Regulations (3.0); 3 cr.** Elements of business law as it applies to insurance; government and social policy as it relates to general insurance; automobile insurance and assigned risk plans.

**ACS 424 Pension Fund Mathematics (3.0); 3 cr.** Valuation theory for pension plans; Description of benefit, Benefit calculations; Funding. Accrued Benefit Method, Projected Cost Method, Aggregate method; Introduction to gains and losses. *Prerequisite:* ACS 324.

**ACS 450 Investment and Asset Management (3.0); 3 cr.** Financial securities and markets Efficient portfolios and efficient frontiers, The single index model; Utility analysis, The standard capital asset pricing model; Efficient markets, Interest rate theory; Options and Futures. *Prerequisite:* MAT 325 or MAT 326.

**ACS 460 Multi-life and Multi-Decrement Models (3.0); 3 cr.** The joint life and last-survivor status; Insurance and annuity benefits, simple contingent functions; Insurance models including expenses; Types of expenses; Net premium and reserves. Multiple decrement models; Multiple and Associate single decrement tables; Net single Premium. *Prerequisites:* ACS 324.

---

## Undergraduate Courses: Statistics

### **STA 202 Statistics for Humanities (3.0); 3 cr.**

This course is designed to introduce students of the humanities to the most important basic statistical techniques used in their field of research, and to the SPSS software package. The course material covers data collection, organization and graphing; describing distributions: scores, central tendency, and variation; sampling and probability distributions; estimation and hypothesis testing; chi-square test; correlation; analysis of variance. The associated computer lab sessions allow the students to apply the methods learned to data sets and interpret findings.

**STA 203 Biostatistics (3.0); 3 cr.** Converse the fundamental principles of statistics as they apply to biological problems, including statistical inference, analysis of variance, and correlation regression. A software package will be used. *Prerequisite:* Sophomore Standing.

**STA 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 models then proceeds to three variable and multi-variable regression models. Thorough discussion of: The assumptions underlying linear regression models; Diagnostic tests, and correction methods for heteroscedasticity, multicollinearity and serial correlations. The second part of the course introduces deterministic and stochastic time series models and discusses: Basic smoothing and extrapolation techniques; Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF) for the different models; Stationarity, nonstationarity and Invertibility conditions; Model specification, Parameter estimation and forecasting for the different stationary time series models AR (p), MA (q), ARMA (p, q), and the homogenous non-stationary models of order d ARIMA. *Prerequisite:* STA 210.

### **STA 315 Mathematical Statistics (3.0); 3 cr.**

Sampling; estimation; hypothesis testing; t-distribution; chi-square distribution; F-distribution; linear regression and correlation. Analysis of variance and covariance; multiple regression. *Prerequisite:* MAT 325.

### **STA 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.

---

## Graduate Courses: Statistics

**STA 500 Applied Statistics for Business and Economics (3.0); 3 cr.** The course covers the following main topics: Introduction to Statistics and Probability, discrete and continuous random variables; Sampling distribution; Testing hypothesis and estimation; Analysis of variance; Simple and multiple regression; And time-series analysis. The course also applies these concepts

and Techniques to actual real world business and economic situations.

### **STA 614 Advanced Statistical Methods for Business Decisions (3.0); 3 cr.**

This course develops an analytical approach to risk in management decisions. Topics include decision analysis; correlation and multiple regression;

discriminant; judgment; canonical; cluster and factor analysis.

**STA 653 Stochastic Processes (3.0); 3 cr.**

Poisson processes: waiting time distributions, non-homogeneous Poisson processes. Renewal theory: Wald's equation; Renewal reward processes. Discrete Markov chains: classification of states; Limit theorems. Continuous-time Markov chains: limiting probabilities; Birth and death processes. Martingales: stopping times; Martingale convergence theorem; Azuma's inequality. Brownian motion: hitting times; Backward and forward diffusion equations. *Prerequisite:* MAT 325.

**STA 654 Methods of Multivariate Analysis (3.0); 3 cr.**

Least Square and multiple regression analysis; Canonical correlation Principle component analysis, Hotelling's  $T^2$  procedures; Multivariate analysis of variance; Discriminant analysis; Cluster analysis. *Prerequisite:* STA 315.

**STA 663 Time Series Analysis (3.0); 3 cr.**

Topics include stationary models and autocorrelation function; Estimation and elimination of trend and seasonal components;

Stationary processes: properties, ARMA processes, estimation of mean and autocorrelation function; forecasting stationary time series; Spectral analysis; Non-stationary and seasonal time series models: ARIMA models, forecasting ARIMA models, seasonal ARIMA models. Applications using real and simulated data. *Prerequisite:* STA 315 or equivalent.

**STA 664 Probability and Statistical Inference (3.0); 3 cr.**

Functions of random variables and sampling distribution: normal distribution, t-distribution, chi-square distribution, F-distribution. Stochastic convergence: convergence in probability; Convergence in distribution; The central limit theorem. Point estimation: properties of estimators; Finding estimators; Rao-Blackwell theorem; Cramer-Rao inequality. Confidence interval estimation: one population and two populations. Hypothesis testing theory: power function, Neyman-Pearson lemma, likelihood ratio test. Applications: Testing various unknown parameters of one population and several populations. Bayesian methods: prior and posterior distributions, credible intervals. *Prerequisite:* MAT 325.

---

## Bachelor of Science in Mathematics

### Degree Requirements (90 credits)

#### General Education Requirements 27 cr.

##### A - Communication Skills in English and Arabic 9 cr.

- Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

##### B - Philosophy and Religion 3 cr.

- One course from the subcategory *Religion*

REG 212, REG 213, REG 215, REG 313, REG 314

OR

- One course from the subcategory *Philosophy*

ENS 205, PHL 211, PHL 311, POS 345

##### C - Cultural Studies and Social Sciences 6 cr.

- Two courses from the category *Cultural Studies and Social Sciences (6 cr.)*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212

##### D - Citizenship 3 cr.

- One course from the category *Citizenship (3 cr.)*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

##### E - Science and Technology 6 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, MIS 201, STA 202, STA 210

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207

*Students majoring in Mathematics are not allowed to count MAT courses within the pool of required GER courses.*

#### Core Requirements 24 cr.

Twenty two credits: CSC 212, CSC 213, MAT 211, MAT 213, MAT 215, MAT 224, MAT 235, PHS 212..

#### Major Requirements 33 cr.

1. Required courses: 18 credits

MAT 325, MAT 333, MAT 411, MAT 412, MAT 413, MAT 423.

2. Elective major courses: 15 credits to be chosen from math courses numbered 300 and above. Six of these credits may also be chosen from among the following courses: STA 315, STA 370, CSC 311, CSC 313, CSC 325.

#### Free Electives 6 cr.

Six credits with the approval of the advisor.

---

### **Minor in Mathematics (15 credits)**

This minor is intended primarily for students in fields of study that require strong mathematical skills such as Engineering, Computer Science, and Physics. Dependent on the choice of courses, the student can, for instance, enhance his understanding in the areas of real and complex analysis, algebra, and/or numerical analysis.

#### **Admission Requirements**

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

#### **Pool of Courses**

MAT 215; MAT 224; MAT 235; MAT 305; MAT 324; MAT 326 or MAT 325; MAT 333; MAT 335; MAT 339; MAT 411; MAT 412; MAT 418

#### **Graduation Requirements and Suggested Schedule**

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

- First semester (2 courses; 6 credits)  
MAT 224; MAT 215 or MAT 235
- Second semester (2 courses; 6 credits)  
Choose two courses from the pool: MAT 325 or MAT 326; MAT 305; MAT 324 or  
MAT 333; MAT 335; MAT 339
- Third semester (1 course; 3 credits)  
Choose one course from the pool: MAT 411; MAT 412; MAT 418

“D” is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

---

## Undergraduate Courses: Mathematics

**MAT 101 Pre-Calculus (3.0); 3 cr.** Integer exponents, scientific notation, measurements, polynomials equations, factoring, rational equations; complex numbers; quadratic equations and inequalities, roots and radicals, rational exponents; radical equations. *Prerequisite:* Placement or Freshman Standing.

**MAT 105 Principles of Calculus (3.0); 3 cr.** Coordinate systems; lines in the plane, functions and graphs. Limits and continuity. Differentiation. Variation and concavity, maxima and minima, graphing. Exponential and logarithmic functions. Antiderivatives. Definite and indefinite integrals. *Prerequisite:* Placement or Freshman Standing.

**MAT 111 Calculus and Analytic Geometry I (3.0); 3 cr.** Functions and graphs, Rate of change, graphing, limit and continuity. Derivatives; differentiation rules. Applications of derivatives; maximum, minimum, the mean value theorem, L'Hôpital's rule. *Prerequisite:* Placement or Freshman Standing.

**MAT 112 Calculus and Analytic Geometry II (3.0); 3 cr.** Integration; applications of definite integrals; areas, volumes, length, moments. Transcendental functions; Inverse functions and their derivatives, hyperbolic functions and their derivatives, Techniques of integration. *Prerequisite:* MAT 111 or Placement.

**MAT 202 Mathematics for Arts (3.0); 3 cr.** Principles of coordinate geometry; symmetry of motion; rigid motions; reflections; rotations; translation; glide reflections; classifying patterns; symmetry of scale and fractals. *Prerequisite:* Sophomore Standing.

**MAT 204 Mathematics for Business and Economics I (3.0); 3 cr.** This course is designed to introduce topics in calculus and matrix analysis with applications to business, management, economics and social science. *Prerequisite:* Sophomore Standing.

**MAT 205 Mathematics for Business and Economics II (3.0); 3 cr.** Sequences; arithmetic and geometric progression. Simple interest; compound interest. Continuous compounding; annuities; amortization and sinking funds. Bonds and stocks. Capital budgeting and depreciation. *Prerequisite:* Sophomore Standing. Accumulation and discounting, simple and compound interest, effective and nominal interest, discount rates, forces of interest and

discount, varying interest. Equations of value. Annuities immediate and due. Perpetuities. Amortization schedules and sinking funds. Introduction to bonds. *Prerequisite:* Sophomore Standing.

**MAT 206 Financial Mathematics (3.0); 3 cr.** This course describes the fundamental concepts of financial mathematics and how these values are applied in calculating the present and accumulated values of various streams of cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Also the course introduces financial instruments such as derivatives and the concept of no-arbitrage. *Prerequisite:* Sophomore Standing.

**MAT 211 Discrete Mathematics (3.0); 3 cr.** Arithmetic in different bases; set theory; relations and functions; mathematical reasoning and induction; counting techniques; permutations and combinations; logic; Boolean algebra; and lattice theory. *Prerequisite:* Sophomore Standing.

**MAT 213 Calculus III (3.0); 3 cr.** Improper integrals. Infinite sequences and series, power series. Taylor and Maclaurin series. Polar coordinates: graphing, integration and areas in polar coordinates. Vectors and vector-valued functions and motion in space. *Prerequisite:* MAT 112 or Placement.

**MAT 214 Applied Linear Algebra (3.0); 3 cr.** An introduction to basic ideas and techniques of Linear Algebra for sophomore students. The course covers Linear systems Matrices, Determinants, Eigen values and Eigen vectors. Each of these topics is followed by one or more applications. *Prerequisite:* Sophomore Standing.

**MAT 215 Linear Algebra I (3.0); 3 cr.** Linear systems and matrices and their applications; determinants; vector spaces; subspaces, basis and dimension, rank and nullity. Eigenvalues and eigenvectors; linear transformations and their algebraic properties. *Prerequisite:* Sophomore Standing.

**MAT 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 227 Mathematics for Computer Games and Animation (3.0); 3 cr.** This course provides a conceptual understanding of the mathematics that forms the underlying basis of 3D graphics and games. It includes a focused review of different mathematical topics in calculus, algebra and numerical methods that are required in the design of game engines and 3D graphics. This course provides not only theoretical mathematical background, but also many examples and exercises on how these concepts are used to affect how a game looks and plays. *Prerequisite:* MAT 215.

**MAT 235 Ordinary Differential Equations (3.0); 3 cr.** First-order ordinary differential equations. Higher-order linear differential equations. Power series solution: ordinary and singular points. Laplace transform, convolution. Systems of linear differential equations. *Prerequisite:* MAT 213.

**MAT 303 Mathematical Logic and Set Theory (3.0); 3 cr.** Axiomatic theory of sets; the axiom of choice; propositional logic; quantification theory; formal construction of the sets  $\mathbb{N}$ ;  $\mathbb{Z}$ ;  $\mathbb{Q}$ ;  $\mathbb{R}$ ; and  $\mathbb{C}$ . Cardinal numbers and their arithmetic; ordinal numbers and transfinite induction. *Prerequisite:* MAT 211.

**MAT 305 Number Theory (3.0); 3 cr.** Foundations of arithmetic; properties of integers and prime numbers; unique factorization; congruence; Diophantine equations; theorems of Fermat; Euler; and Wilson; quadratic reciprocity. *Prerequisite:* MAT 211.

**MAT 315 Linear Algebra II (3.0); 3 cr.** Inner product spaces, orthonormal spaces, orthogonal matrices, change of basis. Eigenvalues, orthogonal diagonalization. Applications. General linear transformations. Inverse of and matrix of a linear transformation, similarity. *Prerequisite:* MAT 215.

**MAT 324 Mathematics for Engineering (3.0); 3 cr.** Functions of a complex variable, Cauchy-Riemann equations; integration in the complex plane; series and residues, evaluation of real integrals. *Prerequisite:* MAT 224.

**MAT 325 Elements of Probability (3.0); 3 cr.** Probability of events; axioms of probability;

conditioning and independence; random variable and expectations; discrete and continuous distributions; moment generating functions; the Central Limit Theorem. *Corequisite:* MAT 224.

**MAT 326 Probability & Statistics For Engineers (3.0); 3 cr.** Concepts of probability, random variables, mathematical expectation, variance, confidence intervals. Estimation, testing of statistical hypotheses, regression and correlation, analysis of variance. *Corequisite:* MAT 224.

**MAT 333 Complex Variables (3.0); 3 cr.** Analytic functions; derivatives; Cauchy-Reimann equations; complex integration; Cauchy integral theorem; power series; Laurent series; residue theorem; conformal mapping; Cauchy-Christoffel transformation. *Prerequisite:* MAT 224.

**MAT 335 Partial Differential Equations (3.0); 3 cr.** Second order linear partial differential equations – heat, wave and Laplace's equations; Fourier series; separation of variables; Fourier Integral; Fourier and Laplace transforms; Dirichlet and Neumann problems for different domains; first order equations; characteristic method; systems of equations. *Prerequisite:* MAT 224, MAT 235.

**MAT 336 Numerical Methods for Finance (3.0); 3 cr.** Basics of financial theory; basics of numerical analysis; numerical integration, deterministic and Monte-Carlo methods; finite difference methods for partial differential equations.

**MAT 337 Foundations of Geometry (3.0); 3 cr.** Introduces the axiomatic method, Euclidean and non-Euclidean geometries; historical developments in geometry. This course is primarily designed for students interested in mathematics education. *Prerequisite:* MAT 215, MAT 224.

**MAT 339 Numerical Analysis (3.0); 3 cr.** Error analysis; roots for non-linear equations; polynomial interpolation; approximation of functions by polynomials; numerical differentiation and integration. *Prerequisite:* MAT 213 and a Computer Programming Language.

**MAT 400 Elementary Differential Geometry (3.0); 3 cr.** The main purpose of this course is the study of curves and surfaces in three-dimensional Euclidean space: Tangent space, vector fields, Gauss map, geodesics, curvature,

minimal surfaces, the Gauss-Bonnet Theorem, and an introduction to smooth manifolds. *Prerequisite:* MAT 224.

**MAT 411 Algebra I (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 Advanced Calculus I (3.0); 3 cr.** The topological properties of the real number system; uniform continuity; Weierstrass approximation theorem; Riemann-Stieltjes integral; uniform convergence; improper integrals with a parameter; the Beta and Gamma functions. *Corequisite:* MAT 412 and Senior Standing.

**MAT 418 Numerical Linear Algebra (3.0); 3 cr.** The course presents mathematical algorithms and analysis to solve linear systems of equations and matrix eigenvalue problems. Matrix norms and analysis. Direct and iterative methods: including factorization methods, singular value decomposition, Jacobi and Gauss-Seidel iteration, power methods, QR algorithm. Operation counts, condition numbers and error analysis. *Prerequisite:* MAT 215, MAT 224, and a Programming language.

**MAT 421 Algebra II (3.0); 3 cr.** Rings; ideals; quotient rings; Euclidean rings; polynomial rings; field extensions; automorphism of fields;

separable and normal extensions; finite fields; Galois theory.. *Prerequisite:* MAT 411 and senior standing.

**MAT 423 Advanced Calculus II (3.0); 3 cr.** Jacobian's of transformations; functional dependence; transformations of multiple integrals; extremal problems of functions of several variables; integrals over curves and surfaces; differential forms; independence of path; exact differential forms. *Prerequisite:* MAT 413.

**MAT 430 Topology II (3.0); 3 cr.** This course is a continuation of Topology I, it introduces countability and separation axioms, completely regular spaces, Complete metric spaces, the fundamental groups and covering spaces. *Prerequisite:* MAT 412.

**MAT 431 Vector Spaces and Modules (3.0); 3 cr.** Vector spaces and modules; homomorphisms; groups, rings, and modules of matrices; exact sequences; direct sum decompositions; dual spaces; canonical forms; multilinear algebra. *Prerequisite:* MAT 411.

**MAT 450 Introduction to General Topology (3.0); 3 cr.** Topological spaces; metric spaces; compactness and connectedness; continuity; product and quotient spaces; function spaces; separation and countability axioms; normal and completely regular spaces. *Prerequisite:* Senior Standing.

**MAT 460 Special Topics in Mathematics (3.0); 3 cr.** Students study selected contemporary topics in Mathematics. *Prerequisite:* Specified when Offered.

## The Graduate Programs

The department of mathematics and statistics offers (i) a Master of Science degree in Mathematics and (ii) a Master of Science degree in Financial Mathematics.

---

### The Degree of Master of Science in Mathematics

The purpose of the M.S. program in Mathematics is to prepare students for continued advanced study of mathematics, college teaching, or certain jobs requiring an in- depth understanding of mathematics. The program offers the student a choice to pursue either a course work option or a thesis option.

#### Master of Science in Mathematics Mission Statement

The mission of the NDU program for a Master of Science in Mathematics is to provide high quality instruction to students, to expose them to a significant range of advanced mathematical disciplines and to build up their reasoning and analytical skills in order to enable them to:

- pursue teaching at the high school or college level;
- secure employment in positions which require analytical ability;
- achieve the experience necessary to do research in Mathematics;
- pursue Ph.D. programs in Mathematics or related fields.

#### Admission Requirements

In addition to the University graduate admission requirements, candidates are expected to have a sufficient background in mathematics. Those who do not meet these requirements may be given provisional admission pending satisfactory completion of a set of undergraduate courses. The credits earned for these courses will not be counted towards the 33 credits required for the degree of Master of Science in Mathematics.

#### Graduation Requirements

To satisfy the requirements for the degree of Master of Science in Mathematics, the student must complete a total of 33 credits with an overall average of at least 3.0/4.0.

#### Degree Requirements (33 credits)

##### Core courses

##### Course work and Thesis option

MAT 621, MAT 623, MAT 625, MAT 634, MAT 641, MAT 664

18 cr.

##### Elective Courses

**Course work option:** 15 credits to be chosen from the following pool

**Thesis option:** 9 credits to be chosen from the following pool in addition to the two thesis courses MAT 691 and MAT 692.

MAT 632, MAT 635, MAT 636, MAT 642, MAT 645, MAT 655, MAT 657, MAT 659, MAT 667, MAT 668, MAT 671, MAT 673, MAT 683

##### Comprehensive written examinations for course-work option

**Pass Two Comprehensive Written Examinations CWE1 and CWE2 after having completed at least 18 credits with an overall GPA of 3.0/4.0. The CWEs are to be chosen from the following pool: Real and Complex Analysis, Algebra, Differential Equations, and Numerical Analysis**

Those who fail any CWE are allowed to retake it, but no later than the end of the following academic year

##### Thesis courses for thesis option

**Regulations concerning the “thesis courses” of (i) the Master of Science in Mathematics and (ii) the Master of Science in Financial Mathematics**

**Master Thesis**

(i) Students in the M.S. Mathematics may register for the thesis courses MAT 691 & MAT 692, and

(ii) Students in the M.S. Financial Mathematics may register for the thesis courses FMA 691 & FMA 692

upon the completion of at least 18 credits with an overall average of at least 3.3/4.0 and after receiving the approval of both the department chairperson and the thesis advisor.

**Duration of Work**

The work for the thesis is expected to be completed within a period of two semesters.

**Jury for the Oral Defense**

After receiving a written note of completion along with five bound copies of the master thesis from the master thesis advisor, the department chairperson shall appoint the jury for the oral defense and its chairperson, and shall distribute to each member one copy of the master thesis. The jury shall consist of the master thesis advisor and three full-time faculty members one of whom is from outside the department.

**Schedule for the Oral Defense**

The oral defense for the master thesis shall be scheduled by the jury chairperson one month from the date of the appointment of the jury at the latest.

**Evaluation and Grade**

Bound master thesis copies are required for the evaluation. The jury shall evaluate the work for the master thesis and assign the appropriate grade by a majority vote. In case of a tie, the committee chairperson shall have the casting vote.

**Final Copy of the Master Thesis**

The student shall submit seven bound copies of the approved final copy of the master thesis to the jury chairperson who, in turn, shall distribute them to the Library, Faculty, Department, and to each member of the jury.

---

## Graduate Courses: Mathematics

**MAT 600 Graph Theory (3.0); 3 cr.** Graphs; subgraphs; connectivity; trees; Hamilton graphs; matchings; coverings; coloring; Ramsey graph theory; connectedness in digraphs. Euler and Hamilton graphs; networks. *Prerequisite:* Graduate Standing.

**MAT 601 Optimization Theory (3.0); 3 cr.** The course deals with the mathematical theory and algorithms for optimization. Convex functions and sets; Unconstrained optimization: steepest descent, Newton, gradient methods, search methods, least squares; Constrained optimization theory: Kuhn-Tucker conditions; linear programming, quadratic programming, nonlinear programming, penalty methods. Some applications are also considered. *Prerequisite:* Graduate Standing.

**MAT 621 Algebra I (3.0); 3 cr.** Free Abelian groups; finitely generated Abelian groups; the action of a group on a set; the Sylow theorems; nilpotent and solvable groups. Rings and localization; polynomial rings and factorization. *Prerequisite:* Graduate Standing.

**MAT 623 Real Analysis (3.0); 3 cr.** Measure spaces; Borel and Lebesgue measure; abstract integration and differentiation; integration on product spaces; functions of bounded variations;  $L^p$  spaces. *Prerequisite:* Graduate Standing.

**MAT 625 General Topology (3.0); 3 cr.** Topological spaces; the metric topology; connected spaces; compact spaces; Homotopy of paths; the Fundamental groups; Cospaces; essential and inessential maps. *Prerequisite:* Graduate Standing.

**MAT 632 Algebra II (3.0); 3 cr.** Basic properties of rings. Ideals and quotient rings. Ring Homeomorphisms. Polynomial rings. Left and right modules. Free modules. Direct sums of modules. Finitely generated modules over a p.i.d. Artinian and Noetherian modules. Completely reducible modules. Tensor product of modules. Bimodules. Algebras and coalgebras. Projective and injective modules. Primitive and semi-primitive rings. The radical of a ring. *Prerequisite:* MAT 621.

**MAT 634 Complex Analysis (3.0); 3 cr.** Power series representation; conformal mappings; zeros of holomorphic functions; analytic continuation; normal families; HP spaces. *Prerequisite:* MAT 623.

**MAT 635 Harmonic Analysis & Potential Theory (3.0); 3 cr.** Harmonic and subharmonic functions. Convexity. Elements of potential Theory. Thinness. Harmonic measure. Green's Functions. Capacity. Applications to spaces and Banach algebras. *Prerequisite:* MAT 623.

**MAT 636 Algebraic Topology (3.0); 3 cr.** Singular homology theory; attaching spaces with maps; the Eilenberg - Steenrod axioms; products; manifolds and Poincaré duality; fixed point theory. *Prerequisite:* MAT 625.

**MAT 641 Theory of Ordinary Differential Equations (3.0); 3 cr.** Existence and Uniqueness Theorems. Linear systems with constant coefficients. Matrix analysis and Matrix Exponential. Stability. Periodic coefficients. Two-Dimensional Autonomous linear and nonlinear systems. Phase plane analysis. Liapunov stability. Limit cycles and the Poincaré-Bendixson Theorem. Stability of Linear non-autonomous systems. *Prerequisite:* Graduate Standing.

**MAT 642 Theory of Partial Differential Equations (3.0); 3 cr.** The single First-Order equation. The Cauchy problem. Systems of First-Order equations. Characteristics. The Cauchy-Kowalevski Existence and Uniqueness Theorem. Elliptic equations. The Laplace equation. The Lagrange-Green identity. The Maximum principle. Harmonic and subharmonic functions. Green's function and the Poisson formula. Hyperbolic equations in higher dimensions. The wave equation. The method of Spherical means. Hadamard's method of descent. Hyperbolic equations with constant coefficients. Solution by the n-dimensional Fourier Transform. Parabolic equations. The Heat equation. *Prerequisite:* Graduate Standing.

**MAT 645 Theory of Integral Equations (3.0); 3 cr.** The course covers an introduction to the theory of linear and nonlinear integral equations. Solutions of Volterra and the Fredholm equations of the first and second kind. Fredholm's alternative theorem. Orthonormal eigensystems of a symmetric Fredholm operator. The Hilbert-Schmidt expansion theorem and its applications to Sturm-Liouville problems. *Prerequisite:* MAT 641.

**MAT 657 Commutative Algebra (3.0); 3 cr.** Commutative Rings and their ideals. Modules over commutative rings. Localization of rings

and modules. Integral extensions. Valuations and valuation rings. Completion. Dimension theory. Basic elements of algebraic geometry. *Prerequisites:* MAT 621, MAT 632, MAT 655.

**MAT 659 Category Theory & Homological Algebra (3.0); 3 cr.** General categories. Functors. Functorial morphisms. Equivalence of categories. Products and coproducts. The Hom functors. Universal objects. Inductive and projective objects. Additive and Abelian categories. Complexes and homology. Resolutions and derived functors. Ext and Tor functors. Cohomology of algebras. Homological dimension. *Prerequisite:* MAT 632.

**MAT 661 Computational Mathematics I (3.0); 3 cr.** Matrix norm; residual vector; condition number; perturbation analysis; operations count; sparse matrices; LU-decomposition diagonally dominant matrices; iterative techniques for linear systems; and eigenvalues and eigenvectors. *Prerequisite:* Graduate Standing.

**MAT 662 Computational Mathematics II (3.0); 3 cr.** QR-decomposition; over determined linear systems; least-square solutions; the generalized inverse  $A^+$ ; positive-definite matrices; Cholesky's decomposition; the singular value decomposition; Given's and Householder's algorithms. *Prerequisite:* MAT 661.

**MAT 663 Information Theory (3.0); 3 cr.** Measures of information: entropy, relative entropy and mutual information. Basic inequalities: Jensen, log-sum, Fano, data processing theorem. Typicality and the asymptotic equipartition property. Entropy rate of stationary sources. Data compression of discrete memoryless sources: Kraft inequality, Huffman code, Shannon-Fano-Elias code. Discrete memoryless channels: definition of capacity and its computation. Communication over discrete channels: the channel coding theorem and the physical significance of capacity. The joint source-channel coding theorem. Measures of information for sources with continuous range. Discrete-time Gaussian channels and their capacity. *Prerequisite:* Graduate Standing.

**MAT 664 Functional Analysis (3.0); 3 cr.** Spaces and operators: Metric spaces, normed and Banach spaces, linear operators, inner product, Hilbert spaces. Fundamental theorems: Hahn-Banach theorem, uniform boundedness theorem, open mapping theorem, closed graph

theorem. Spectral theory: basic concepts, operators on normed spaces, compact operators, self-adjoint operators. *Prerequisite:* MAT 623.

**MAT 665: Advanced Linear Algebra (3 credits).**

Spectral decomposition, simultaneously diagonalizable matrices, generalized eigenvectors, triangulization, Jordan canonical forms

**MAT 667 Numerical Analysis I (3.0); 3 cr.** Linear Systems. LR and QR Decomposition. Basic Functional Analysis. Matrix Norms. Completeness. The Banach Fixed Point Theorem. Iterative Methods for Linear Systems. Ill-conditioned Linear Systems. *Prerequisite:* Graduate Standing.

**MAT 668 Numerical Analysis II (3.0); 3 cr.** Iterative Methods for Nonlinear Systems. Least Squares Problems. Matrix Eigenvalue Problems. The QR-Algorithm. Interpolation. Numerical Integration. Convergence of Quadrature Formulas. *Prerequisite:* MAT 667.

**MAT 669 Numerical Analysis III (3.0); 3 cr.** Initial Value Problems. Picard-Lindelöf Theorem. Single and Multi-Step Methods. Boundary Value Problems. Finite Difference Methods. The Finite-Element Method. Integral Equations. Stability. *Prerequisites:* MAT 668.

**MAT 670 Measure and Probability (3.0); 3 cr.** The course introduces the student to the basic of measure theory, Lebesgue integration, probability spaces, random variables, almost sure convergence, weak convergence, conditioning on a sigma-field, martingales and martingales inequalities, and limiting distributions of random variables.

**MAT 671 Differential Geometry (3.0); 3 cr.** Smooth manifolds, smooth maps, the inverse function theorem, vector fields on manifold, vector bundles, cotangent bundle, submersions, submanifolds, Lie groups, tensor fields on manifold, differential forms, and integration on manifolds. *Prerequisite:* Graduate Standing.

**MAT 673 Differential Topology (3.0); 3 cr.** Manifolds and maps, manifolds with boundary, transversality, vectors bundles and tubular neighborhoods, degrees of maps, intersection numbers and the Euler characteristics, Lefschetz fixed-point theorem, Borsuk-Ulam theorem, and

Morse theory. *Prerequisites:* MAT 625, MAT 671.

**MAT 675: Special Functions (3 credits)**

Special functions in mathematics: Hypergeometric, Bessel, Beta, Gamma functions, Orthogonal Polynomials (Chebyshev, Hermite, Laguerre) and the like, with applications to other fields.

**MAT 681 Master Project (3.0); 3 cr.** A substantial project in a topic in mathematics under the supervision and the approval of a faculty member.

**MAT 683 Directed Reading (3.0); 3 cr.** A topic in mathematics of interest will be studied under the supervision of a faculty member – evaluated as a tutorial course.

**MAT 685: Selected Topics in Mathematics (3 credits)** Contemporary topics in Mathematics selected by the instructor.

**MAT 691 Master Thesis in Mathematics I; 3 cr.** The research for the master thesis must show the student's proficiency in approved topics in mathematics. *Prerequisite:* Advisor Consent.

**MAT 692 Master Thesis in Mathematics II; 3 cr.** Continuation of MAT 691. *Prerequisites:* MAT 691 and Advisor Consent.

---

## The Degree of Master of Science in Financial Mathematics

The purpose of the MS program in Financial Mathematics is to prepare students for an in-depth application of Mathematics and Probability in decision-making processes as a financial analyst or brokerage consultant.

### Master of Science in Financial Mathematics Mission Statement

A Master of Science degree in Financial Mathematics

- prepares students to work effectively in a wide spectrum of financial service industries such as investment firms, commercial banks, brokerage houses, consulting firms, and other related corporations
- helps students to synthesize a highly technical branch of mathematics and measure theoretic probability with practical applications that affect everybody's life
- emphasizes problem-solving skills that dramatically increase the graduate value to an employer
- prepares students to pursue Ph.D. programs in Financial Mathematics or related fields

### Admission Requirements

In addition to the general graduate admission requirement set by NDU- Louaize graduate school, applicants to this program should have:

1. A minimum GPA of 3.0 or its equivalent from a non american undergraduate program
2. An interview to determine qualifications for the program

### Graduation Requirements

To satisfy the requirements for the degree of Master of Science in Mathematics, the student must complete a total of 33 credits with an overall average of at least 3.0/4.0.

## Degree Requirements (33 credits)

### Core and Major Requirements (18 credits):

1. MAT 670 (Measure and Probability) (3 cr.)
2. STA 663 (Time Series Analysis) (3 cr.)
3. STA 664 (Methods of Statistical Inference) (3 cr.)
4. FMA 640 (Advanced Financial Mathematics) (3 cr.)
5. FMA 645 (Computational Financial Mathematics) (3 cr.)
6. FMA 650 (Stochastic Calculus) (3 cr.)

### Elective Requirements (9 credits from the following pool):

1. BAF 602 (Managerial Finance) (3 cr.)
2. BAF 606 (Asset Pricing) (3 cr.)
3. BAF 610 (Derivatives) (3 cr.)
4. FMA 665 (Risk Theory) (3 cr.)
5. FMA 670 (Optimization Methods) (3 cr.)
6. FMA 675 (Discrete-Time Financial Modelling) (3 cr.)
7. FMA 677 (Continuous-Time Financial Modelling) (3 cr.)
8. FMA 683 (Directed Reading) (3 cr.)
9. FMA 685 (Selected Topics in Financial Mathematics)(3 cr.)

### Thesis Requirements (6 credits):

1. FMA 691 (Master Thesis I) (3 cr.)
2. FMA 692 (Master Thesis II) (3 cr.)

---

## Graduate Courses: Financial Mathematics

**FMA 640 Advanced Financial Mathematics (3.0); 3 cr.** One-period models, multi period models, risk-neutral pricing of derivative securities, Brownian motion, Ito's formula and SDE's, asset models, arbitrage and hedging, interest rate models, actuarial applications. *Prerequisite:* MAT 670.

**FMA 645 Computational Financial Mathematics (3.0); 3 cr.** Symbolic and numerical solutions of ODE's, solving Black-Scholes PDE symbolically, generalized Black-Scholes formulas, implied volatility, obstacle problems, steady state obstacle problems, fast numerical solutions of obstacle problems for Dupire PDE, Optimal portfolio rules, optimal portfolio hedging under general asset price dynamics. *Prerequisite:* FMA 640.

**FMA 650 Stochastic Calculus (3.0); 3 cr.** Review of probability and random variables, conditional expectation, martingales in discrete

time, stopping times, Optional stopping time theorem, stochastic processes in continuous time, Brownian motion, Ito stochastic integral, stochastic differential and Ito formula, stochastic differential equations (SDE's). *Prerequisite:* MAT 670.

**FMA 665 Risk Theory (3.0); 3 cr.** Convolutions, risk models, martingales, point processes, fixed-time ruin probability, finite- and infinite-time ruin probabilities, discrete risk models. *Prerequisite:* MAT 670.

**FMA 670 Optimization Methods (3.0); 3 cr.** General optimization problems, compactness, convexity, convex hulls, probability distribution spaces, moment spaces, linear programs, integral optimization, moment problems by dual method, loaded premium problems, ruin problems. *Prerequisite:* MAT 670

**FMA 675 Discrete-Time Financial Modelling (3.0); 3 cr.** This course introduces the most common financial contracts that are traded on exchanges between the financial institutions and their clients. It discusses Arbitrage pricing within the framework on one period model; Valuation and hedging of European and American options; The Cox-Ross-Rubinstein Model; Arbitrage free discrete time models of spot and futures markets; Fundamental Theorems of Asset Pricing for a finite model of security market. *Prerequisite:* MAT 670, FMA 640.

**FMA 677 Continuous-Time Financial Modelling (3.0); 3 cr.** This course discusses the continuous time modelling under deterministic interest rates. Black-Scholes model and its variants; Continuously rebalanced portfolio and the existence and uniqueness of a martingale probability measure; Study of volatility: historical, implied, risk-neutral marginal distributions and local volatility models; Call and put options; rational exercise time; early

exercise premium and optimal exercise boundaries; Cross currency derivatives; currency forward contracts and options and options on a foreign stock. *Prerequisite:* MAT 670, FMA 640.

**FMA 683 Directed Reading (3.0); 3 cr.** A topic of interest in financial mathematics will be studied under the supervision of a faculty member – Evaluated as tutorial.

**FMA 685 Selected Topics in Financial Mathematics (3.0); 3 cr.** The content of this course is to be arranged by the faculty member in charge of giving it. *Prerequisite:* FMA 640.

**FMA 691 Master Thesis I (3.0); 3 cr.:** The research for the master thesis must demonstrate the student's proficiency in financial mathematics. *Prerequisite:* Advisor consent.

**FMA 692 Master Thesis II (3.0); 3 cr.** A continuation of FMA 691. *Prerequisite:* MAT 691.

## DEPARTMENT OF PHYSICS & ASTRONOMY

---

<b>Associate Professors:</b>	El-Hage, Youssef Kamal; Hajjar, Roger; Sabra, Bassem (Chair)
<b>Assistant Professors:</b>	Gebran, Marwan; Nehme, Cyrine
<b>Senior Lab Instructor:</b>	Zoghbi, Catherine

---

### Programs of Study

The Department of Physics & Astronomy offers the following degree programs:

- BS in Physics (95 Credits)
- MS in Astrophysics (36 Credits) (Joint degree with USJ)

The Department offers the following minor for the first time:

- Minor in Physics (16 Credits)

The Department of Physics & Astronomy also offers a variety of undergraduate service courses in astronomy and physics. These courses are meant to serve academic programs offered by other Faculties of the University.

### Mission

Consistent with the missions of NDU and its Faculty of Natural & Applied Sciences, the Department of Physics & Astronomy (DPA) aims at giving physics majors a well-rounded education that will prepare them for graduate studies and a career in research, industry, or education. The DPA is particularly committed to developing astronomy in Lebanon and the Arab region through quality teaching and innovative programs in research and public outreach.

### Undergraduate Program

---

#### Bachelor of Science in Physics

Physics is the discovery of the inner fundamental unity of the natural world, from the whole universe to the insides of the smallest nucleus. It is the science that studies the basic laws of nature that produce the wealth of phenomena observed in everyday life.

Holders of a B.S. in Physics can pursue a career in teaching or follow graduate studies. Other options include, among others, working in hospitals as medical physicists or in industry for running quality control labs or devising numerical simulations.

## Degree Requirements (95 credits)

### General Education Requirements 27 cr.

#### A - Communication Skills in English and Arabic 9 cr.

- Two courses from the subcategory *English* (6 cr.)

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic* (3cr.)

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B – Philosophy and Religion 6 cr.

- One course from the subcategory *Religion* (3cr.)

REG 212, REG 213, REG 215, REG 313, REG 314

- One course from the subcategory *Philosophy* (3cr.)

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences 6 cr.

- Two courses from the category *Cultural Studies and Social Sciences* (6 cr.)

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship 6 cr.

- Two courses from the category *Citizenship* (6 cr.)

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

3 cr.

*Students majoring in Physics are not allowed to count PHS courses within the pool of required GER courses.*

### Core Requirements 29 cr.

MAT 213, MAT 215, MAT 224, MAT 235, PHS 206, PHS 212, PHS 213, PHS 275, PHS 276, EEN 205, CSC 212.

### Major Requirements 33 cr.

PHS301, PHS 303, PHS 351 (or MAT 335), PHS 373, PHS 374, PHS 415, PHS 417, PHS 435, PHS 497, AST 210

#### Two courses of the following (headings are suggestions):

*Astrophysics courses:* AST 320, 321, 370. Students opting for two of these courses are encouraged to take the third as a free elective.

*Hydrodynamics courses:* MEN 320, MEN 321. Students opting for these two course are encouraged to take MEN 550 (Computational Methods in Thermal and Fluid Mechanics) as a free elective.

*Semiconductors courses:* EEN 206, PHS 405. Students opting for these two courses will be encouraged to take EEN 416 (Semiconductor devices) as a free elective.

*Nuclear & Particle Physics courses:* PHS 315, PHS 403

*Other:* PHS 460

### Free Electives 6 cr.

## Minor in Physics (16 credits)

The Minor in Physics aims at giving students who are literate in mathematics a basic background enabling them to approach any applied or advanced topic in physics. It makes them eligible for graduate work in physics without the need for remedial courses or a disadvantage vis-à-vis physics majors. More specifically, the Minor in Physics will:

- Prepare students to work on advanced topics in Physics;
- Give a math major an edge when pursuing a teaching career in sciences and mathematics;
- Give the engineer more problem-solving techniques, crucial for his/her career.

The Minor proposed is aimed at scientifically minded students who already possess the necessary mathematical skills to tackle advanced physics courses. It will be most attractive for engineering and math students.

### Admission Requirements

General requirements for admission to this minor are those of the University policy on Undergraduate Academic Minors. No additional requirements are needed.

### Pool of Courses

PHS 213; PHS 303; PHS 415; PHS 417\*; PHS 435 (4 cr.)

### Graduation Requirements and Suggested Schedule

To satisfy the graduation requirements of a minor in Physics, a student must pass **all five courses** from the pool of courses above. Students are not exempted from the prerequisites of these courses. The level of mathematics required in PHS 303 and above is MAT 335. A suggested schedule is as follows:

- First semester (1 course; 3 credits): PHS 213<sup>♦</sup>
- Second semester (2 courses; 6 credits): PHS 303; PHS 417
- Third semester (2 courses; 7 credits): PHS 415; PHS 435 (4 cr.)

“D” is the passing grade for each course, and the minor should be completed with a GPA of 2.0.

---

\* EEN 330 taken at the Departments of Electrical and Computer & Communication Engineering is equivalent to PHS 417. Students from these majors may ask to replace PHS 417 with EEN 330.

♦ This course is part of the undergraduate majors in Electrical and , Computer and Communication Engineering, and Mathematics.

---

## Undergraduate Courses: Physics

**PHS 101 General Physics I (3.0); 3 cr.** A basic course covering: vectors, Newton's laws of motion, particle kinematics and dynamics, work, energy, linear and angular momentum, rotational motion, rigid body, equilibrium and Statistics. *Prerequisite:* Freshman Standing.

**PHS 102 General Physics II (3.0); 3 cr.** A basic course covering electric fields and electrical potential; DC-circuits; magnetic fields; capacitance and inductance; AC-circuits and electromagnetic waves. *Prerequisite:* Freshman Standing.

**PHS 171 General Physics I Laboratory (0.3); 1 cr.** Laboratory course illustrating the principles and experiments taught in General Physics I. *Corequisite:* PHS 101.

**PHS 172 General Physics II Laboratory (0.3); 1 cr.** Laboratory course illustrating the principles and experiments taught in General Physics II. *Corequisite:* PHS 102.

**PHS 203 General Physics III (3.0); 3 cr.** A course covering waves and corpuscles, sound, acoustics, reflection and refraction of light; interference and diffraction; polarization, spectrometry, and laser optics. *Prerequisite:* Sophomore Standing.

**PHS 206 Heat, Vibration and Waves (3.0); 3cr.** Introduction to thermodynamics: Kinetic Theory, Zeroth, First and Second Law of Thermodynamics. Vibrations: Simple Harmonic Motion, Damped and Forced Oscillators, Coupled Oscillators and Normal modes, Damped and Forces Coupled Oscillators. Waves: Mechanical waves as a chain of coupled oscillators, harmonic waves, Fourier combination of waves. *Prerequisite:* Sophomore standing.

**PHS 207 Development of Science and Technology (3.0); 3 cr.** The principal periods in the development of the scientific thought. The contribution of individuals like Aristotle, Ptolemy, Copernicus, Galileo, Newton, Darwin, Mendel, and Einstein. *Prerequisite:* Sophomore Standing.

**PHS 208 Physics for Life Sciences I (3.0); 3 cr.** This course covers mechanics, relativity, hydrostatics, hydrodynamics, thermodynamics, and the physics of waves, with special emphasis

on biological applications, *Prerequisite:* Sophomore Standing.

**PHS 209 Physics for Life Sciences II (3.0); 3 cr.** This course covers electricity and magnetism, modern physics: early quantum theory with emphasis on atomic and molecular applications, spectroscopy, nuclear physics, statistical mechanics, with special emphasis on biological and medical applications. *Prerequisite:* Sophomore Standing.

**PHS 212 Electricity and Magnetism (3.0); 3 cr.** Electrostatics: field, potential and dielectric. DC circuits and laws. Magnetic field, Ampere's and Faraday's laws, induction. AC circuits. Qualitative discussion of Maxwell's equations. *Corequisite:* MAT 224.

**PHS 213 Modern Physics (3.0); 3 cr.** Special Relativity. Quantization of electricity, charge, and light, blackbody radiation. particle-wave duality. Bohr model of Hydrogen. Schrodinger wave equation and application to one dimensional problems. Three-dimensional solution of the Hydrogen atom. Angular momentum and spin. *Corequisite:* MAT 235.

**PHS 271 Electricity and Magnetism Laboratory (0.2); 1 cr.** Selected experiments in electricity and magnetism. Emphasis is placed on statistical treatment of data and error estimation. *Corequisite:* PHS 212.

**PHS 272 Modern Physics Laboratory (0.2); 1cr.** Selected experiments in modern physics. Emphasis is placed on statistical treatment of data and error estimation. *Corequisite:* PHS 213.

**PHS 273 Experimental Physics for Mechanical Engineers (0.2); 1 cr.** Selected experiments in mechanics, energy & thermodynamics, vibrations and acoustics, and electricity & magnetism. Pre-requisite: PHS 203. Co-requisite: PHS 212

**PHS 275 Experimental Physics I (0.3); 1 cr.** The first of a sequence of two sophomore physics labs. It includes selected experiments in classical mechanics, electricity and magnetism, and modern physics such as collisions, vibrations and waves, electric and magnetic field measurements, emission line spectroscopy, etc. Students learn about error analysis, software packages for data visualization and data analysis

such as Excel, Matlab, and lab report writing. *Corequisite:* PHS 206.

**PHS 276 Experimental Physics II (0.3); 1 cr.** A continuation of PHS 275 with additional experiments and topics. *Prerequisite:* PHS 275

**PHS 278 Physics for Life Sciences I Lab (0.2); 1 cr.** Lab to accompany PHS 208. Experiments are performed in Mechanics, Hydrodynamics, Heat transfer and Waves. *Corequisite:* PHS 208.

**PHY 279 Physics for Life Sciences II Lab (0.2) 1 cr.** Lab to accompany PHS 209. Experiments in Electricity and Magnetism: Hall Effect, Circuits, Helmholtz Coil, and Modern Physics: Blackbody Radiation, Spectroscopy... *Corequisite:* PHS 209.

**PHS 301 Optics (3.0); 3 cr.** Topics covered: wave optics and properties of light including interference, Fraunhofer and Fresnel diffraction, polarization and double refraction. Introduction to lasers and holography. *Prerequisite:* PHS 206, PHS 212.

**PHS 303 Analytical Mechanics (3.0); 3 cr.** Particle kinematics and dynamics, central force problem, motion in non-inertial frames of reference, kinematics and dynamics of rigid bodies, Lagrangian mechanics, small oscillations, and relativistic momentum and energy. *Corequisite:* PHS 351 or MAT 335.

**PHS 315 Nuclear Physics (3.0); 3 cr.** General nuclear properties, radioactivity, nucleon-nucleon interaction, scattering, nuclear models, and nuclear reactions. *Prerequisite:* PHS 213.

**PHS 351 Mathematical Methods for Physics (3.0); 3 cr.** Topics include partial differential equations, Fourier series and transforms, wavelets, special functions, orthogonal functions, Greene's function, integral equations. *Prerequisites:* MAT 215, MAT 224, MAT 235.

**PHS 373 Experimental Physics III (0.3); 1 cr.** The first of a sequence of two junior physics labs with more advanced experiments that may include forced oscillations and resonance, the Hall effect, diffraction, Zeeman effect, etc. Emphasis will continue on data and error analysis and report writing. *Prerequisite:* Junior Standing

**PHS 374 Experimental Physics IV (0.3); 1 cr.** The second of a sequence of two junior physics labs with more advanced experiments that will include long experiments on measurements of

fundamental constants and other advanced topics. This lab will serve as a preparation for the Senior Project. *Prerequisite:* PHS 373.

**PHS 403 Elementary Particle Physics (3.0); 3 cr.** Survey of elementary particles: leptons, hadrons, and quarks. Invariance principles and conservation laws. Detectors and accelerators. Phenomenological study of interactions. *Prerequisites:* PHS 435.

**PHS 405 Solid State Physics (3.0); 3 cr.** Topics include crystal structure, the band theory, the free-electron and Fermi-Dirac theory, and the physical properties of semiconductors and metals. *Prerequisites:* PHS 415

**PHS 415 Thermal and Statistical Physics (3.0); 3 cr.** Topics include: entropy and probability, energy and temperature, the three laws of thermodynamics, Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics, equation of state for simple systems, and elementary theory of phase transitions. *Prerequisites:* Senior Standing.

**PHS 417 Electromagnetic Theory (3.0); 3 cr.** Maxwell equations with applications to physical problems. Topics include: electrostatics, magnetostatics, Laplace and Poisson equations, dielectric and magnetic materials, electromagnetic waves and radiation, and special theory of relativity. *Prerequisites:* PHS 212, PHS 351 or MAT 335.

**PHS 435 Quantum Mechanics (4.0) 4 cr.** "Modern" quantum Mechanics. Hilbert space, operators, eigenvalues and eigenfunctions. Matrix formulation of quantum mechanics. Time-independent and time dependent perturbation theories. Scattering theory and interaction of radiation with matter. *Prerequisites:* PHS 213, PHS 303.

**PHS 460 Selected Topics in Physics (3.0); 3 cr.** Advanced topics selected from the different disciplines of physics. *Prerequisite:* Senior Standing.

**PHS 497 Senior Project. 3 cr.** A selected project in one of the different fields of physics. The project is expected to be an introduction to research through the involvement in an actual project carried by faculty members. *Prerequisites:* Senior standing and consent of the instructor.

---

## Undergraduate Courses Astronomy

**AST 101 – Introduction to the Solar System and Exoplanets (3.0); 3cr.** The course gives an up-to-date description of the solar system: the eight planets, Kuiper Belt Objects, asteroids and comets. The latest discoveries in planetary science will be seamlessly woven into the course. The course also covers the search for exoplanets and what they tell us about planetary systems in the Universe. It also discusses the topic of life in the Universe.

**AST 201 Discovering Astronomy (3.0); 3 cr.** A non-calculus based introduction to astronomy. It explores the wonders of the universe using observations from space and from the ground. It covers the solar system, stars and their evolution (black holes, white dwarfs...), galaxies and cosmology (the Big-Bang...). The course will include an observing night to discover the night sky, readings, and some elementary observations. Not open to physics students

**AST 210 Introduction to Astronomy and Astrophysics (3.0); 3 cr.** This introductory astrophysics course is designed for students majoring in physics. The course will include an introduction to the night sky and coordinate systems, magnitudes, and telescope types. The course will also introduce students to stellar

astrophysics, the solar system, and galaxies.  
*Corequisite:* PHS 213

**AST 320 Astrophysics I: Stars (3.0); 3 cr.** This course will specifically concentrate on stellar astrophysics. The course will discuss stellar structure and nuclear astrophysics, stellar atmospheres and radiative transfer, star formation processes, and evolution of stars beyond the main sequence (pulsations, AGBs, white dwarfs, neutron stars, supernovae).  
*Prerequisite:* AST 210

**AST 321 Astrophysics II: Galaxies (3.0); 3 cr.** This course deals with the nature and properties of galaxies and provides an introduction to cosmology. The course will cover the Milky Way, and properties of spiral, elliptical, and irregular galaxies. The course will also cover the basic elements of cosmology and the birth and evolution of the Universe as a whole.  
*Prerequisite:* AST 210.

**AST 370 Observational Astronomy (0.9); 3 cr.** An introduction to the major observational techniques used in astrophysics and their corresponding instrumentation, based on practical observational projects. This course will also include a discussion of telescope optics.  
*Prerequisite:* AST 210.

## Graduate Program

The graduate program in Astrophysics is a joint degree program with Université Saint-Joseph de Beyrouth (USJ). The program follows only the Thesis Option and is designed to prepare students for doctoral studies in Astrophysics, allow students to acquire, through research, the competencies requested by the job market, and to graduate competent physicists who are capable of integrating astronomy and astrophysics within the physics curricula in schools.

---

## The Degree of Master of Science in Astrophysics

### Admission Requirements

Admission rests on the study of the candidate's file followed by an interview with a joint committee from both Faculties of Sciences composed of the two Deans, the two department chairs concerned, the Masters Program supervisors, and instructors delegated by the two Faculties. To be eligible for admission, students shall satisfy the following criteria:

1. They shall have a minimum GPA of 2.7/4.0 according to the American grading system applied at NDU, or a minimum weighted mean point average of 60/100 according to the system applied at USJ.
2. They shall be able to follow lectures in both English and French.

### Graduation Requirements

To satisfy the requirements for the degree of M.S. in Astrophysics, the student must complete a total of 36 credits with an overall average of at least 3.0/4.0, with a minimum grade of 79/100 on his/her Master thesis (9 credits). The thesis is based on original research conducted by the student.

### Degree Requirements (Thesis Option) (36 Credits)

- |  |               |
|--|---------------|
| <b>1- Complete the following nine required courses</b>         | <b>19 cr.</b> |
| AST 601, AST 602, AST 603, AST 604, AST 631, AST 635, AST 670. |               |
| <b>2- Complete the following courses</b>                       | <b>8 cr.</b>  |
| AST 612, AST 613, AST 614, AST 620, AST 621, AST 622, AST 623  |               |
| <b>3- Complete the MS thesis requirements</b>                  | <b>9 cr.</b>  |
| AST 691  |               |

---

## Graduate Courses: Astrophysics

**AST 601 Stellar Astrophysics (3.0); 3 cr.**  
Stellar parameters and classification; Structure and evolution; Energy production and transport in stellar interiors; compact objects; binary systems.

**AST 602 Radiative Processes (3.0); 3 cr.**  
Photoionization; line formation and broadening; LTE and non-LTE radiation transfer; Polarization processes; Non-thermal processes (synchrotron, Compton...); Application to different regions and regimes (HII, AGNs, Atmospheres, CS shells...).

**AST 603 Astrophysics of Galaxies (3.0); 3 cr.**  
Anatomy of the Milky Way: disk, bulge, globular clusters, ISM, rotation curve, spiral structure; Hubble tuning fork, spirals, ellipticals, irregulars; Formation and evolution; Active galaxies. *Prerequisite:* AST 601

**AST 604 Instruments & Techniques in Astrophysics (3.0); 3 cr.** Software and numerical methods in Astronomy; Telescope optics, aberrations and characterization, various designs used: Newtonian, Cassegrain, Schmidt, Ritchey-Chretien, etc; Optics of instrumentation:

spectrograph, polarimeter, spectropolarimeter, etc; elements of optical design and instrumentation.

**AST 612 Interstellar Medium (2.0); 2 cr.** Interstellar Medium (ISM) in the Milky Way ; HII regions ; photoionisation equilibrium in the ISM ; Interstellar Dust ; ISM distribution and phases ; Absorption and emission in the ISM...  
*Prerequisite:* AST 602

**AST 613 Active Galaxies (2.0); 2 cr.** Historical overview of the discovery of active galaxies and the enigma of the power source and its nature; The black hole paradigm; accretion physics; AGN types; Emission processes in AGNs; Unification models. *Prerequisite:* AST 602; *Corequisite:* AST 603

**AST 614 Site Evaluation & Atmospheric Optics (2.0); 2 cr.** Effects of the atmosphere on astronomical observations; Seeing; Opacity; Turbulence; Measurement techniques of the different parameters of interest to astronomy.

**AST 620 Variable Phenomena in Astrophysics (2.0); 2 cr.** Photometric and Spectroscopic variability of individual stars ; Binaries and variable phenomena ; Long term variability of AGNs, Blazars, and BL Lac; Other variable and transient phenomena such as supernovae. *Prerequisite:* AST 601, AST 603, AST 613

**AST 621 Nuclear Astrophysics (2.0); 2 cr.** Elements in the universe; Stellar and primordial

nucleosynthesis; Hydrogen burning sequences; r and s processes; Post hydrogen-burning reactions; neutron stars. *Prerequisite:* AST 601

**AST 622 Circumstellar Environments (2.0); 2 cr.** Study of the material surrounding stars at their different phases of evolution; Disks and outflows in pre-main sequence; main sequence and post-main sequence phases; Composition, dynamics and geometries of circumstellar matter; Relation to mass loss; Formation of planets. *Prerequisite:* AST 601, AST 602, AST 612

**AST 623 Cosmology (2.0); 2 cr.** Newtonian Cosmology; Introduction to General Relativity; Big Bang; Inflation; Primordial nucleosynthesis; CMB; Large-Scale structure; Dark matter and dark Energy. *Prerequisite:* AST 603

**AST 631 Seminar (1.0); 1 cr.** Reading, presentation, and discussion of papers in various fields of astrophysics.

**AST 635 Selected Topics in Astrophysics (3.0); 3 cr.** Topics of interest in contemporary astrophysics.

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

**AST 691 thesis (9.0); 9 cr.** Research Project and thesis

## DEPARTMENT OF SCIENCES

---

<b>Associate Professors :</b>	Hage, Tanos G.; Kabrita Bou-Serhal, Colette (Chair); Khalaf-Keirouz, Layla
<b>Assistant Professors :</b>	Aad, Pauline ; Badr, Layla ; Dib, Robert ; El-Khoury, Diala; Ghanem, Esther ; Maalouf, Rita; Rahmé, Kamil ; Sattout, Elsa; Tannous, Marie
<b>Senior Lab Assistants:</b>	El-Ghossein-Maalouf,Nada;El-Hage-El-Amm, Rita
<b>Laboratory Assistant :</b>	Moussa, Layale
<b>Laboratory Assistant :</b>	Merhi, Samar; Saliba-Tabet, Elizabeth

---

### Department Mission

The Department of Sciences (DS) offers coherent and well-designed program curricula to provide in depth-knowledge to students interested in the biological, chemical and closely-related sciences. It is committed to furnish quality education through an inherent assortment of major courses. The DS also emphasizes moral integrity and ethics as to prepare competent, fully-rounded students who can be leaders in their respective field of study.

### Programs of Study

---

The Department of Sciences offers a Freshman Science program and an undergraduate program leading to the degrees of:

- BS in Biology (92Credits)
- BS in Environmental Science (92 Credits)
- BS in Chemistry (92 Credits)
- MS in Biology (36 Credits)

In addition, the Department of Sciences offers a Minor in Biology (17 credits).

The Department of Sciences also offers a variety of undergraduate service courses in biology, chemistry and geology. These courses are meant to serve academic programs offered by other Faculties of the University.

### Freshman Science Program

---

The Freshman Science program consists of a minimum of 30 credits. This program is equivalent to the official Lebanese Baccalaureate Part II (Scientific Strands). It normally requires a minimum period of 2 semesters. The Freshman Science Program includes courses from the following areas:

<b>Hmanities and Social Sciences</b> (a minium of 3crs. in each area)	<b>9cr.</b>
<b>Mathematics</b> <b>(MAT 111 &amp; MAT 112)</b>	<b>6cr.</b>
<b>Natural Sciences*</b>	<b>9 cr.</b>

**Free Electives****6 cr.**

*\*Suggestions: Students planning to go into Computer Science, Engineering, Mathematics, or Physics may choose to take PHS 101, 102, and CHM 101. Students planning to go into Biology, Chemistry, Environmental Sciences, Medical Lab Technology, Nutrition, or Nursing may choose to take BIO 101, CHM 101, and CHM 102.*

For more details on this program, refer to the subsection “*Freshman Program*” within the section “*GER, Freshman Program and Degrees.*”

**Bachelor of Science in Biology****Degree Requirements (92 credits)****General Education Requirements** **27 cr.****A - Communication Skills in English and Arabic** **9 cr.**

- Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

**B – Philosophy and Religion** **6 cr.**

- One course from the subcategory *Religion (3cr.)*

REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy (3cr.)*

ENS 205, PHL 211, PHL 311, POS 345

**C - Cultural Studies and Social Sciences** **3 cr.**

- One course from the category *Cultural Studies and Social Sciences (3 cr.)*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

**D - Citizenship** **3 cr.**

- One course from the category *Citizenship (3 cr.)*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

**E - Science and Technology** **6 cr.**

- STA 203 from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 201, ENS 201, ENS 202, ENS 206, GEO 203, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207

**Core Requirements** **33 cr.**

BIO 211, BIO 212, BIO 220, BIO 227, CHM 211, CHM 221, CHM 222, CHM 272, PHS 208, PHS 209, PHS 278, PHS 279.

**Major Requirements** **26 cr.**

BIO 324, BIO 335, BIO 485

Choose two biology courses 4 credits each.

Choose three biology courses 3 credits each, excluding

BIO 201, BIO 202 and BIO 203.

**Free Electives****6 cr.**

It is advisable that students (especially pre-med) take CHM 215.

### **Minor in Biology (17 credits)**

The Minor in Biology offers students a basic understanding of majors concepts in biology through classroom and laboratory courses. Biology is a dynamic scientific field in view of the many discoveries and their impact on society, such as the human genome project and the development of the world's first "synthetic cell". By enrolling in the Minor in Biology,, students will have a well-rounded education that will complement their major field of study and will improve their competitiveness in the job market. This minor will be most attractive to students in the medical and health sciences.

---

#### **Curriculum requirements**

Students enrolled in the Minor in Biology must complete 17 credits of biology courses as follows:

The following two courses (8 credits)

- BIO 211 General Biology I, 4cr.
- BIO 212 General Biology II, 4 cr.

Three courses (9 credits) selected from two pools of courses as follows:

Any **one** course (3 credits) from the following pool:

- BIO 215 Human Physiology, 3 cr.
- BIO 220 Genetics, 3 cr.

Any **two** courses (6 credits) from the following pool:

- BIO 322 Virology
- BIO 314 Ecology
- BIO 316 Economic Botany
- BIO 420 Neurobiology and Behavior

#### **Graduation requirements**

The overall GPA should be a minimum of 2.0.

---

## Undergraduate Courses: Biology

**BIO 101 Introduction to Biology (3.0); 3 cr.**

An introduction to the fundamental principles of biology. Covers chemical basis of life, structure and function of cells and tissues, basic genetic concepts, as well as structure and function of human body systems. *Prerequisite:* Freshman Standing.

**BIO 201 Your Body in Action (3.0); 3 cr.**

A balanced introduction to how the human body works and the integrated action of the various systems. Basic concepts in physiology are blended into clinical and technological applications to make learning more appealing and interactive. Special topics connecting to wellness and aging are also considered.

**BIO 203 Discover Biology (3.0); 3 cr.**

A general introductory course that covers the basic principles and concepts of Biology with current applications. Not open for Biology students.

**BIO 207 Biochemistry for Nursing (3.0); 3 cr.**

This course is a general overview of the basic concepts in biochemistry. It reviews the essentials of general and organic chemistry, discusses the main biochemical pathways in the cell and emphasizes the relevance of the concepts to clinical disorders.

**BIO 211 General Biology I (3.2); 4 cr.**

This course introduces major concepts of biology including the organization of life on all levels; metabolism and energy transactions involved in life processes; the transfer of information and the diversity and classification of organisms. *Prerequisite:* Sophomore Standing.

**BIO 212 General Biology II (3.2); 4 cr.**

It covers the study of structure and life processes in plants and animals. *Prerequisite:* BIO 211.

**BIO 214 Human Anatomy (3.0); 3 cr.**

General human anatomy, emphasizing human scales, proportions, articulation, and factors influencing movements. *Prerequisite:* BIO 211.

**BIO 215 Human Physiology (3.0); 3 cr.**

A study of the fundamental principles and mechanisms that govern body functions in humans. *Prerequisite:* BIO 211.

**BIO 216 Microbiology and Immunology for Nursing (3.0); 3 cr.**

A study of the essentials of basic and clinical microbiology and immunology that includes immunology, bacteriology, virology, physiology and mycology. *Prerequisite:* BIO 207.

**BIO 217 Pathophysiology (3.2); 4 cr.**

The content of this course refers to three major areas based on the health-illness continuum: control of normal body function, alteration in body function, and failure in any system or part of body function. *Prerequisite:* BIO 215.

**BIO 218 Histology (2.2); 3 cr.**

An introduction to the microscopic structure of tissues and organs, with particular emphasis on the interrelation between structure and function. *Prerequisite:* BIO 211.

**BIO 219 Pathophysiology for Nursing (2.0); 2 cr.**

This course offers an integrated approach to biological alterations that affect human equilibrium. The content of this course refers to three major areas based on the health – illness continuum: control of normal body function, alteration in body function, and failure in any system or part of body function. *Prerequisite:* BIO 215.

**BIO 220 Genetics (3.0); 3 cr.**

Mendelian genetics & extensions of Mendelian analysis; population & quantitative genetics; molecular genetics: DNA structure and replication, organization of DNA in chromosomes, gene & chromosomal mutations, gene expression and its regulation, recombinant DNA technology. *Prerequisite:* BIO 211.

**BIO 222 Immunology (3.0); 3 cr.**

Detailed description of the components of the immune system: their development, differentiation & functioning during an immune response; immune response to pathogens, tumors & grafts; immunopathologies; basic immunological techniques. *Prerequisite:* BIO 211.

**BIO 226 Evolution (3.0); 3 cr.**

Study of processes that bring about evolutionary changes in organisms, evolutionary trends, patterns of adaptations, and principal factors that influence the patterns of speciation. *Prerequisite:* BIO 220.

**BIO 227 Introductory Biochemistry (3.0); 3 cr.**

An introduction to the structure-function relationships of biomolecules, enzymes, metabolic reactions and biochemical energetic of living cells. *Prerequisites:* BIO 211, CHM 221 or CHM 213.

**BIO 228 Parasitology (3.2); 3 cr.**

Provides a general overview on the classification, morphology, development & physiology of

human and animal parasites. *Prerequisite:* BIO 212.

**BIO 314 Ecology (3.0); 3cr.** Principles of ecosystems; the interaction of organisms & their environment. Food web, energy flow & nutrient cycling in ecosystems. Factors which affect the distribution & abundance of species: Wildlife resources & extinction. *Prerequisite:* BIO 212, also listed as ENS 303

**BIO 316 Economic Botany (3.0); 3cr.** The course provides an introduction to the study of botany and the economic uses of plants in industry, production of food and medicine. *Prerequisite:* BIO 212.**BIO 320 Microbiology (3.2); 4 cr.** Covers structures, isolation, classification and metabolic diversity of microorganisms. *Prerequisite:* BIO 220 or BIO 227.

**BIO 322 Virology (3.0); 3 cr.** Provides a general overview on the classification, biophysical and biochemical characteristics of bacterial, plant and animal viruses. *Prerequisite:* BIO 212.

**BIO 324 Plant Physiology (3.2); 4 cr.** Basic principles of plant physiology; the physiological processes of green plants and the effect of the environment on these processes. *Prerequisites:* BIO 212, BIO 227.

**BIO 325 Marine Biology (3.2); 4 cr.** Covers biology of marine life, with emphasis on the roles that marine plants and animals assume in their environmental situations, & the structural and physiological adaptations necessary to fulfill those roles. *Prerequisite:* BIO 212.

**BIO 332 Developmental Biology (3.2); 4 cr.** The course sheds light on the major events and processes that accompany animal development—from the fusion of two cells to the creation of a more complex multicellular organism. The molecular mechanisms underlying such developmental processes are considered. The impacts of special environmental and pharmacological agents on animal development are also emphasized. *Prerequisite:* BIO 212.

**BIO 334 Molecular Biology; (3.0) 3cr.** Provides an understanding of the molecular basis of biological phenomena with emphasis on the fundamental processes common to all organisms: enzyme catalysis, DNA, RNA and protein synthesis, and mechanism of gene expression. Includes a description of common

molecular biology techniques for gene study and manipulation. *Prerequisites:* BIO 220, BIO 227.

**BIO 335 Cell Biology (3.2); 4 cr.** Provides students with a basic understanding of the structure and function of the eukaryotic cell. *Prerequisite:* BIO 227.

**BIO 336 Basic Biotechnology (3.0); 3 cr.** Covers broadly the development of the field of biotechnology: methods and applications. Covers topics such as principles of recombinant DNA technology and its applications to studies of animals, plants, medicine, forensics and human genome project. *Prerequisite:* BIO 227.

**BIO 337 Biochemical Methods; (3.0) 3 cr.** Introduction to basic methods used in studies of enzymes, proteins, nucleic acids and their interactions. Different methods of extraction, purification, analysis and production of biomolecules are discussed in general but also by means of some precise examples. *Prerequisite:* BIO 227.

**BIO 340 Metabolic Endocrinology (3.0) 3 cr.** A comprehensive study of the general principles of endocrinology with emphasis on intermediate metabolism and heritable endocrine disorders. *Prerequisite:* BIO 215.

**BIO 400 Bioinformatics (3.2); 4 cr.** An introduction to computer analysis of macromolecular structure information. This course describes how to access, process and interpret structural information regarding biological macromolecules as a guide to experiments in Biology. *Prerequisites:* BIO 220, BIO 227, senior standing.

**BIO 411 Plant Taxonomy (3.2); 4 cr.** An introductory study of identification, naming and classification as well as the history of systematics and the role of evolution in systematics. Laboratory emphasis is on knowledge of the major families of vascular plants and on the collection and identification of local vascular plants. Of particular importance is gaining an understanding of the philosophical bases in taxonomy and the relevance of this field to other areas of biology. *Prerequisite:* BIO 212.

**BIO 412 Plant Propagation (3.2); 4 cr.** Principles, practices and techniques in sexual and asexual propagation of horticultural plants, in which seed technology, and seed propagation, rooting and propagation by cutting, grafting and budding systems, layering and propagation by specialized plant structures, biotechnology and

tissue culture systems for micropropagation are discussed. *Prerequisites:* BIO 212.

**BIO 413 Plant Tissue Culture and Biotechnology (3.2); 4 cr.** Principles and techniques for the in vitro culture, propagation, and genetic manipulation of plant cells. *Prerequisites:* BIO 212.

**BIO 420 Neurobiology and Behavior (3.0); 3 cr.** The course aims at highlighting the basic neural mechanisms which underlie all animal behavior, including the high cognitive processes such as learning and memory. The different types of neural circuits and nerve cell cross-talks in both invertebrates and vertebrates are considered. *Prerequisite:* BIO 212.

**BIO 424 Conservation Biology (3.0); 3 cr.** The application of biological principles to issues in the conservation biology will be examined within a context that integrates biology, land management, protection and development. *Prerequisite:* BIO 314. Also listed as ENS 424.

**BIO 451 Environmental Biotechnology (3.0); 3 cr.** The use of biotechnology as it relates to various environmental technologies: biodegradation, remediation, biodegradable materials, energy saving process and chemical production from renewable resources. *Prerequisites:* BIO 211, BIO 212. Also listed as ENS 451.

**BIO 460 Selected Topics in Biology (3.0); 3 cr.** Students study recent and current biological issues and topics. *Prerequisites:* Specified when offered.

**BIO 485 Seminar; 1 cr.** Students work on selected papers from recent biological journals. Under the supervision of an advisor. *Prerequisite:* Senior Standing.

**BIO 495 Research in Biology; 1, 2 or 3 cr.** An independent research project in an area of biology under the direction of a faculty mentor. *Prerequisite:* Senior standing and consent of the instructor.

## Master of Science in Biology

The Department of Sciences offers a Master of Science (M.S.) degree in Biology with thesis work. The purpose of this graduate program is to provide students with in-depth knowledge in advanced topics in Biology. Students are trained to be independent thinkers who are able to identify specific research problems in biology and investigate them. The thesis option provides the necessary background to pursue further research in biology and is more applicable for students planning to enroll in a Ph.D. program.

### Admission Requirements

In addition to the University graduate admission requirements, students holding a B.S in Biology with a GPA of 2.7-2.99 will be accepted on probation. The probation will be removed if the students receive a minimum of a “B” average for six credits taken during their first semester. Students from other majors may be given provisional admission pending satisfactory completion of prerequisite courses consisting of a maximum of 12 credits of undergraduate biology courses, as specified by the Faculty Graduate Committee. The credits earned for these prerequisite courses will not be counted towards the 36 credits required for the M.S. in Biology. Students coming from institutions whose language of instruction is not English, must register for a 3 cr. English language course, as specified by the University. Normally a maximum of nine transfer credits from previous work completed at another accredited institution of higher education is permitted upon the discretion of faculty graduate committee.

### Graduation Requirements

To satisfy the requirements for the degree of M.S. in Biology, the student must complete a total of 36 credits, including 6 credits of thesis work, with an overall average of at least 3.0/4.0.

Based on the selection of elective courses in the major, students can choose between two orientations: Molecular Biology or Ecology/Organismal Biology. The selected elective courses should be approved by the advisor.

Thesis work provides the necessary background and research experience to students planning to pursue a Ph.D. and indulge in scientific research activity.

### Degree Requirements (36 credits)

- 1- Complete the following required major courses:** **15 cr.**  
BIO 603, BIO 605, BIO 608 or BIO 636, BIO 610 or BIO 628, BIO 670, BIO 671.
- 2- Complete 9 credits of electives in the major from the following list of courses:** **9 cr.**  
BIO 609, BIO 611, BIO 613, BIO 617, BIO 619, BIO 620, BIO 625, BIO 626, BIO 630, BIO 635, BIO 637, BIO 638, BIO 641, BIO 645, BIO 646, BIO 650, BIO 660.
- 3- Complete 6 credits of free electives (not selected in the above course list categories).** **6 cr.**
- 4- Complete the MS thesis requirements.** **6 cr.**  
BIO 691

## **Regulations concerning the thesis work of the Master of Science in Biology**

### **Master Thesis**

Students may register for the thesis (BIO 691) upon the completion of at least 19 credits with an overall average of at least 3.0/4.0 and after receiving the approval of both the department chairperson and the thesis advisor. The grade will be reported as pass or fail.

### **Jury for the Oral Defense**

The jury shall be composed of three members, including the thesis advisor, as appointed by the Department Chairperson.

### **Schedule for the Oral Defense**

The oral defense for the master thesis shall be scheduled within a month from the date of submission of thesis copies to the jury members.

### **Evaluation and Grade**

The jury shall evaluate the work for the master thesis and assign the appropriate grade by a majority vote.

### **Final Copy of the Master Thesis**

The student shall submit two bound copies of the approved final copy of the Master Thesis, one to the Thesis Advisor and the other to the University Library.

---

## Graduate Courses: Biology

**BIO 603 Quantitative Methods in Biology (2.3); 3 cr.** This course introduces biology students to statistical analysis, data acquisition, hypothesis testing, and computer applications in biological research.

**BIO 605 Research Methods in Biology (1.5); 3 cr.** This core course is designed to introduce students to conduct scientific research. Under the supervision of an instructor, students select a research project through which they learn about literature review including the access and use of print and electronic resources, proposal writing, research methods, experimental design and analysis in addition to scientific writing. At the discretion of the instructor this project can be extended in taking an additional tutorial course. This may serve as the nucleus of research for students with thesis option.

**BIO 608 Advanced Biochemistry (4.0); 4 cr.** This course covers the reaction bioenergetics and metabolic pathways of biomolecules. It also provides an in-depth knowledge of the function, structure, and mode of action of binding proteins and enzymes.

**BIO 609 Advanced Molecular Biology (3.0); 3 cr.** This course deals with the structure, function, and regulation of the gene. It covers the regulation mechanisms of gene transcription, RNA stability and translation, gene mapping and recombinant DNA technology. Prerequisite: consent of advisor.

**BIO 610 Advanced Cell Biology (3.0); 3 cr.** The course will focus in depth on topics of current research interest in the field of cell biology. Students will gain an understanding of the nature of cell biology research by means of a detailed discussion of primary literature (original research papers): experimental design, methods, results obtained, interpretation of results and implications for further studies.

**BIO 611 Cancer Biology (3.0); 3 cr.** This course provides students with an understanding of the molecular and cellular basis of cancer. Topics include: cell growth and cell death, oncogenes and tumor-suppressor genes, cell cycle regulation, tumor development, invasion and metastasis, and treatment of cancer.

**BIO 613 Research Methods in Proteins Science (1.6); 3 cr.** This course deals with

methods used in proteins extraction, fractionation, purification, quantification, analysis, characterization, sequencing and modification.

**BIO 617 Reproductive Biology (3.0); 3 cr.** The course sheds light on the mammalian hypothalamo-pituitary-gonadal axis and its role in reproduction. It discusses the anatomy and hormonal control of the male and female reproductive systems at different developmental stages, and the mechanisms of fertilization and implantation. The endocrinology of pregnancy is also considered.

**BIO 619 Plant Secondary Metabolites (3.0); 3 cr.** This course surveys the field of plant natural products that are known as secondary metabolites. It covers the structure and biosynthesis of the main classes of plant secondary metabolites. In addition, the uses of secondary metabolites will be discussed.

**BIO 620 Plant Genomics and Biotechnology (3.0); 3 cr.** This course explores the modern techniques employed in plant genome modification: cloning and sequencing of nucleic acids, gene isolation and mapping, genetic transformation, and germplasm collection. The relevance of plant biotechnology to the different sectors of the economy will be discussed. Prerequisite: consent of advisor.

**BIO 625 Biological Clocks (3.0); 3 cr.** The course provides basic knowledge about biological rhythms and their survival value in various organisms, with special focus on mammals. It provides insight into the mechanisms underlying entrainment to environmental stimuli. Functional significance of the circadian pacemaker in relation to some diseases is also considered.

**BIO 626 Developmental Neurobiology (2.3); 3 cr.** The course provides comprehensive knowledge about development of the vertebrate nervous system, both central and peripheral. It discusses the factors affecting neuroblast migration, differentiation, identification of target tissues and establishment and maintenance of synapses. Neurogenesis of selected brain regions is also considered. Prerequisite: consent of advisor.

**BIO 628 Advanced Human Physiology (3.0); 3 cr.** The course provides a thorough coverage of the functions of various body systems, whereby physiological mechanisms at various levels of organization (molecular, cellular, tissue and organ system levels) are considered. It also emphasizes the functional integration among the different organ systems and some clinical correlations.

**BIO 630 Microbial Biotechnology (2.3); 3cr.** This course is designed to introduce students to industrial, medical and environmental biotechnology. It covers food microbiology, microbial bioconversions, industrial microorganisms, and production of enzymes, vitamins, antibiotics, and valuable metabolites. Prerequisite: consent of advisor.

**BIO 635 Population and Community Ecology (3.0); 3cr.** This course explores population dynamics, distribution and community structure. Emphasis will be placed on population growth and regulation, community stability and diversity, ecological succession, populations' interactions, and coevolution. Prerequisite: consent of advisor.

**BIO 636 Plant Ecology (3.3); 4cr.** Biotic and abiotic factors controlling plant distribution and plant communities with special emphasis on the Mediterranean biome. Field trips are required in order to emphasize examples from Lebanon.

**BIO 637 Insect-Plant Interactions (3.0); 3cr.** This course covers the ecology and evolution of insect-plant relationships: plant defense, adaptations to herbivorous insects, pollination biology and applications to managed ecosystems.

**BIO 638 Invasive Alien Species (3.0); 3cr.** The biology and the impact of invasive alien species on natural ecosystems are discussed. Special emphasis will be placed on invasive alien plants in the Mediterranean biome. Prerequisite: consent of advisor.

**BIO 641 Cell Culture Techniques (2.3); 3 cr.** This course is designed to teach students the skills of mammalian cell culture, including: maintenance and manipulation of cells from various lines under sterile conditions, cell cloning, somatic cell hybridization and cryopreservation of cells.

**BIO 645 Principles of Pharmacology (3.0); 3cr.** A study of pharmacokinetics and pharmacodynamics of drugs in relationship to dose and time. The principles of drug action and interaction in different systems of the body will be discussed through representative substances.

**BIO 646 Signal Transduction (3.0); 3 cr.** The course covers the fundamental biochemical mechanisms involved in cellular signal transduction and regulation. Topics include receptors, secondary messengers, protein kinase function, nuclear transport, protein translocation, intercellular signaling mechanisms.

**BIO 650 Cellular and Molecular Immunology (2.3); 3 cr.** This course is a detailed study of the cellular and molecular components of the immune system: their production, structure, function and manipulation. It also includes major immunological techniques (e.g. ELISA, monoclonal antibody production, immunohistochemistry, western blot, affinity chromatography...), which are also used in other biological sciences. Prerequisite: consent of advisor.

**BIO 660 Selected Topics in Biology; 1, 2, 3, or 4 cr.** Oral presentations and in-depth discussions of selected topics in the area of specific competence of the course instructor (or groups of instructors). Course content will emphasize recent advances in the specific topic area. Prerequisite: consent of advisor.

**BIO 670 Seminar I; 1 cr.** Oral presentations and discussions by students on selected topics in Biology in an area of special interest.

**BIO 671 Seminar II; 1 cr.** Oral presentations and discussions by students on selected topics in Biology in an area of special interest.

**BIO 680 Tutorial I; 2 cr.** Individual study or research on a specially selected topic in Biology directed by a faculty member. Prerequisite: graduate standing and consent of the instructor.

**BIO 681 Tutorial II; 3 cr.** Individual study or research on a specially selected topic in Biology directed by a faculty member. Prerequisite: graduate standing and consent of the instructor.

**BIO 691 Master Thesis; 6 cr**

---

## Bachelor of Science in Chemistry

### Degree Requirements (92 credits)

#### General Chemistry

#### General Education Requirements

27 cr.

#### A - Communication Skills in English and Arabic

9 cr.

Two courses from the subcategory *English (6 cr.)*

ENL 213 And

ENL 223 Or ENL 230

- One course from the subcategory *Arabic (3cr.)*

ARB 211, ARB 212, ARB 224, ARB 231, ARB 317

#### B – Philosophy and Religion

6 cr.

- One course from the subcategory *Religion (3cr.)* REG 212, REG 213, REG 313, REG 314

- One course from the subcategory *Philosophy (3cr.)*

ENS 205, PHL 211, PHL 311, POS 345

#### C - Cultural Studies and Social Sciences

3 cr.

- One course from the category *Cultural Studies and Social Sciences (3 cr.)*

HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212

#### D - Citizenship

6 cr.

- Two courses from the category *Citizenship (6 cr.)*

HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337

#### E - Science and Technology

3 cr.

- One course from the subcategory *Mathematics/Statistics/Computer Science (3 cr.)*

CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, MIS 201

#### OR

- One course from the subcategory *Natural Sciences (3 cr.)*

AST 201, BIO 201, BIO 202, BIO 203, ENS 201, ENS 202, ENS 206, GEO 203, GIS 211, HEA 201, HEA 204, NTR 201, PHS 207

*Students majoring in Chemistry are not allowed to count CHM courses within the pool of required GER courses.*

#### Core Requirements

25 cr.

CHM 211, CHM 215, CHM 221, CHM 222, CHM 272, MAT 213, MAT 224, PHS 212, PHS 271

#### Major Requirements

34 cr.

CHM 321, CHM 322, CHM 326, CHM 327, CHM 335, CHM 372, CHM 440, CHM 490

Choose three Chemistry courses, 3 credits each. These courses should be at the 300 level and above.

#### Free Electives

6 cr.

---

## Undergraduate Courses: Chemistry

**CHM 101 General Chemistry I (3.0), 3 cr.** An introductory course about the atomic theory, chemical bonding and periodicity, stoichiometry; the state of matter, gases and solutions.

**CHM 102 General Chemistry II (3.0); 3 cr.** Cover chemical equilibrium, acids and bases, electrochemistry, an overview of the groups in the periodic table, and an introduction to organic chemistry and nuclear chemistry. *Prerequisite:* CHM 101.

**CHM 205 – Basic Chemistry, 3 credits (3.0).** This course provides a contemporary introduction to the basic principles in chemistry. It covers the principles of elements, atoms, and molecules, their physical changes, chemical reactivity, and electronic structure. It develops an understanding of bonding and structure, in addition to naming various compounds. Applications concerning quantitative composition of compounds, stoichiometric calculations, limiting reagent, and reaction yield are practiced in this course. The different states of matter are covered with the emphasis on the gas laws and the kinetic molecular theory of gases, and the colligative properties in the liquid state. Finally, acids and bases, titration, and buffers are discussed in the context of chemical equilibrium.

**CHM 211 Principles of Chemistry (3.0); 3 cr.** Deals with chemical nomenclature, stoichiometry, atomic theory, Lewis structure and VSEPR model, intermolecular forces, hybridization, acid-base and solubility equilibria, thermochemistry, thermodynamics, kinetics, redox reactions. The course is designed for sciences and engineering students.

**CHM 213 Basic Organic Chemistry (3.0) 3 cr.** This course provides a brief overview to basic principles in Organic Chemistry including the nomenclature, structure, synthesis and reaction of the main function groups of organic compounds. *Prerequisite:* CHM 205 or CHM 211.

**CHM 215 Quantitative Analysis (3.3); 4 cr.** This course deals with the theoretical and practical aspects of chemical analysis. It covers the principles of chemical equilibrium and its application on gravimetric and titrimetric methods of analysis in addition to the

fundamental principles of spectrometry. Statistical evaluation of the accuracy and precision of experimental data is discussed. *Prerequisite:* CHM 205 or CHM 211.

**CHM 221 Organic Chemistry I (3.0); 3 cr.** Introduction to the basic principles and concepts of organic chemistry with an emphasis on the relation between structure and properties, chemistry of hydrocarbons and stereochemistry. *Corequisite:* CHM 211.

**CHM 222 Organic Chemistry II (3.0); 3 cr.** A study of substitution and elimination reactions and of the chemistry of aromatic compounds, alcohols, ethers, epoxides, aldehydes and ketones, carboxylic acids and derivatives, amines and carbohydrates. *Prerequisite:* CHM 221.

**CHM 270 – Basic Chemistry Lab, 1 credit (0.2).** This laboratory course familiarizes students with laboratory techniques and equipment common to chemistry laboratories and reinforces the concepts learned in CHM 205 – Basic Chemistry.

**CHM 271 Principles of Chemistry Laboratory (0.2); 1 cr.** Introduction to laboratory techniques, selected experiments in chemical analysis. *Corequisite:* CHM 211.

**CHM 272 Organic Chemistry Laboratory (1.2); 2 cr.** The aim of this course is to familiarize students with the main techniques encountered in organic chemistry lab such as extraction, recrystallization, simple and fractional distillation, thin layer and column chromatography, identification of functional groups, conduct chemical reactions. Emphasis is placed on the theory of these techniques. *Corequisite:* CHM 222.

**CHM 273 Organic Chemistry Laboratory (0.2); 1 cr.** This course is designed for nutrition students and introduces the methods of separation and purification including extraction, recrystallization, simple and fractional distillation and thin layer chromatography. Identification of functional groups and chemical reactions will be also included. *Corequisite:* CHM 213.

**CHM 321 Physical Chemistry I (3.0); 3 cr.** This course covers fundamental principles of chemical dynamics and chemical

thermodynamics. A theoretical study of the macroscopic behavior and microscopic structure of matter using mathematical models; kinetic theory of gases, rate laws, mechanism, collision theory, activated complex theory; the three laws of thermodynamics and their application to chemical systems; thermodynamics of chemical reactions, thermodynamics of solutions, thermodynamics of phase transformation, chemical equilibrium. *Prerequisite:* CHM 211.

**CHM 322 Physical chemistry II (3.3); 4 cr.** This course deals with Quantum Chemistry and Spectroscopy. Topics covered are Quantum theory, postulates, Schrodinger equation, harmonic oscillator model, hydrogen atom, hydrogenic wave function, Pauli principle, rotational motion, atomic structure, molecular electronic structure, Huckel approximation, hybridization, symmetry, rotational and vibration spectroscopy, electronic spectroscopy of molecules. *Prerequisite:* CHM 321.

**CHM 325 Inorganic Chemistry (3.3); 4 cr.** Covers electronic structure and properties of atoms; structure and bonding of inorganic substances, the unit cell, VSEPR theory, bond energies; periodicity and correlation with the electronic structure, properties of the main-group elements and the d-transition metals; organometallic complexes and their applications in synthesis and catalysis. *Prerequisite:* CHM 211.

**CHM 326 Inorganic Chemistry I (3.3); 4 cr.** Covers atomic structure, chemical bonding (MOT), molecular geometry (VSEPR model), solid state (metals, ionic, covalent molecules), crystal field theory, symmetry and point group, acid-base concepts, e.m.f. diagram and its uses, chemistry of selected main group and transition elements with emphasis on physical properties and their applications in industrial chemistry. *Prerequisite:* CHM 211.

**CHM 327 Inorganic Chemistry II (3.0); 3cr.** Includes structures, stereochemistry, reaction mechanisms and physical properties with emphasis on transition metal coordination and sigma and pi bonded organometallic compounds and their role in catalysis. Metals in biological system will be covered. *Prerequisite:* CHM 326.

**CHM 331 Organic Identification and Structure (1.4); 3cr.** This course studies the theoretical and practical aspects of the separation, purification and identification of organic compounds. The identification of pure

compounds and of components of mixtures of organic compounds is accomplished by chemical and spectral methods and/or synthesis of derivatives. It covers the theory of NMR (including two-dimensional proton), infrared and mass spectrometry with emphasis on spectral interpretation skills needed for the elucidation of structure. *Prerequisite:* CHM 222, CHM 272.

**CHM 335 Biological Chemistry (3.0); 3cr.** Topics covered include structures and functions of important biomolecules, methods of structure determination, kinetics of enzyme-catalyzed reactions and enzyme mechanisms. *Prerequisite:* CHM 222

**CHM 372 Advanced Synthesis Laboratory (0.4); 2cr.** Advanced laboratory methods for the preparation of organic and inorganic molecules; synthetic techniques, purification techniques and multi-step syntheses with the characterization of intermediates and products by IR, NMR and MS. *Prerequisite:* CHM 326, CHM 222, CHM 272

**CHM 415 Environmental Chemistry I (3.0); 3cr.** Covers the natural chemical processes on Earth and the anthropogenic effects on the environment. The chemical processes occurring in the lithosphere, hydrosphere, and atmosphere are analyzed. The effects of primary and secondary pollutants, their interactions between each other and natural substances, and their propagation in the environment are covered. *Prerequisite:* Senior Standing.

**CHM 416 Environmental Chemistry II (3.0); 3cr.** Covers special chemistry topics relevant to environmental protection and environmental systems such as water, air, and soil. Selected topics include: polluted sites decontamination, wastewater and oil spill treatment, hazardous waste management, chemical sources of renewable energy, and an overview of Green Chemistry. *Prerequisite:* Senior Standing

**CHM 420 Industrial Chemistry I: Unit Operations (3.0); 3cr.** This course covers the study of unit operations: distillation, liquid-liquid extraction, gas-liquid extraction, gas absorption, filtration, evaporation, centrifugation, drying and leaching operations. The fundamentals of material balances will be introduced. *Prerequisite:* Senior Standing

**CHM 421 Industrial Chemistry II: Chemical Processes (3.0); 3cr.** This course provides a broad overview of technologies and processes involved in chemical industry. Topics covered:

industrial production of organic and inorganic chemicals, fermentation processes, Petroleum refining, Polymer processing, industrial catalysis, product development from bench to pilot plant to full-scale manufacturing, process economics and environmental considerations. *Prerequisite:* CHM 222, CHM 326

**CHM 425 Modern Methods of Organic Synthesis (3.0); 3cr.** The course presents the most important reaction types as tools for research scientist to use in synthesis. Topics include formation of carbon-carbon bonds, molecular rearrangement, cycloaddition and pericyclic reactions, photochemical and free radical reactions, oxidation and reduction reactions with emphasis on chemo-, regio- and stereoselectivity. General principles of retrosynthetic analysis will be used to design simple synthetic schemes for synthesis of target molecules, including important natural products. *Prerequisite:* CHM 222

**CHM 427 Pharmaceutical Chemistry (3.0); 3cr.** It explores in depth the synthesis of pharmaceutically important molecules such as antibiotics, cardiovascular, anti-inflammatory, chemotherapeutic agents and more. Special attention is placed on the strategy and tactics in synthesis and reaction mechanisms. Real case studies of process development of drug substances in pharmaceutical industry will be illustrated to show the problems which may be encountered in scaling up chemical synthesis and the ways these problems may be overcome. *Prerequisite:* CHM 425.

**CHM 428 Drug Design and Action (3.0); 3cr.** This course will give an overview of how drugs are designed and function to help synthetic chemists improve their understanding of drug chemistry. It covers stages of drug discovery process, drug-target interactions, pharmacological properties in drug design, elucidation of mechanism of action of drugs, description of routes for the delivery of drugs in the human body, chemical aspects of drug metabolism and the concept of pro-drugs. *Prerequisite:* CHM 222 and CHM 335 or BIO 227.

**CHM 430 Polymer Chemistry (3.0); 3cr.** Covers structure, characterization, synthesis and classification of polymers; mechanical properties; stability; and applications in packaging, insulators and fibers etc. *Prerequisites:* CHM 222, CHM 322.

**CHM 431 Atmospheric Chemistry & Pollution (3.0); 3 cr.** Covers the chemical composition of the earth's atmosphere and the major factors that control its chemical composition. Emphasizes the effects of the biosphere and the changes induced by human activities. Topics such as climate change, ozone depletion, urban air pollution and acid rain will be developed. *Prerequisite:* CHM 322.

**CHM 432 Chemistry & Processing of Food (3.0); 3 cr.** Provides an overview of the chemical and physical properties of food components and additives. Covers the processing operations of important food classes (beverages, fruits and vegetables, dairy products); major chemical changes taking place during processing and storage of foods; and principal methods of analysis used in the food industry. *Prerequisite:* CHM 222.

**CHM 433 Soil Chemistry & Pollution (3.3); 4 cr.** Covers chemistry of inorganic and organic soil components with emphasis on environmental significance of soil solution-solid phase equilibrium, sorption phenomena, ion exchange processes, reaction kinetics, redox reactions, and acidity and salinity processes. Also covers soil pollution: sources, dispersion, and remediation methods. *Prerequisites:* CHM 215, CHM 222, BIO 211.

**CHM 434 Materials Chemistry (3.0); 3 cr.** This course gives an introduction to materials chemistry and solid state chemistry together with an overview of common synthesis and characterization of materials with emphasis on molecular understanding of their chemical, electrical, optical, mechanical, thermal and magnetic properties. Topics covered include inorganic solids, polymers, nanoscale materials and biological materials with their potential technological applications. *Prerequisite:* CHM 222, CHM 322, CHM 325

**CHM 440 Instrumental Analysis (3.3); 4 cr.** Covers theory, practice and applications of modern analytical instrumentation: different aspects of instrumental analysis in areas of separation sciences and spectroscopy. Introduces instrumental methods of analysis, including gas and liquid chromatography; atomic, ultraviolet/visible, infrared, and fluorescence spectroscopy; nuclear techniques; and electrochemical methods. The use and the interpretation of data from these instruments will be practiced in the laboratory. *Prerequisite:* CHM 215.

**CHM 490 Chemistry Project; 1, 2 or 3 cr.**  
Upon the consent of an advisor the student carries out a research project, gaining deeper skills in problem-solving, performing a literature

review, experimental techniques, designing experiments, analyzing data and preparing a final report. *Prerequisite:* Senior standing.

---

**Bachelor of Science in Environmental Science****Degree Requirements (92 Credits)**

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>A - Communication Skills in English and Arabic</b>	9 cr.
- Two courses from the subcategory <i>English (6 cr.)</i>	
ENL 213 And	
ENL 223 Or ENL 230	
- One course from the subcategory <i>Arabic (3cr.)</i>	
ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>B – Philosophy and Religion</b>	6 cr.
- One course from the subcategory <i>Religion (3cr.)</i>	
REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3cr.)</i>	
ENS 205, PHL 211, PHL 311, POS 345	
<b>C - Cultural Studies and Social Sciences</b>	3 cr.
- One course from the category <i>Cultural Studies and Social Sciences (3 cr.)</i>	
HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, BAD 201, ECN 200, ECN 211, ECN 212	
<b>D - Citizenship</b>	3 cr.
- One course from the category <i>Citizenship (3 cr.)</i>	
HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>E - Science and Technology</b>	6 cr.
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i>	
CSC 201, CSC 202, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210, MIS 201	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i>	
AST 201, BIO 201, BIO 202, BIO 203, CHM 211, HEA 201, HEA 204, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>38 cr.</b>
BIO 211, BIO 212, CHM 215, CHM 221, CHM 222, CHM 272, CSC 318, ENS 303, ENS 321, GEO 201, GEO 311, STA 203.	
<b>Major Requirements</b>	<b>21 cr.</b>
ENS 201, ENS 322, ENS 323, ENS 430, ENS 450, ENS 490	
and also one freely chosen 3 credits Environmental Science course (preferably ENS 471).	
<b>Free Electives</b>	<b>6 cr.</b>

---

## Undergraduate Courses: Environmental Science

**ENS 201 Introduction to Environmental Science (3.0); 3 cr.** Introduction to the basic environmental global problems facing the Earth with emphasis on pollution and the use of energy resources. *Prerequisite:* Sophomore Standing.

**ENS 202 The Environment and Sustainable Development (3.0); 3 cr.** Introduction to sustainable development: concepts, goals, ecological, economic and social aspects. Fundamental environmental issues in sustainable development: natural resources management, population, food production, energy. International organizations and efforts. Standards and policies. Emerging technological applications and their impact. Resolution of environmental conflicts.

**ENS 205 Environment, Society and Ethics (3.0); 3 cr.** Population dynamics and community organization. World's economic unbalance and consequent impacts on human health and quality of life. International Politics and the environment. Environmental Law. Ethics and sustainability.

**ENS 206 Ecotourism (3.0); 3 cr.** Principles, characteristics and organization. Sustainability based on environmental protection, conservation and beneficial community and social interests. International experience, domestic ecotourism: description and geography. Field trips to the major nature reserves and sites of natural beauty in Lebanon.

**ENS 303 Ecology (3.0); 3 cr.** Principles of ecosystems; the interaction of organisms & their environment. Food web, energy flow & nutrient cycling in ecosystems. Factors which affect the distribution & abundance of species: Wildlife resources & extinction. *Prerequisite:* BIO 212. Also listed as BIO 314.

**ENS 312 Environmental Health (3.0); 3 cr.** Provides general understanding of how environmental factors are involved in the transmission of communicable diseases. Health hazards resulting from exposure to chemical and physical factors in the environment are emphasized as well.

**ENS 321 Soil Pollution (3.0); 3 cr.** Soil formation, soil chemistry. Soil erosion, weathering, salinity, soil rehabilitation. Soil contamination from environmental

contaminants: Their fixation/ mobility. Dispersion in the environment. Soil remediation methods.

**ENS 322 Water Pollution (3.0); 3 cr.** Natural water quality. Contaminant Hydrogeology: Chemical and physical contaminants. Marine Pollution. Problems arising from water treatment and resource use.

**ENS 323 Air Pollution (3.0); 3 cr.** Composition of the atmosphere. Climate and weather. Global atmospheric changes. Indoor and outdoor air pollution. Air pollution control processes, air pollutants dispersion modeling. *Prerequisite:* ENS 201.

**ENS 332 Plants and Pollution (3.0); 3 cr.** Biomes on Earth. Loss of biodiversity and desertification. Preventive measures. Forest resources and conservation. Interaction between plants and pollution, plant pollutant uptake and physiological responses. *Prerequisite:* BIO 212.

**ENS 420 Energy Resources (3.0); 3 cr.** Fossil fuels energy resources. Mineral resources. Alternative energy resources. Technological hazards and environmental impacts including political, economic and social consequences of their exploitation.

**ENS 422 Pollution of Marine Environment, (3.0); 3 cr.** Introduction to the marine ecosystems, sources and types of pollutants, environmental degradation and its impact. Marine pollution management. International legislation for the conservation of marine environment.

**ENS 423 Water and Wastewater Quality and Treatment (3.0); 3 cr.** Water and wastewater treatment processes. Consequent health impacts. Water and wastewater control techniques. Water protection.

**ENS 424 Conservation Biology (3.0); 3 cr.** The application of biological principles to issues in the conservation biology will be examined within a context that integrates biology, land management, protection and development. *Prerequisites:* ENS 203. Also listed as BIO 424.

**ENS 425 Forest Resource Conservation (3.0); 3 cr.** Ecological, social and economic principles applied in the management of forest and wildland resources, forests, range, water, fish

and game. Evaluation of alternate management plans: introduction to integrative planning: The interactions of water, wood, wildlife, range fisheries, and recreation resources. *Prerequisite:* BIO 212.

**ENS 430 Solid Waste Management (3.0); 3 cr.** Solid waste management and disposal. Treatment processes: Recycling, composting, landfilling. Introduction to hazardous/toxic waste.

**ENS 431 Industrial Waste Management (3.0); 3 cr.** Industrial waste: sources, types, quality, quantity and impact assessment. Treatment processes and detoxification. Disposal.

**ENS 440 Environmental Natural Hazards (3.0); 3 cr.** Seismic hazards; volcanoes; Atmospheric hazards; floods and Hydrologic hazards; landslides and rockfalls; design with nature; human interaction with the environment; risk maps; case studies.

**ENS 441 Mitigation Measures and Policies (3.0); 3 cr.** Rehabilitation concepts; mitigation procedures, design, and methodology; application to quarries, landfills, coastal erosion, landslides, floods.

**ENS 450 Environmental Impact Assessments (3.0); 3 cr.** The assessment of a project environmental limitations, precautions, mitigation, legal measures and the various methodologies of technical investigation, monitoring and assessment.

**ENS 451 Environmental Biotechnology (3.0); 3 cr.** The use of biotechnology as it relates to various environmental technologies: biodegradation, remediation, biodegradable materials, energy saving process and chemical production from renewable resources. *Prerequisites:* BIO 211, BIO 212. Also listed as BIO 451.

**ENS 471 Field and Laboratory Work (1.2); 3 cr.** Investigation of polluted sites and risk assessments. Environmental field work. Sampling methods. Laboratory analysis.

**ENS 475 Selected Topics in Environmental Science (3.0); 3 cr.** Students study recent and current environmental issues and topics. *Prerequisite:* Specified when offered.

**ENS 485 Seminar; 2 cr.** Students work on selected papers from recent biological, earth and environmental science journals. Under the supervision of an advisor. *Prerequisite:* Senior Standing.

**ENS 490 Senior Project; 3 cr.** After consultation with the Department, students run an environmental research project (case study) that will be presented as a seminar.

**ENS 495 Research in Environmental Science; 1, 2 or 3 cr.** An independent research project in an area of environmental science under the direction of a faculty mentor. *Prerequisite:* Senior standing and consent of the instructor.

---

## Undergraduate Courses: Geology

**GEO 101 Environmental Geology (3.0); 3 cr.**

An introductory course of the study of the earth covering: how the earth works, the major geologic processes as earthquakes and volcanoes, how they influence human activities and the geologic aspect of environmental pollution . *Prerequisite:* Freshman Standing.

**GEO 201 Physical Geology (3.0); 3 cr.**

Basic principles of structural and depositional geologic processes. Structure of the Earth. Minerals, rocks and soils. Minerals and Rocks identification. Geological maps interpretation. *Prerequisite:* Sophomore Standing.

**GEO 202 Geology for Architects (2.0) 2 cr.**

Minerals and Rocks, Earthquakes, Interpreting and Reading Topographical and Geological Maps, Geology of Lebanon, Laboratory Application and Field Trips.

**GEO 203 Planet Earth (3.0); 3 cr.**

Basic principles of the Earth's composition: Structure

and age, the Earth's processes: Earthquakes and volcanoes, the Earth's materials: Minerals, rocks, soils and groundwater. Applications from the major geological aspects in Lebanon . *Prerequisite:* Sophomore Standing.

**GEO 311 Hydrogeology (3.0); 3 cr.**

Hydrologic cycle; meteorology; groundwater resources and uses; groundwater movement, natural and artificial discharge. Groundwater erosion and deposition. Lebanon's water resources.

**GEO 312 Engineering Geology: 3 cr.**

Weather and soil-forming Processes: Application of engineering geology in foundations design; properties of rock substance and rock mass; Tunnels; Mass-Wasting Process; Ground Water in Engineering Geology; Fluvial Processes; Dams; Land subsidence; coastal engineering geology; Earthquakes; Case Studies. *Prerequisite:* GEO 201.



**FACULTY OF  
NURSING  
AND HEALTH SCIENCES (FNHS)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

Farhat, Antoine, Ph.D.  
FNAS Building, 3<sup>rd</sup> floor Room S r27  
Tel: 09-218950/1/2 (Extension 2093), Direct line: 09-208900  
E-mail: afarhat@ndu.edu.lb

### **Chairperson**

#### **Nursing Program Academic Advisor**

Jaalouk, Doris, Ph.D.  
FNAS Building, 3<sup>rd</sup> floor Room S 325  
Tel: 09-218950/1/2 (Extension 2084), Direct line: 09-208707  
E-mail: djaalouk@ndu.edu.lb

#### **Medical Laboratory Technology Program Academic Advisor**

Doumit, Jacqueline, Ph.D.  
FNAS Building, 3<sup>rd</sup> floor Room S 322  
Tel: 09-218950/1/2 (Extension 2272), Direct line: 09-208903  
E-mail: jdoumit@ndu.edu.lb

#### **Nutrition and Dietetics Program Academic Advisor**

#### **Dietetics Internship Certificate Program Coordinator**

Abou Jaoude, Maya, M.S.  
FNAS Building, 3<sup>rd</sup> floor Room S 323  
Tel: 09-218950/1/2 (Extension 2098), Direct line: 09-208908  
E-mail: maboujaoude@ndu.edu.lb

#### **Faculty Administrative Assistant**

Fahed, Nathalie, B.A.  
FNAS Building, 3<sup>rd</sup> floor Room S 326  
Tel: 09-218950/1/2 (Extension 2534), Direct line: 09-208901  
E-mail: nfahed@ndu.edu.lb  
fnhs@ndu.edu.lb

# **FACULTY OF NURSING AND HEALTH SCIENCES (FNHS)**

---

<b>Associate Professors:</b>	Doumit, Jaqueline; Farhat, Antoine; Jaalouk, Doris
<b>Assistant Professors:</b>	Bou Mosleh, Jocelyne; El-Hayek, Jessy
<b>Lecturer:</b>	Abou-Jaoude, Maya

---

## **MISSION, VISION AND VALUES**

### **Mission**

The Faculty of Nursing and Health Sciences (FNHS) provides student-centered and quality education in an environment that fosters academic integrity, social justice, and personal responsibility. The FNHS prepares students to become morally reflective health care scholars who provide leadership in evidence-based practice to promote well-being and disease prevention among individuals and communities. Through integrated programs of excellence in education, research, and service, FNHS contributes to the enhancement of the public's health in Lebanon and the region by training future health professionals from diverse backgrounds, conducting quality and significant research, and using newly generated knowledge to drive effective public health practice and policy. The faculty's curricula offer students comprehensive knowledge and clinical experience through supervised practice programs that enable them to assess, plan, implement and evaluate an adequate therapeutic regimen for clients in different healthcare settings.

### **Vision**

The faculty of Nursing and Health Sciences aims at establishing professional leading programs in Lebanon by offering well developed curricula with biological, social, behavioral, and professional components, fostering a life-long learning process and developing leaders in the health care system.

### **Values**

The followings are the values that inspire the work of the FNHS faculty, students and staff:

- Academic integrity;
- Academic excellence;
- Ethical behavior and conduct;
- Belief in the welfare of the caretaker;
- Lifelong learning;
- Service to the community;
- Teamwork;
- Cross-cultural understanding;
- Social justice.

## **DEGREE PROGRAMS**

The Faculty of Nursing and Health Sciences offers undergraduate programs leading to the degree of:

- B.S. in Medical Laboratory Technology (103 credits)
- B.S. in Nursing (105 credits)
- B.S. in Nutrition and Dietetics (95 credits)

Each undergraduate program offered at the FNHS is composed of three components:

- The General Education Requirements (GER)
- Core and Major Requirements
- Free Elective

In addition, the Faculty of Nursing and Health Sciences offers the Dietetics Internship Certificate Program.

The Dietetics Internship Program (DIP) - NTR 580- is open to holders of B.S. in Nutrition and Dietetics interested in pursuing post-graduate hospital training primarily for the purpose of fulfilling eligibility criteria to sit for the National Colloquium Examination. The latter is a must for graduates in Nutrition and Dietetics to obtain the license to practice the profession of dietetics in Lebanon. The DIP gives the opportunity to accepted candidates to follow a supervised training for a period of six months at an affiliated hospital. Upon successful completion of training, applicants would be issued a certificate.

### **Admission Requirements**

For admission requirements to degree programs offered by the Faculty of Nursing and Health Sciences refer to the section under the title of “Undergraduate Admission” of this Catalog.

### **Graduation Requirements**

To graduate, a student must fulfill all requirements of the degree program, with an overall GPA of at least 2.0/4.0, and a minimum GPA of 2.3/4.0 in both the core and major requirements, and clear all accounts with the University. Candidates for degrees are reminded that grades of “I” assigned during the last semester to courses required for graduation will result in delaying of graduation.

## DEPARTMENT OF NURSING AND HEALTH SCIENCES

### Bachelor of Science in Medical Laboratory Technology

#### Degree Requirements (103 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 and ENL 223 or ENL 230	
- One course from the subcategory <i>Arabic (3 cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>b) Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3 cr.)</i> REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3 cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>c) Cultural Studies and Social Sciences</b>	<b>6 cr.</b>
Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>d) Citizenship</b>	<b>3 cr.</b>
One course from the category <i>Citizenship (3 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>e) Science and Technology</b>	<b>3 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
<b>OR</b>	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, ENS 201, ENS 202, ENS 206, NTR 201, PHS 207	
<b>Core Requirements</b>	<b>24 cr.</b>
BIO 211, NHS 205 BIO 227, CHM 205, CHM 213, CHM 215, CHM 273, NHS 203	
<b>Major Requirements</b>	<b>49 cr.</b>
BIO 222, MLT 311, MLT 314, MLT 318, MLT 320, MLT 321, MLT 322, MLT 325, MLT 327, MLT 329, MLT 330, MLT 339, MLT 340, MLT 400, MLT 410, MLT 420, MLT 430, MLT 440, MLT 450, MLT 460, MLT 470	
<b>Free Electives</b>	<b>3 cr.</b>

---

## Medical Laboratory Technology: Undergraduate Courses

**MLT 311 Clinical Chemistry I (2.0); 2 cr.** Concepts of clinical chemistry, mechanisms of diseases and the correlation of laboratory data with those diseases. Clinical interpretation of normal and abnormal values. *Prerequisite:* CHM 205 or CHM 211.

**MLT 314 General Microbiology (3.2); 4 cr.** Covers structure, morphology, nutritional requirements, metabolism, and growth of microorganisms, culture techniques, microbial diseases, assays, and introduction to microbial genetics. *Prerequisite:* BIO 211. Also listed as BIO 320.

**MLT 318 Hematophysiology (3.0); 3 cr.** Covers general hematology, including development and functions of red blood cells, white blood cells, and platelets, coagulation, manual techniques and modern automation. *Prerequisite:* BIO 211.

**MLT 320 Clinical Parasitology (3.0); 3 cr.** Covers parasitic infections of humans of clinical importance, and their diagnostic laboratory techniques. *Prerequisite:* BIO 211.

**MLT 321 Clinical Mycology (1.0); 1 cr.** Covers fungal infections of humans of clinical importance, mode of infection, methods of identification, and susceptibility testing of fungi. *Prerequisite:* BIO 211.

**MLT 322 Clinical Chemistry II (2.0); 2 cr.** Continuation of MLT 311. *Prerequisite:* MLT 311.

**MLT 325 Clinical Bacteriology (2.0); 2 cr.** Covers bacterial infections of humans of clinical importance, mode of infection, identification methods, and antibiotic susceptibility testing. *Prerequisite:* MLT 314.

**MLT 327 Clinical Virology (1.0); 1 cr.** Covers viral infections of humans of clinical importance, mode of infection, methods of identification, and their diagnostic laboratory techniques. *Prerequisite:* MLT 314.

**MLT 329 Hematopathology (2.0); 2 cr.** Covers blood cells (erythrocytes, leukocytes, and platelets) disorders, and coagulation disorders. *Prerequisite:* MLT 318.

**MLT 330 Clinical Histopathology and Cytology Techniques (2.0); 2 cr.** Series of lectures in cell biology and normal histology of various human tissues. Lectures on techniques of tissue handling, preparation and staining of specimens and smear of cytological material.

**MLT 339 Blood Banking and Transfusion Medicine (1.0); 1 cr.** Covers basic principles in blood banking and transfusion medicine. *Prerequisite:* BIO 222, and MLT 318.

**MLT 340 Serology (2.0); 2 cr.** Basic aspects of clinical serology which involves the study of mechanisms, different formats, interfering factors, application and interpretation of commonly used serological tests. *Prerequisite:* BIO 222.

**MLT 400 Selected Topics in Laboratory Medicine (1.0); 1 cr.** Covers recent advances or special topics in the various disciplines of laboratory medicine. *Prerequisite:* MLT 325, MLT 339.

**MLT 410 Practical Training in Clinical Chemistry; 4 cr.** 5-week practical training in clinical chemistry.

**MLT 420 Practical Training in Clinical Hematology; 4 cr.** 5-week practical training in clinical hematology.

**MLT 430 Practical Training in Clinical Bacteriology; 4 cr.** 5-week practical training in clinical bacteriology.

**MLT 440 Practical Training in Clinical Parasitology and Urinalysis; 2 cr.** 4-week practical training in clinical parasitology and urinalysis.

**MLT 450 Practical Training in Serology; 2 cr.** 4-week practical training in serology.

**MLT 460 Practical training in Blood Banking; 2 cr.** 4-week practical training in blood banking.

**MLT 470 Practical Trainig in Phlebotomy, Cytogenetics & Histological Techniques; 2 cr.** 4-week practical training in phlebotomy, cytogenetics & histological techniques.

---

## Bachelor of Science in Nursing

### Degree Requirements (105 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	9 cr.
ENL 213, ENL 230 ARB 211 or ARB 231	
<b>b) Philosophy and Religion</b>	6 cr.
REG 212 or REG 213 or REG 313 or REG 215, NUR 203	
<b>c) Cultural Studies</b>	6 cr.
EDU 213, PSL 201 or SOL 313	
<b>d) Citizenship</b>	3 cr.
POS 240 or POS 319	
<b>e) Science and Technology</b>	3 cr.
NTR 210	
 <b>Major Requirements</b>	 <b>72 cr.</b>
BIO 207, NHS 204, NHS 205, BIO 216, BIO 219, NUR 202, NUR 204, NUR 205, NUR 301, NUR 302, NUR 303, NUR 304, NUR 305, NUR 306, NUR 307, NUR 308, NUR 309, NUR 310, NUR 402, NUR 403, NUR 404, NUR 405, NUR 406, NUR 407, NUR 408, NUR 409, NUR 410	
 <b>Free Electives</b>	 <b>6 cr.</b>

---

### Nursing: Undergraduate Courses

**NUR 202 Nursing Concepts: Theory and Practice (1.0); 1 cr.** The course offers an introduction to Nursing theory and practice emphasizing the principles of clinical procedures, the use of medical instruments and the various ways of handling patient care throughout the nursing care delivery.

**NUR 203 Introduction to Bioethics (3.0); 3 cr.** The course presents the basic principles and guidelines of bioethical issues. Moral problems arising in the delivery of health care are addressed within the ethical context.

**NUR 204 Health Assessment across the Life Span (2.0); 2 cr.** This course provides the student with the knowledge and skills needed to assess the physical, psychosocial and cultural health status of individuals from infancy to old age in order to identify normal and abnormal findings.

**NUR 205 Nurse – Patient Relationship (2.0); 2 cr.** This course explores aspects of therapeutic communication skills in the nurse – patient relationship. The goal is to achieve a therapeutic professional outcome in the process of health

care delivery. Moreover, the course brings insight and behavioral change in the exchange process.

**NUR 301 Adult Health Nursing I – Theory (3.0); 3 cr.** This course develops the knowledge and application of scientific principles in the care of adults presenting medical – surgical problems. It builds on the holistic approach to nursing care of the client through the application of the nursing process.

**NUR 302 Adult Health Nursing I – Clinical (0.6); 3 cr.** Using the nursing process, this course gives the student the opportunity to apply in a clinical setting the concepts and principles stated in NUR301. *Corequisite:* NUR 301.

**NUR 303 Adult Health Nursing II – Theory (3.0); 3 cr.** This course is a continuation of NUR 301 with an emphasis on dysfunctions related, among others, to metabolic, endocrine, neurologic, rheumatic and chronic conditions.

**NUR 304 Adult Health Nursing II – Clinical (0.6); 3 cr.** Using the nursing process, this course gives the student the opportunity to

implement the concepts stated in NUR 303 in a variety of settings. *Corequisite:* NUR 303.

**NUR 305 Geriatric Nursing – Theory (3.0); 3 cr.** The course will focus on theories and concepts of the aging process, health problems and needs of the elderly, and health promotion and maintenance of the elderly in the community.

**NUR 306 Geriatric Nursing – Clinical (0.6); 3 cr.** The course will help in assessing and evaluating the impact of the aging process on the individual, the family and the society, as well as in planning and implementing appropriate nursing care for the elderly person. *Corequisite:* NUR 305.

**NUR 307 Pharmacology for Nursing (2.0); 2 cr.** This course focuses on the study of basic concepts in pharmacology and introduces the student to the different groups of therapeutic drugs used in professional nursing. It also introduces the role and responsibilities of the professional nurse in the administration of medication.

**NUR 308 Community Health Nursing – Theory (2.0); 2 cr.** The course presents the theories and concepts of health care in the community, the different nursing roles in community health, and the various legal, social and environmental issues affecting community health.

**NUR 309 Community Health Nursing – Clinical (0.4); 2 cr.** The course focuses on individual, family and community responses to actual or potential health problems. Health promotion, disease prevention, and care of clients with long-term illness are addressed. The clinical nursing process is used to determine the appropriate intervention in cooperation with team workers. *Corequisite:* NUR 308.

**NUR 310 Legislation for Nursing (2.0); 2 cr.** This course provides an understanding of the legal issues related to the nursing profession, and gives the student awareness and discernment in the process of performance within the health system, especially in Lebanon.

**NUR 402 Obstetric Nursing – Theory (3.0); 3 cr.** This course will focus on the nursing care of the woman during the maternity cycle and the care of the newborn, taking into consideration the physical, psychological and emotional needs of the woman during the pregnancy and post partum periods.

**NUR 403 Obstetric Nursing – Clinical (0.6); 3 cr.** The course emphasizes the implementation of the nursing concepts and process in maternal and neonatal care units. *Corequisite:* NUR 402.

**NUR 404 Pediatric Nursing – Theory (3.0); 3 cr.** This course presents theories and concepts associated with the response of children to acute and chronic illness. The emphasis is on the child's growth and development in relation to illness. The impact of developmental variables from infancy to adolescence is integrated throughout the course.

**NUR 405 Pediatric Nursing – Clinical (0.6); 3 cr.** This course focuses on the application of the theory of pediatric nursing in the clinical process for a variety of settings, using the nursing interventions in the care of the children and their families to help them in coping with acute and chronic health problems. *Corequisite:* NUR 404.

**NUR 406 Psychiatric and Mental Health Nursing – Theory (3.0); 3 cr.** This course introduces the student to principles and concepts associated with psychiatric and mental health nursing, and to the care of individuals and families with acute and chronic mental health problems.

**NUR 407 Psychiatric and Mental Health Nursing – Clinical (0.6); 3 cr.** This course focuses on the application of the nursing process regarding the interventions in the clinical setting on patients suffering from acute and long-term mental health problems. Special emphasis is placed on assessing, planning, and establishing a nurse – patient therapeutic relationship in collaboration with the multi-disciplinary health team. *Corequisite:* NUR 406.

**NUR 408 Leadership and Management in Nursing – Theory (3.0); 3 cr.** The course will focus on the theories, concepts and modalities of leadership and management in nursing. It will assist the student in understanding the professional role of the nurse as a potential leader in various areas of health care.

**NUR 409 Leadership and Management in Nursing – Clinical (0.6); 3 cr.** The course will allow the student to make the transition from a dependent role as a student to a relatively independent role as a nurse-leader by observing, assisting and practicing the different modalities and skills of leadership and management in a variety of health care settings. *Corequisite:* NUR 408.

**NUR 410 Nursing Research (3.0); 3 cr.** The course introduces the student to the research scientific process and its application to nursing.

Emphasis is placed on the basic research steps towards the assessment and evaluation of the data and the potential use of the findings.

---

## Bachelor of Science in Nutrition and Dietetics

### Degree Requirements (95 Credits)

<b>General Education Requirements</b>	<b>27 cr.</b>
<b>a) Communications Skills in English and Arabic</b>	<b>9 cr.</b>
- Two courses from the subcategory <i>English (6 cr.)</i> ENL 213 and ENL 223 or ENL 230	
- One course from the subcategory <i>Arabic (3 cr.)</i> ARB 211, ARB 212, ARB 224, ARB 231, ARB 317	
<b>b) Philosophy and Religion</b>	<b>6 cr.</b>
- One course from the subcategory <i>Religion (3 cr.)</i> REG 212, REG 213, REG 215, REG 313, REG 314	
- One course from the subcategory <i>Philosophy (3 cr.)</i> ENS 205, PHL 211, PHL 311, POS 345	
<b>c) Cultural Studies and Social Sciences</b>	<b>6 cr.</b>
Two courses from the category <i>Cultural Studies and Social Sciences (6 cr.)</i> HUT 305, HUT 306, MUS 210, FAP 215, COA 359, COA 315, NTR 215, ARP 215, PSL 201, SOL 201, SOL 301, SOL 313, BAD 201, ECN 200, ECN 211, ECN 212	
<b>d) Citizenship</b>	<b>3 cr.</b>
One course from the category <i>Citizenship (3 cr.)</i> HIT 211, POS 201, POS 210, POS 240, IAF 301, POS 319, POS 337	
<b>e) Science and Technology</b>	<b>3 cr.</b>
- One course from the subcategory <i>Mathematics/Statistics/Computer Science (3 cr.)</i> CSC 201, MAT 201, MAT 202, MAT 204, MAT 211, STA 202, STA 210	
<b>OR</b>	
- One course from the subcategory <i>Natural Sciences (3 cr.)</i> AST 201, ENS 201, ENS 202, ENS 206, HEA 204, PHS 207	
<b>Core Requirements</b>	<b>18 cr.</b>
BIO 211, NHS 203, NHS 205, CHM 205, CHM 213, CHM 270, CHM 273	
<b>Major Requirements</b>	<b>47 cr.</b>
NTR 210, NTR 227, NTR 313, NTR 320, NTR 321, NTR 325, NTR 330, NTR 335, NTR 425, NTR 430, NTR 435, NTR 440, NTR 441, NTR 450, NTR 460, NTR 495	
<b>Free Electives</b>	<b>3 cr.</b>
Students are encouraged to take NUR 307	

---

## Nutrition and Dietetics: Undergraduate Courses

**NTR 101 Nutrition Concepts and Controversies (3.0); 3 cr.** This course introduces students to fundamental concepts and principles of nutrition by exploring current nutritional issues of relevance to their lives. It will also provide students with insight to the evaluation of the nutritional information promoted in the news nowadays. The course will illustrate the six classes of nutrients: carbohydrates, lipids, proteins, vitamins, minerals and water, their basic functions, and their roles in the body.

**NTR 201 Basic Human Nutrition (3.0); 3cr.** An introduction to the study of carbohydrates, fats, proteins, vitamins and minerals and their effects on health. An overview of the processes of digestion, absorption and their metabolism. *Prerequisite:* Sophomore Standing and ENL 105. Not open to students who take NTR 101.

**NTR 210 Human Nutrition (3.0); 3 cr.** Study of macro- and micro-nutrients and their roles in the body, as well as the nutritional needs of an individual throughout the lifespan. *Passing grade: C*

**NTR 212 Food Sanitation and Safety (3.0); 3 cr.** Food microbiology and food hygiene; causes of food poisoning and food-borne infections; prevention and safety. *Prerequisite:* NTR 201 or NTR 210.

**NTR 215 Foods and Nutrition of World Cultures (3.0); 3 cr.** The focus of the course is to enhance the student's basic understanding of the cultural factors, which influence food intake and nutritional status. Food and diet patterns of various culture groups will be explored through lecture, food preparation, food sampling, and guest speakers.

**NTR 227 Nutritional Biochemistry (3.0); 3 cr.** General biochemistry, with emphasis on the biochemical functions of nutrients and their metabolism. *Prerequisite:* BIO 211, and NTR 210, *Corequisite:* CHM 213.

**NTR 313 Foodservice Management (3.0); 3 cr.** The course focuses on planning and service of safe, nutritionally balanced meals within budgetary margins as well as technical operations in a foodservice system. It includes regulations and standards, and the basics of total quality management in health care and other

institutions. *Prerequisite:* NTR 201 or NTR 210. *Passing grade: C*

**NTR 320 Food Chemistry (2.0); 2 cr.** Covers chemical composition, physical and sensory properties of foods. Focuses on the structural considerations of food components (water in foods, lipids, carbohydrates and proteins), chemicals in foods, browning reactions and flavor of foods. *Prerequisite:* CHM 213.

**NTR 321 Food Microbiology (3.2); 4 cr.** A study of microorganisms with emphasis on food spoilage, food poisoning, and the control of pathogenic microorganisms in food. *Prerequisite:* BIO 211.

**NTR 325 Food Analysis (1.2); 2 cr.** Introduces the laboratory methods for chemical analysis of nutrients and chemicals in food products. *Prerequisite:* CHM 215, or (CHM 205 and CHM 270). *Corequisite:* NTR 320.

**NTR 330 Community Nutrition (3.0); 3 cr.** Focuses on community nutrition education programs in schools, health centers, government institutions, and mass media. Emphasis on current research in assessing community nutrition program needs as well as program implementation. *Prerequisite:* NTR 210. *Passing grade: C*

**NTR 335 Sports Nutrition (3.0); 3 cr.** In-depth coverage of both nutrition and exercise physiology while delivering practical, applied information useful to provide dietary and training guidelines for different kinds of sports. *Prerequisite:* (NTR 201 or NTR 210), and (BIO 215 or NHS 205)

**NTR 425 Food Processing (2.2); 3 cr.** Covers the changes in basic constituents of foods (carbohydrates, lipids, proteins, vitamins, minerals, food enzymes, and water) resulting from processing and preparation. Focuses on the principles of food spoilage and food preservation, and the different laboratory methods of food processing. *Prerequisite:* NTR 320.

**NTR 430 Advanced Human Nutrition (3.0); 3 cr.** Covers human physiological needs for energy requirements; body needs from food groups such as carbohydrates, proteins and fats; control of nutrient metabolism; and methods of the nutritional assessment. *Prerequisite:* NTR

227 and (BIO 215 or NHS 205). *Passing grade: C*

**NTR 435 Nutrition in the Life Cycle (3.0); 3 cr.** Covers the basic nutritional needs of people throughout their life cycle (infancy, childhood, adolescence, adulthood and elderly people) and the special nutritional requirements during pregnancy and lactation. *Prerequisite: NTR 430. Passing grade: C*

**NTR 440 Therapeutic Nutrition (3.2); 4 cr.** Covers the nutritional needs of individuals throughout their life cycle and in various diseases. Provides the students with an understanding of how nutritional status is assessed in relation to health and disease at the individual and community levels by covering case studies reports and study modules. *Prerequisite: NTR 430. Passing grade: C*

**NTR 441 Special Topics in Therapeutic Nutrition (2.0); 2 cr.** Outlines medical nutrition therapy of selected metabolic, respiratory and neurological diseases, cancers, and food allergies. Also outlines nutritional care during pregnancy and lactation. *Prerequisite: NTR 430. Passing grade: C*

**NTR 445 Introduction to Dietetics Profession (2.0); 2 cr.** Reviews basic skills needed by the dietician including nutritional care, ethics, role and responsibilities in various employment settings. *Prerequisite: Senior Standing.*

**NTR 450 Dietetics Counseling and Communication (3.2); 4 cr.** Application of the principles of dietetics in a hospital setting. Focuses on the techniques in collection and interpretation of dietary intake. Emphasis on the team concept of patient care and strategies for promoting change in nutritional education. *Prerequisite: Senior Standing. Passing grade: C*

**NTR 460 Therapeutic Nutrition Practicum (1.3); 2 cr.** Case study evaluation of selected topics in advanced therapeutic nutrition and related current pertinent research. *Prerequisite: NTR 450. Corequisite: NTR 440. Passing grade: C*

**NTR 580 Dietetics Internship 6 cr.** Supervised dietetic training for a period of 6 to 9 months at an affiliated hospital. *Prerequisite: BS in Nutrition & Dietetics*

**NTR 495 Project in Nutrition; 3 cr.** Emphasizes current research in nutrition and dietetics. *Prerequisite: Senior standing and consent of instructor.*

---

## Undergraduate Faculty Courses

**HEA 201 Health Awareness (3.0); 3 cr.** Comprehensive prevention-oriented approach to personal health topics: stress management, mental health, physical fitness, nutrition and weight control, human sexuality, communicable and chronic diseases, addictive substances and personal safety.

**HEA 204 Contemporary Health Issues (3.0); 3 cr.** This course intends to provide students with the latest information on major current health issues and to teach them skills for them to be able to critically evaluate it. It covers selected quality and timely articles on a variety of health topics written by authors with diverse educational backgrounds and expertise.  
*Prerequisite:* Sophomore-standing.

**NHS 203 Principles of Epidemiology (3.0); 3 cr.** An integrated course that introduces the basics in Epidemiology and Biostatistics. Topics include population measures of mortality and morbidity, epidemiological study designs and concepts such as sources of bias, confounding

and effect measure modification and ethics in clinical trials and research. Methods of presenting health-related data, probability models and assessment of causal associations and differences are also covered. Special attention is given to the Lebanese context.

**NHS 204 Anatomy for Nursing & Allied Health Professions (3.0); 3 cr.** Covers gross normal structure of human body organ systems; accompanies “Physiology for Nursing and Allied health Professions”.

**NHS 205 Physiology for Nursing & Allied Health Professions (3.0); 3 cr.** Provides an understanding of the basic principles of human body’s functioning under normal healthy conditions necessary for nursing and allied health professions’ students. It outlines principles of physiology along with a survey of various body systems (homeostasis; metabolism; nervous, muscular, cardiovascular, respiratory, gastrointestinal, renal, reproductive and endocrine systems). It serves as a foundation for the clinical topics covered in health sciences programs.



**FACULTY OF  
POLITICAL SCIENCE,  
PUBLIC ADMINISTRATION,  
AND DIPLOMACY (FPSPAD)**

## **FACULTY DIRECTORY**

### **Office of the Dean**

Ghais, Chahine, Ph.D. Professor  
Green Building, 1<sup>st</sup> Floor, Room B265  
Tel: 09-218950/1/2 (Extension 2432), Direct line: 09-208200  
E-mail: cghaith@ndu.edu.lb

### **Chairperson**

Al-Hindy, Elie, Ph.D. Assistant Professor  
Green Building, 1<sup>st</sup> Floor, Room B256  
Tel: 09-218950/1/2 (Extension 2445), Direct line: 09-208195  
E-mail: eelhindy@ndu.edu.lb

### **Professor**

Nehme, Michel, Ph.D.  
Guest Dorms Building, 2<sup>nd</sup> Floor, Room RC 211  
Tel: 09-218950/1/2 (Extension 2446), Direct line: 09-208985  
E-mail: micheln@ndu.edu.lb

### **Associate Professors:**

Labaki, George, Doctorate  
Green Building, 1<sup>st</sup> Floor, Room B266  
Tel: 09-218950/1/2 (Extension 2464), Direct line: 09-208197  
E-mail: glabaki@ndu.edu.lb

Salem, Naim, Ph.D.  
Green Building, 1<sup>st</sup> Floor, Room B268  
Tel: 09-218950/1/2 (Extension 2416), Direct line: 09-208198  
E-mail: nsalem@ndu.edu.lb

Sensenig-Dabbous, Eugene, Doktor der Philosophie  
Green Building, 1<sup>st</sup> Floor, Room B254  
Tel: 09-218950/1/2 (Extension 2322), Direct line: 09208196  
E-mail: sdabbous@ndu.edu.lb

### **Assistant Professor:**

Sabat, Rita, Ph.D.  
Green Building, 1<sup>st</sup> Floor, Room B255  
Tel: 09-218950/1/2 (Extension 2468), Direct line: 09-208194  
E-mail: rsabat@ndu.edu.lb

### **Administrative Assistant**

Basbous, Nayla Bassil, M.A.  
Green Building, 1<sup>st</sup> Floor, Room B264  
Tel: 09-218950/1/2 (Extension 2431), Direct line: 09-208199  
E-mail: nbasbous@ndu.edu.lb;  
fpspad@ndu.edu.lb; politicalscience@ndu.edu.lb

# **FACULTY OF POLITICAL SCIENCE, PUBLIC ADMINISTRATION, AND DIPLOMACY**

## **FACULTY PROFILE**

The Faculty of Political Science, Public Administration and Diplomacy consists of three Departments:

- Department of International Affairs and Diplomacy
- Department of Political Science
- Department of Public Administration

The Faculty of Political Science, Public Administration and Diplomacy offers programs leading to the degrees of:

- Bachelor of Arts in International Affairs and Diplomacy
- Master of Arts in International Affairs and Diplomacy
- Master of Arts in International Affairs and Diplomacy - International Law Emphasis
- Bachelor of Arts in Political Science
- Bachelor of Arts in Political Science – American Studies
- Bachelor of Arts in Political Science – Euro-Mediterranean Studies
- Bachelor of Arts in Political Science – NGOs Emphasis
- Master of Arts in Political Science
- Master of Arts in Political Science – NGOs Emphasis
- Master of Arts in Political Science – Human Rights Emphasis
- Bachelor of Arts in Public Administration
- Master of Arts in Public Administration

## **MISSION, VISION AND VALUES**

### **Mission**

The mission of the Faculty of Political Science, Public Administration and Diplomacy is to provide quality education that helps build in our students the characteristics of high intellect, moral integrity, enlightened citizenship, human solidarity, and responsible leadership in the public and private sectors. We serve our community by enhancing awareness about human rights, the common good, sustainable development, and other basic precepts of democratic governance; and by connecting it to the rest of the world through educational networks of cooperation and through original applied research.

## **Vision**

The Faculty of PSPAD envisions itself as a leading national and regional platform of intellectual and scholarly discourse on issues of government, politics, international relations, and human organization. We consistently strive to provide our students and community with the most evolved education by introducing new courses and programs that cover new and expanding disciplines. The aim is to enrich the minds of our students with the most developed analytical and critical thinking approaches that transform them into leaders in the service of the community and essential interlocutors in the cultural/civilizational dialogue.

## **Values**

True to the Maronite Catholic traditions of NDU, the Faculty of PSPAD is dedicated to serve as a beacon of enlightenment in the continuous search for truth and better life. In this pursuit, we are guided by a value system founded on:

- Academic excellence;
- Integrity;
- Individual initiative;
- Intellectual freedom;
- Responsible citizenship and accountable leadership;
- Human solidarity;
- Conflict transformation and peace building;
- Diversity, dialogue, and cooperation;
- Subsidiarity;
- Catholic Social Theory.

# **ACADEMIC DEPARTMENTS AND DEGREE PROGRAMS**

## **Bachelor of Arts Degrees**

### **Admission Requirements:**

Compliance with the general rules and regulations applied by NDU in the general Catalogue.

### **Graduation Requirements:**

Students seeking the degree of Bachelor of Arts in the Faculty of PSPAD must complete a total of 105 credits with an overall average of at least 2.0/4.0 and a minimum average of 2.3/4.0 in the major requirements.

## **Master's Degrees**

### **Program Guidelines**

The M.A. degrees in the Faculty of Political Science, Public Administration and Diplomacy, require each 36 credit hours, including a thesis. Courses are offered primarily in the late afternoon to allow students to pursue part-time employment or internship, if they so choose. The graduate programs usually require a minimum of four semesters of study depending on the full-time or part-time status of the student.

### **Admission Requirements**

In addition to the University graduate admission requirements, applicants should have a B.A. in Political Science, or Public Administration, or International Affairs and Diplomacy, International Law, or other related fields.

Successful passing of the EET Entrance Exam with a minimum score of 600 is required (p. 66 general catalogue), students' undergraduate GPA of 3.0 minimum, work experience, letters of recommendation, motivation for a career and leadership are all taken into consideration. The Faculty may require the GRE exam for non-NDU students, and the following prerequisite courses may be required of non-major applicants.

- M.A. in Political Science;  
IAF 211, POS 201, POS 210 or equivalent by petition.
- M.A. in Public Administration;  
PAD 201, POS 201, POS 210 or equivalent by petition.
- M.A. in International Affairs and Diplomacy;  
IAF 211, IAF 321, POS 201 or equivalent by petition.
- M.A. in International Affairs and Diplomacy - International Law Emphasis:  
IAF 211, IAF 401, POS 442

### **Graduation Requirements:**

Students seeking the degree of M.A. in the Faculty of PSPAD must meet the University graduation requirements and complete one of the following two options with a G.P.A. of at least 3.0/4.0:

36 credits of course work in addition to a comprehensive written and oral examination; or

2. successful completion of 30 credits course work and six credits thesis.

## **GENERAL EDUCATION REQUIREMENTS**

All majors within FPSPAD, based on University policy and the principles of liberal art education, include 33 credits of general education requirement course divided according to the below pools:

### **A. Communication Skills in English and Arabic (6 cr. ENL + 3 cr. ARB)**

ENL 213 and ENL 223 or ENL 230, ARB 211, ARB 212, ARB 224, ARB 231, ARB 317.

### **B. Philosophy and Religion (3 cr. REG + 3 cr. PHL or POS)**

REG 212, REG 213, REG 215, REG 313, REG 314, PHL 211, PHL 311, POS 345, ENS 205

### **C. Cultural Studies and Social Sciences (6 cr.)**

ARP 215, BAD 201, COA 315, COA 359, ECN 200, ECN 211, ECN 212, FAP 215, HUT 305, HUT 306, LIR 214, MUS 210, NTR 215, PSL 201, SOL 201, SOL 301, SOL 313

### **D. Citizenship (6 cr.)**

HIT 211, IAF 301, POS 201, POS 209, POS 210, POS 225, POS 240, POS 319, POS 337

*Students may not fulfill GER requirements with courses required in their major*

### **E. Science and Technology (6 cr.)**

**3 cr. from:** CSC 201, CSC 202, MAT 201, MAT 202, STA 202, **and 3 cr. from:** AST 201, BIO 201, BIO 202, BIO 203, CHM 211, ENS 201, ENS 202, ENS 206, GIS 211, HEA 201, HEA 204, MIS 201, NTR 201, PHS 207, PHS 211

## DEPARTMENT OF INTERNATIONAL AFFAIRS AND DIPLOMACY

---

The Department of International Affairs and Diplomacy offers three programs leading to the degrees of:

Bachelor of Arts in International Affairs and Diplomacy

Master of Arts in International Affairs and Diplomacy

Master of Arts in International Affairs, International Law Emphasis.

---

### **The Degree of Bachelor of Arts in International Affairs and Diplomacy**

#### **Mission**

The mission of the B.A. program in International Affairs and Diplomacy is to provide students with a broad well-rounded education in the areas of international relations, diplomacy, international organizations, Lebanese government and politics, regional politics, basic international law, basic international political economy, and peace and security. The goal, thus, is to equip students with the higher educational skills, which will enable them to fulfill their career objectives and provide society with skilled graduates to meet diplomatic Foreign Service and a variety of other public and private sector needs.

#### **Degree Requirements (105 credits)**

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Major Requirements</b>	<b>45 cr.</b>
IAF 211, IAF 231, IAF 301, IAF 321, IAF 322, IAF 401, IAF 402, IAF 407, IAF 409, IAF 490, PAD 201, POS 210, POS 350, POS 353, POS 382	
<b>Electives in PSPAD (21 crs.)</b>	<b>21 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>
<b>Minor in IAF</b>	<b>18 crs.</b>
Required: IAF 211, IAF 231, IAF 321	
Electives: 9 credits from IAF courses	

---

## Undergraduate Courses: International Affairs and Diplomacy

**IAF 211 Introduction to International Relations (3.0); 3 cr.** An examination of the nature and evolution of the major concepts that shape international relations: the balance of power, the role of states in the international system, international law, and the elements of foreign policy. *Prerequisite:* ENL 107

**IAF 231 World Political Geography (3.0); 3 cr.** A general survey of states in the world that focuses on politically relevant geographic information: location, size, population, principal cities, major resources.

**IAF 239 Elements of Globalization (3.0); 3cr.** This course analyzes the multitude of factors that have increasingly been leading to the phenomenon of globalization in the international system: political, economic, technological, communication, cultural, organizational, financial, legal, and structural/political among others. The course focuses on case studies in the various dimensions of globalization worldwide, and on directed individual and group research.

**IAF 301 Modern Political Ideologies (3.0); 3 cr.** An introduction to the most influential political ideas in the modern world since the mid-nineteenth century. The focus is on the ideologies that have been influential and effective in the international system. *Prerequisite:* ENL 107

**IAF 303 Feminism in International Relations (3.0); 3cr.** This course provides an overview of feminist political and international relations theory. It explores the questions surrounding the construction of gender, the complexity and multiplicity in the different positions in gender constructions, and how feminist agency and knowledge creation can exist in masculine dominated spaces.

**IAF 305 Gender, Security, and Human Rights (3.0); 3cr.** This course is at the juncture between international relations, peace studies, security studies, human rights and gender studies. The primary objective of this course is to review the theories on security, the feminist perspectives on security, and feminist theory of international politics. This course will cover gender based violence in the context of public and private spaces and in periods of war and peace. Furthermore, the course will examine the role of both state and non-state actors in the

perpetuation of violence against women during conflict. Finally, the course will review the role of the women's movement in the development of gender security agenda in the international system and human rights.

**IAF 321 Diplomacy: Theory and Practice (3.0); 3 cr.** An examination of the principles and practice of diplomacy, international relations, and an analysis of the structures, functions, and procedures of diplomatic and consular services, including diplomatic privileges, immunities, and recruitment of diplomatic and consular personnel. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 322 Lebanese Diplomacy (3.0); 3 cr.** Covers the legal and practical evolution of the Lebanese diplomatic corps and focuses on the framework within which Lebanese diplomacy operates, the direction(s) which it generally takes regionally and internationally, and the approaches and strategies followed. (Arabic/English).

**IAF 331 Geopolitics (3.0); 3 cr.** The course provides an analysis of the reciprocal effects of geography and political organization on the geopolitical positions of states, in the international system, including size and location demography, national resources, spatial strategies and maritime power. Other topics include: theories of geopolitics, the impact of nationalism on geopolitics, political geography, and the interrelations among geopolitics and international relations. *Prerequisite:* IAF 231 or consent of instructor.

**IAF 332 Introduction to strategic Studies (3.0); 3 cr.** This course introduces students to the field of strategy; the basic concepts and issues of strategy, deterrence, defense, and arms control, an overview of defense policies, programs, and problems. Students will learn how to relate International Relations and Political Science theory to Strategy. Furthermore, students will be able to understand how political military leaders develop policies during times of war and peace. Strategy is a byproduct of geopolitics. Currently, International Relations, as well as Political Science are both directly related to the field of Strategy.

**IAF 333 Terrorism (3.0); 3 cr.** This course studies terrorism in modern times, its definition,

its history, its roots and its geographical spread. Other topics include: The political, religious, social, cultural, economic, and ideological causes of terrorism as well as international cooperation in the fight against terrorism. The course is supplemented by a number of case studies including the September 11 terrorist attack and other examples selected from various countries.

**IAF 340 International Political Economy (3.0); 3 cr.** Studies the contemporary issues in international political economy approaches, global welfare, international debts, equality, ecology.

**IAF 401 Public International Law (3.0); 3 cr.** A study of the sources of Public International Law and its application in interstate relations.

**IAF 402 Human Rights in International Politics (3.0); 3 cr.** This course covers the conceptual bases of the fundamental rights of the human being. It focuses on international principles, conventions, and treaties signed by governments on the question of human rights at the international, regional and national levels, and the ways and means through which violations of human rights may be documented and countered.

**IAF 404 Laws of Disruption (3.0); 3 cr.** Examination of the various natural, economic, scientific and technological factors which trouble the status-quo of states thus pushing them to develop different political strategies to meet the changes in the world order. Topics include global warming, advancement of technology and cyber space, nuclear development and natural disasters.

**IAF 407 International and Regional Organizations (3.0); 3 cr.** An examination of the structures, functions, and agencies of the United Nations and other regional international organizations, and their role in the international system. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 409 Foreign Policy Making of the Major Powers (3.0); 3 cr.** An analysis of the making and objectives of the foreign policy of the major states in the international system in the context of globalization, the new world order, European integration, and other regional factors. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 411 Conflict Management and Resolution (3.0); 3 cr.** This course examines the causes of conflict, its management and neutral resolution. It prepares the student to define the nature of conflict, understand its causes and ramifications, study ways to manage and limit its scope, and then search for solutions. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 453 Euro-Mediterranean Partnership (3.0); 3 cr.** A study of the historical and Evolving relationships between Europe and the Middle East, and the factors of trade, resources, security, and geo-strategic consideration which influence these relationships.

**IAF 471 Modern Europe and the European Union (3.0); 3 cr.** A study of the European Union and its economic, political, social, financial, and legal institutions. Attention is given to the impact of the European integration process in Europe and beyond. *Prerequisite:* IAF 211 or consent of instructor.

**IAF 488 Current Issues in International Affairs and Diplomacy (3.0); 3 cr.** A seminar highlighting topic areas and theoretical approaches of particular interest to the study of international affairs and diplomacy as a profession. This course will deal with both the critical thinking and practice in a specific area. The content and focus of the course will be altered from semester to semester in order to remain up to date with technical experience and scholarly discourse in the field.

**IAF 490 Senior Study (3.0); 3 cr.** Special topics in International Affairs and Diplomacy.

---

## The Degree of Master of Arts in International Affairs and Diplomacy

### Mission

The mission of the M.A. in International Affairs and Diplomacy is to provide advanced university training in the broad academic field of international affairs and diplomacy and to graduate highly specialized students and equip them with theoretical and practical training that will professionally prepare them for a multitude of career options, locally, regionally, and internationally. Further, the M.A. degree aims at graduating researchers who are able to pursue doctoral studies.

### Degree Requirements (36 credits)

#### Core Requirements

IAF 601, PAD 604, POS 681

**9 cr.**

#### Major-Related Electives

Choose 5 courses from

IAF 602, IAF 604, IAF 605, IAF 609, IAF 615, IAF 621, IAF 631, IAF 632, IAF 633, IAF 641, IAF 645, IAF 651, POS 611, POS 661

**15 cr.**

#### Free Electives

*Option I:* Thesis (IAF 699) in addition to 6 credits of course work.

*Option II:* Successful completion of 12 credits of course work and a comprehensive written and oral exams.

**12 cr.**

---

## Graduate Courses: International Affairs and Diplomacy

**IAF 601 International Relations; Theory and Practice (3.0); 3 cr.** The seminar surveys major theories of international relations and evaluates their utility for understanding international politics. It emphasizes: (1) The broad trends and theoretical frameworks which shape relations among states, both at the international and regional levels; (2) The implications of the power factors on the external and domestic policies of states; and (3) The factors leading to international cooperation and confrontation and their implications.

**IAF 602 Economics of International Politics (3.0); 3 cr.** The course investigates the relationship between economic and political processes in the international system, and the institutions involved in conducting these processes. Major theoretical understandings of international political economy are examined along with specific issues in the field. These issues include: International trade, trade and developing nations, transnational corporations, multinational investment, and the World Trade Organization.

**IAF 604 Human Rights in International Politics (3.0); 3 cr.** This seminar focuses on the role played by the UN and other intergovernmental organizations in protecting, promoting, and advancing these rights. Special emphasis is placed on problems of human rights violations worldwide, on international conventions, and the role of human rights organizations internationally.

**IAF 605 International Organizations and Specialized Agencies (3.0); 3 cr.** This seminar focuses on the role played by the UN and other intergovernmental organizations in international affairs. Special emphasis is placed on the operations of the specialized agencies (IMF, World Bank), the determinants of their policies, and the impact of these policies internationally.

**IAF 609 Ethnic Conflict and Conflict Resolution (3.0); 3 cr.** The seminar focuses on the theories and methods of conflict resolution, the relevant literature in the field, and the importance of conflict resolution mechanisms and modalities in international politics. These theories and modalities are applied to various intra- and interstate conflicts in the international system, some of which are focused upon as case studies in the seminar.

**IAF 611 Globalization (3.0); 3 cr.** Analyzes the multitude of factors that have increasingly been leading to the phenomenon of globalization in the international system: political, economic, technological, communication, cultural, organizational, financial, legal, and structural/political. The seminar focuses on case studies in the various dimensions of globalization worldwide, and on directed individual and group research.

**IAF 615 Statesmanship and Diplomacy (3.0); 3 cr.** Deals with the role of leaders and diplomats in protecting and promoting countries' interests and in influencing international politics, and addresses the factors that may guide or constrain statesmen in conducting foreign policy.

**IAF 617 Democracy and Democratization in the International System (3.0); 3 cr.** Covers the recent trends towards democratization and the factors which promote or hinder democracy internationally. The seminar covers the theories of democracy and their evolution since the late eighteenth century, the development and expansion of democracy in various parts of the world or the constraints limiting its spread in others, as well as the implications of these questions on peoples, states, and international relations.

**IAF 619 Nationalism and the politics of identity (3.0); 3 cr.** Studies the different and complex factors shaping identity and national formations of groups and states, and explores how issues of ethnic and national identities have shaped world politics, and how subnationalism, supranationalism, and/or internationalism are reshaping it. Covers recent research and literature in the field concerning questions of identity in the international system and their effects on national integration and/or disintegration.

**IAF 621 Contemporary International Issues (3.0); 3 cr.** Provides an overview of the contemporary issues in international affairs that have political, strategic, and socio-economic significance in interstate relations. These issues range from ideological conflicts to technology and politics, warfare and politics, violence and terrorism, and nuclear proliferation.

**IAF 623 The European Integration: Its impact (3.0); 3 cr.** Analysis of the institutional

structures of the European Union. Emphasis is on the economic and political effects of the integration process on Europe and beyond.

**IAF 631 U.S. Foreign Policy Making (3.0); 3 cr.** The seminar explores the United States' foreign policy-making from an institutional perspective. It focuses on Congress, the Presidency, and the relevant executive agencies. Attention is given to U.S. policy toward the Middle East.

**IAF 632 Diplomacy (3.0); 3 cr.** The focus in this seminar is on the role of diplomacy in interstate relations and how diplomacy can facilitate interaction among governments and nations and help to achieve national goals. It emphasizes the basics of diplomatic negotiations and bargaining along with the etiquettes of diplomatic and political relations.

**IAF 633 Comparative Foreign Policy (3.0); 3 cr.** The focus in this course is on how foreign policy is made in the context of a state's declared objectives. A primary attention is directed to the foreign policy-making of the major states in the international system and the various processes used to accomplish political goals. Ideologies, national interest, and the type of political system are focused upon insofar as they shape a state's foreign policy direction.

**IAF 635 Terrorism in the international System (3.0); 3 cr.** Generically defined as violence targeting indiscriminately civilians and civil communities and milieus at the national or international levels, terrorism, in recent decades, has become a concern of global scale. The seminar analyses the factors causing the spread of this phenomenon and the measures or policies applied, or that may be applied, to deal with such threats.

**IAF 641 Public International Law (3.0); 3 cr.** A graduate seminar that deals with the sources and development of international law, with a special attention given to current trends and problems. A critical evaluation of contemporary problems of world legal order is provided, covering issues related to global resources regimes, war, social and economic and trade laws.

**IAF 645 Political Risk Analysis (3.0); 3 cr.** This course aims at investigating current international events and highlighting their potential negative impacts in the political,

economic, social, and business arenas. Students will be given case studies in the detection and analysis of risk indicators and their probable consequences.

**IAF 649 International Energy and Environmental Issues (3.0); 3 cr.** A study of energy questions globally from the perspectives of economic developmental needs, on the one hand, and environmental considerations and concerns, on the other. The seminar surveys the evolution of energy usage internationally and assesses the use of different sources of energy over time, the efficiency of these various sources, and their effects on development, the environment, and human society.

**IAF 660 Special Topics in International Affairs (3.0); 3 cr.** The seminar deals with current issues in international affairs that have political, strategic, or economic significance at the global or regional levels. The questions to be studied in this seminar are based on current international developments and are chosen according to the specialty of the professor directing the course.

**IAF 665 Current Issues in Human Rights and Global Justice (3.0); 3 cr.** The first part of this course focuses on the dramatic changes in the creation and enforcement of international human rights law that have taken place since World War II. Notwithstanding serious challenges from a variety of sources, no government in the world publicly dissents from the acceptance of support for human rights. Students will examine the existing international human rights regime and explore the impact of the UN charter, the Universal Declaration, and various multilateral and regional human rights treaties and regimes on the behavior of nations today. Using cases from the M.E., Europe, US and international courts, the course will focus on ethical issues in human rights. Topics will include political repression, informed consent, and human rights. Law can be used to promote human rights

**IAF 699 Thesis; 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of international affairs and diplomacy. The project involves the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound, written report available to later researchers.

---

## **The Degree of Master of Arts in International Affairs and Diplomacy, International Law Emphasis**

In an increasingly interactive world influenced by state and non-state actors in which governments, peoples, and large varieties of organizations and multinational corporations interact on a daily basis through an enormity of contracts, regulations, laws and procedures, it has become necessary that higher educational institutions stress in their academic curricula the importance of International Law. This concentration in International Law helps students understand the basic different legal systems applied in international relations and the role of International Law in International Affairs.

### **Degree Requirements (36 credits)**

#### **Core Requirements**

IAF 601, PAD 604, POS 681

**9 cr.**

#### **Major-related Electives: choose 5 courses**

Choose any 5 INL courses from those listed in the catalog.

CPL 611 is considered a major related elective.

**15 cr.**

#### **Free Electives**

*Option I:* Thesis (INL 699) in addition to 6 credits of course work.

*Option II:* Successful completion of 12 credits of course work and a comprehensive written and oral exams.

**12 cr.**

---

## Graduate Courses: International Law

**INL 620 International and Comparative Patent Law (3.0); 3 cr.** A study of patent reform issues including domestic patent reform legislation and ongoing harmonization treaty discussions under WIPO; review of selected topics with comparative study from the viewpoint of Japan, the United States, and Europe.

**INL 622 International Environmental Law (3.0); 3 cr.** Studies of the treaty negotiation process, role of international institutions in developing and implementing environmental agreements, relationship between environmental law and international issues, developing countries' perspectives on environmental law. Issues covered include climate change, export of hazardous waste, deforestation and biodiversity, Antarctica, and environmental concerns in war, human rights, and development financing.

**INL 624 International Business Transactions (3.0); 3 cr.** U.S. law and practice relating to characteristic forms of international transactions, including the transnational sale of goods (the law governing the documentary sale, various forms of letters of credit, commercial terms and insurance); the export of technology through franchising, distributorship, and licensing contracts; and the export of capital through the establishment, operation, and withdrawal of foreign direct investment. The impact of relevant international organizations and/or emerging substantive international commercial law (e.g., the United Nations convention on Contracts for the International Sale of Goods). Specialized problems in the negotiation and structure of international transactions.

**INL 626 International Trade Law (3.0); 3 cr.** Study of domestic and international laws and institutions governing foreign trade. Legal aspects of U.S. participation in the World Trade Organization, NAFTA, and other international forums, laws regulating customs and tariffs, most-favored nation treatment, subsidies, dumping, unfair trade practices, and disruptive imports under the escape clause. Specialized problems in regulating exports under the Export Administration Act, boycotts, corrupt practices, and restrictive business practices may be covered.

**INL 628 International Litigation (3.0); 3 cr.** Study of the history, forms, progress, problems, and future of interstate, third party dispute

resolution. Examination of basic issues and principles of public international litigation and arbitration between governments and between a government and a private entity. Investigation of the guiding principles and essential elements of conducting litigation in the arena of public international law and with state parties through in-depth examination of leading cases before the International Court of Justice. Problems of mixed and interstate arbitration, both ad hoc and institutional.

**INL 630 Immigration Law (3.0); 3 cr.** Theory and application of the Immigration and Nationality Act and 8 Code of Federal Regulations. Examination of practice before the Executive Office of Immigration Review, Immigration and Naturalization Service, Department of State and Department of Labor. Removal, political asylum, adjustment of status, naturalization, and other issues. Focus on family- and employment-based immigration practice. Examination of the procedural aspects of obtaining lawful permanent resident status in the U.S. through the family and/or employment preferences categories, as well as the process for obtaining non-immigrant admission.

**INL 632 Refugee and Asylum Law Seminar (3.0); 3 cr.** Selected topics from the areas of international law pertaining to the protection of refugees and domestic law of political asylum.

**INL 634 International Banking (3.0); 3 cr.** Study of the legal aspects of international banking and finance, including international laws and regulations concerning the structure and transactions of international banks and institutions. Topics include the institutional, legal and regulatory framework for international commercial banking and development finance; the emerging rules regarding international trade in financial services; international supervision of banking activities and regulation of banking transactions; contractual instruments for international financial transactions; and international debt and development crisis.

**INL 638 International Law of Human Rights (3.0); 3 cr.** An overview of international and regional human rights instruments and institutions, focusing on the manner in which the U.N., Middle Eastern, European, Inter-American, African and Asian human rights systems seek to protect individual and group rights. Examination of the problems these

systems have encountered in discharging their mandate and exploration of ways to strengthen international and regional governmental and non-governmental efforts in the human rights field.

**INL 642 Law of the Sea (3.0); 3 cr.** International law related to the use of ocean space. Development of international law concerning internal waters, territorial sea, contiguous zone, high seas, continental shelf-fisheries, exclusive economic zone, maritime boundaries, marine environment, marine scientific research, deep seabed and settlement of disputes. Current legal and policy issues associated with these areas.

**INL 644 International Law of Territory (3.0); 3 cr.** Basic principles of the international law of territory, including the definition of territory, the forms it may take, its relationship to states and other subjects of international law, how territory is acquired, how it is lost and how it is transferred, how it is delimited and demarcated, how the title to territory is affected by historical and demographic factors, and traditional and contemporary principles and mechanisms for resolution of territorial disputes. Consideration of the modification of these principles since World War II and their possible application to several intense post-Cold War territorial disputes.

**INL 646 Law of War (3.0); 3 cr.** Examines the origins of the law of war, the 1949 Geneva Conventions for the Protection of War Victims, the Geneva Protocols of 1977, the 1980 Geneva Conventional Weapons Convention, other treaties and customary international law relating

to means and methods of warfare, the role of the International Committee of the Red Cross, war crimes and enforcement mechanisms, and current problems in the regulation of hostilities.

**INL 648 International Criminal Law (3.0); 3 cr.** Study of selected issues attending the application of criminal law across international boundaries. Topics may include war crimes, terrorism, narcotics trafficking, money laundering, business fraud, extradition, and the recognition of foreign penal judgments.

**INL 650 International Arbitration (3.0); 3 cr.** Survey of arbitration and related mechanisms of dispute resolution in the international legal system that arise out of commercial, financial, and governmental transactions. Analysis of the arbitration agreement, the process of arbitration, and the enforcement of arbitrate awards as well as the common principles governing the disposition of claims. Review of the various arbitrate tribunals and their rules.

**INL 652 International Negotiations (3.0); 3 cr.** The art and science of international negotiations from a practitioner's perspective: analysis of the roles of the legislative and executive branches; examination of the inter- and intra-agency processes, including pre-, during, and post-negotiation, impact of external influences; and arms control negotiations, and practical exercises in negotiations.

**INL 699 Thesis; 6 cr.** The thesis involves The application of research methods to a significant Topic of current relevance to the spheres of international law.

## DEPARTMENT OF POLITICAL SCIENCE

The Department of Political Science offers two programs, leading to the degrees of Bachelor of Arts and Master of Arts in Political Science along with different emphasis on both levels as follows:

- Bachelor of Arts in Political Science
- Bachelor of Arts in Political Science – American Studies
- Bachelor of Arts in Political Science – Euro-Mediterranean Studies
- Bachelor of Arts in Political Science – NGOs Emphasis
- Master of Arts in Political Science
- Master of Arts in Political Science – NGOs Emphasis
- Master of Arts in Political Science – Human Rights Emphasis

---

### The Degree of Bachelor of Arts in Political Science

#### Mission

The mission of the Bachelor's degree in Political Science is to build the characteristics of high intellect, moral integrity, enlightened citizenship, human solidarity, and responsible leadership by providing a balance of practical, theoretical, and applied course work in the concerned areas of study to students.

---

#### Degree Requirements (105 credits)

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Major Requirements</b> IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.	<b>45 cr.</b>
<b>Electives in PSPAD (21 crs.)</b>	<b>21 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>
<b>Minor in Political Science</b> Required: POS 210, POS 350, IAF 211, Electives: 9 credits from POS courses	<b>18 cr.</b>

---

## **The Degree of Bachelor of Arts in Political Science, NGOs Emphasis**

Non-governmental organizations (NGOs) play an important role in creating an open and viable democratic society. This rapidly expanding sector faces the challenges posed by the transition economy and society. We see the Degree Program of training in NGO management and civil society to be a most adequate option for developing a stratum of professional managers in this sector in Lebanon and the Arab World. This program is designed to provide students with broad knowledge in the field of International and Civil Society Organizations and specifically NGOs. Graduates will be prepared to work in several career areas, specifically in independent international, regional and local organizations and those that operate under the umbrella of the United Nations and its various agencies.

**General University Requirements** **33 cr.**

**Major Requirements** **48 cr.**

IAF 211, IAF 402, IAF 407, NGO 201, NGO 203, NGO 305, NGO 306,  
NGO 404, NGO 493, PAD 201, PAD 302, POS 213, POS 240, POS 350, POS  
382, POS 442

**Electives in PSPAD** **18 cr.**

**Free Electives** **6 cr.**

---

**The Degree of Bachelor of Arts in Political Science, American Studies  
Emphasis**

The program introduces students to the field of Political Science in general, and concentrates on American Studies. In addition to the general Political Science courses, students take courses which include: American History, American Constitutional Law, Government and Politics of the US, American Political Parties and Pressure Groups, and American culture. The major program will equip students with professional preparation in the respective areas to include: Public sector, Foreign Service, international and regional organizations, multi-national corporations, banking institutions, media and other enterprises.

---

**Degree Requirements (105 credits)**

<b>General University Requirements</b>	<b>33 cr.</b>
<b>Major Requirements</b> IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.	<b>45 cr.</b>
<b>Electives in PSPAD</b>	<b>21 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>
<b>Minor in American Studies</b> AMS 305, AMS 316, AMS 408, AMS 481, AMS 483, POS 479	<b>18 cr.</b>

---

**The Degree of Bachelor of Arts in Political Science - Euro-Mediterranean Studies Emphasis**

The program is designed to provide students with in-depth awareness of the discipline of Political Science in general and concentrates on Euro-Mediterranean studies. In addition to the general Political Science courses, students take courses which include Modern European Thought, European Politics, European Civic Politics, politics and culture of Germany, special topics, Politics and Culture of Russia and Eastern Europe

**Degree Requirements (105 credits)**

<b>General University Requirements</b>	<b>33 cr.</b>
<b>Major Requirements</b> IAF 211, IAF 301, IAF 401, IAF 407, IAF 409, PAD 201, PAD 241, PAD 302, POS 210, POS 345, POS 350, POS 353, POS 382, POS 442, POS 490.	<b>45 cr.</b>
<b>Electives in PSPAD</b>	<b>21 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>
<b>Minor in Euro-Mediterranean Studies</b> EMS 303, EMS 371, EMS 391, EMS 483, EMS 490, IAF 471	<b>18 cr.</b>

---

## Minors in the Political Science Department

### Minor in Middle Eastern Studies (18 credits)

This program introduces students to the study of political systems in the Middle East, highlighting the Arab states of the region, but also focusing on Cyprus, Iran, Israel, and Turkey. Along with general required Political Science courses, students will take specialized courses on the dialogue of civilizations, human rights—with an emphasis on the Middle East and NGOs in the region—and comparative public administration. The Government and Politics series of courses—including the non-Arab countries of the—will be tailored around the needs of students interested in working in the MENA region within an international and cross-cultural context. This program will equip students with the knowledge and skills needed to work with international and regional governmental organizations, international corporations, research and advocacy based NGOs and regional and international media outlets. It will also help them bridge the gap between the economies and political systems of Europe and the Middle East and take advantage of the expanding trade relationships within the greater Mediterranean market.

The Minor in Middle Eastern Studies would be of particular benefit to students in the following majors and fields of study:

- Primarily in Arabic Literature, Political Science, Public Administration, International Affairs and Diplomacy, Business Administration, Energy Economics, International Business Management, Education, Communication Arts, Advertising and Marketing, Graphic Design
- Peripherally in Sociology, Religion and Philosophy

#### Core Minor Requirements

9 cr.

POS 353	Governments of the Middle East
POS 405	Religion and Politics in the Middle East
POS 424	Political Economy of the Middle East

#### Minor Electives out of a pool of the following courses

9 cr.

IAF 453	Euro-Mediterranean Partnership
NGO 204	Civil Society in the MENA Region
NGO 306	NGOs and Development
POS 212	Political History of the Middle East
POS 303	Government and Politics of Cyprus, Turkey and Iran
POS 304	Government and Politics of Israel
POS 305	Government and Politics in North Africa
POS 306	Government and Politics of Egypt, Syria and Iraq
POS 307	Government and Politics in the Arab Gulf
POS 308	Human Rights in the Middle East
POS 403	Arab-Israeli Conflict
POS 406	Cultural Pluralism in the Middle East
POS 425	Business Law in the Middle East
REG 412	History of Religious Thought in the Middle East
ARB 336	Literature of Modern Arabic Renaissance
ARB 415	The Arabic Modernization Movement
COA 355	Mass Media in Lebanon and the Middle East
ECN 439	Economics of Developing Countries
ENR 401	Petroleum in the World Economy

---

## Minor in Peace and Conflict Studies (18 credits)

Academic and professional programs in Peace and Conflict Studies have considerably grown in number over the last decades to prepare students to become professional conflict resolvers. These programs are key in giving students the necessary skills and credentials to: Enroll in a Masters program in conflict resolution; work as crisis management experts, activists, mediators, etc.; widen one's horizons; Become active members in peace and justice related organizations and contribute to the many existing peace and conflict journals. In addition to helping widen their students' academic horizons and increase their employment opportunities, universities in Lebanon have the social responsibility of introducing their students to peace and justice concepts and skills. Lebanon remains a conflict zone with few grassroots initiatives aimed at managing its disputes. The absence of grassroots inventiveness is the consequence of a shortage in conflict resolution trainings and programs. The youth's powerlessness in the face of conflict leads it to despair and increase its dependency on the ruling class and/or migrate. NDU is committed to engage in building a qualified peace taskforce and to take the lead in shaping Lebanon's future conflict resolvers.

The minor brings varied disciplines into dialogue and collaboration enabling a comprehensive and original understanding with which to address the topics of peace and war. A minor that brings established fields of study together through course requirements would also bring students into dialogue.

The Minor in Peace and Conflict Studies would be of particular benefit to students in the following majors and fields of study:

- Primarily in Education, Sociology, Economics, Politics, Psychology, Religion, Philosophy, and other social sciences

### Core Minor Requirements

9 cr.

POS 315	Conflict Analysis and Intervention: a multitrack approach
POS 405	Diasporas: Conflict and Peacebuilding
POS 425	Understanding and Creating Social Change

### Minor Electives out of a pool of the following courses

9 cr.

IAF 402	Human Rights in International Politics
IAF 411	Conflict Management and Resolution
IAF 333	Terrorism
IAF 407	International and Regional Organizations
NGO 204	Civil Society in the MENA-Region
NGO 307	Religion and Development
POS 319	Democracy and Human Rights
POS 337	Dialogue Among Civilizations
NGO 401	Civil Society and Advocacy
POS 240	Law and Society
POS 323	Minority Politics

---

## Minor in Strategic Studies (18 credits)

Strategic studies deals with the attempts of sovereign states, and other international players (e.g. UN, EU, NATO) to deal with the contemporary issues challenging their political and economic interests. It enables students to combine their knowledge of politics with a review of the international environment in which it takes place. This interdisciplinary academic field of study is dedicated to the relationship between the political process, geography, the

allocation of natural resources, economic development, and military power. The curriculum also includes the role of diplomacy and threats in the preparation and use of force. Specific topics include the emergence and resurgence of major regional powers such as China, India, and Russia, the changing role of the US as the world's remaining superpower, political Islam, and the military, economic, political developments in crisis regions in Africa, the Middle East, Central and Southern Asia.

Introducing a Minor in Strategic Studies at NDU will allow students to widen their knowledge across the faculties in a comprehensive way. Issues related to economics, politics, international relations, resources and technology will thus gain different dimensions in the minds of the students, who would then be able to apply their knowledge in the world around them.

The Minor in Strategic Studies would be of particular benefit to students in the following majors and fields of study:

- Primarily in Political Science, Public Administration, International Affairs and Diplomacy, Business Administration, Energy Economics, International Business Management, Advertising, Sociology and Marketing;
- Peripherally in Natural Sciences, Psychology, and Economics.

#### **Core Minor Requirements**

**9 cr.**

**IAF 231** World Political Geography  
**IAF 331** Geopolitics  
**IAF 332** Introduction to strategic Studies

#### **Minor Electives out of a the below pool (including at least one 400 level)**

**9 cr.**

**IAF 209** Elements of Globalization  
**IAF 211** Introduction to International Relations  
**IAF 333** Terrorism  
**IAF 404** Laws of Disruption  
**IAF 411** Conflict Managements and Resolution  
**IAF 340** World Political Economy  
**POS 323** Minority Politics  
**POS 403** Arab-Israeli Conflict  
**ENR 401** Petroleum in the World Economy

---

#### **Minor in Gender Studies (18 Credits)**

Gender Studies is a growing field of studies that cuts across most disciplines. Gender Studies analyses the social construction of the roles of females and males in society and its impact on individuals, communities, societies, states, and the international system. The importance and significance of having a focus on gender in international affairs, political science, education, sociology, nutrition, and medicine has been highlighted in most university institutions globally. The significance of integrating gender understanding and analysis in the Middle East is vital to understand contemporary events and their effects on development of citizenship, peace, and security. NDU's Handbook references gender in its identity statement, admission policy, and in various faculty values statements. With this in mind the Faculty of Political Science, Public Administration, and Diplomacy has put together a Gender Studies Minor to explore the impact of gender on policy making, global governance, and social engagement.

The Minor in Gender Studies is an interdisciplinary minor that would be of particular benefit to students in the following majors and fields of study:

- Primarily in Education, Sociology, Literature, Psychology, Political Science, International Affairs, Public Administration, Communication Arts;
- Peripherally in Natural sciences, Religion, Philosophy, Advertising and Marketing, Business Management.

### **Core Minor Requirements**

**9 cr.**

**POS 213** Introduction to Gender Studies  
**NGO 406** Gender & Development

**IAF 303** Feminism in International Relations

### **Minor Electives out of a pool of the following courses**

**9 cr.**

**IAF 305** Gender, Security, and Human Rights

**POS 408** Gender and the Law

**EDU 412** Gender and Human Interaction

**LIR 424** Gender Studies

**PSL 310** Psychology of the Family

**SOL 313** Family Violence and Child Abuse

---

## **Undergraduate Courses: American Studies**

**AMS 305 Cultural Pluralism in America (3.0); 3 cr.** Survey of the development of American Society focusing on the role of Afro Americans, concepts of cultural pluralism, racism and inter-group relations explored within a comparative historical framework.

**AMS 316 American History (3.0); 3 cr.** Studies the various stages in the American history, colonial England, Independence, Confederacy and Federacy, the Civil War, WWI, the New Deal, WWII and after.

**AMS 408 American Foreign Policy (3.0); 3 cr.** The process of formulating US foreign policy, with emphasis on the Department of State and the Foreign Services. Analyzes the major problems of American policy in action.

**AMS 481 American Constitutional Law (3.0); 3 cr.** The development of constitutional doctrine concerning public power that has resulted from US supreme court cases and decisions.

---

## **Undergraduate Courses: Euro-Mediterranean Studies**

**EMS 303 Modern European Thought (3.0); 3 cr.** Overview of the history of ideas in Europe beginning with the Renaissance and covering the liberal age, authoritarian ideologies, and contemporary liberal democracy.

**EMS 371 European Civic Politics (3.0); 3 cr.** Focuses on the role of civic society in influencing governmental institutions and shaping the political, economic, and social settings. Particular attention is given to parties and citizens' groups.

**EMS 373 Politics and Culture of Germany (3.0); 3 cr.** This course will provide an

introduction to German politics and culture, students will study the origins of Germany as a state, from unification in the 19<sup>th</sup> century – through the two World War – to reunification in 1990. Emphasis will be placed on the social, cultural, geopolitical and economic roots of the German political system and its current role within the European Union.

**EMS 391 European Politics (3.0); 3 cr.** A survey of the new Europe, from Dublin to Moscow, in relation to its political history and future prospects. Geography, economic issues, and military matters are stressed along with the European cultural and sub-cultural identities.

### Undergraduate Courses: History

**HIT 101 Contemporary History of Lebanon (3.0); 3 cr.** Covers Lebanon's contemporary history. Political, economic and social developments are stressed.

**HIT 211 History of Lebanon and the Middle East (3.0); 3 cr.** Deals with the Middle East since the beginning of the Ottoman domination till the present. *Prerequisite:* ENL 107.

---

### Undergraduate Courses: NGOs

**NGO 201 Introduction to NGOs and Civil Society (3.0); 3 cr.** An introduction to NGOs and Civil Society Organizations, their scope, size, structure and funding base. A special emphasis on their contribution to poverty alleviation/reduction, sustainable societies and the progress of social welfare. *Prerequisite:* ENL 107

Organizations and how different OD-interventions and tools can be applied within the Third Sector. *Prerequisite:* IAF 211 or consent of instructor.

**NGO 202 Introduction to Development Theory (3.0); 3 cr.** An introduction to key concepts and current paradigms related to development, poverty alleviation/reduction, international cooperation and relief.

**NGO 304 Project Management for NGOs (3.0); 3 cr.** An introduction to how NGOs prepare, design, fund, manage, implement, monitor and report projects mainly in the development sector. Project-tools on Project Cycle Management (PCM) as well as the Logical Framework Approach (LFA) will be introduced.

**NGO 203 Introduction to NGO Management (3.0); 3 cr.** An overview of the main areas related to NGO Management such as the context in which the Third Sector is operating, the organizational set-up of NGOs, the relations and the programs, projects and other related activities. The main focus will be on development management. *Prerequisite:* ENL 107

**NGO 305 Civil Society & Globalization (3.0); 3 cr.** A study which enables the understanding, analysis and interpretation of the key concepts of globalization and the related current external factors and challenges affecting Civil Society and NGOs.

**NGO 204 Civil Society in the MENA-region (3.0); 3 cr.** An analysis of the interaction and networking that take place between NGOs, the State and Non-formal Social Actors in the Middle East, North Africa-region (MENA). A special focus on the typologies of CSO active in the region and the examination of current data from the Arab World.

**NGO 306 NGOs and Development (3.0); 3 cr.** A study of the changing role of NGOs in the development process. A special emphasis on how the focus have changed from short-term relief & welfare to a more sustainable and community based approach.

**NGO 205 Legal Framework of NGOs (3.0); 3 cr.** This course will study the laws applied to NGOs, the procedure of their legal registration, restrictions in their activities, in Lebanon and other MENA-countries, and will also compare these laws with the legal framework of NGOs in Western countries.

**NGO 401 Civil Society and Advocacy (3.0); 3 cr.** An introduction to main concepts, definitions and challenges to advocacy in the Third Sector. This course covers how NGOs are building up their advocacy strategies, what kind of tools that are being applied and how the main stakeholders will be involved in the process.

**NGO 301 Introduction to Organization Development (3.0); 3 cr.** An examination of current models for organizational assessment and change related to Civil Society

**NGO 402 Disaster Response & Humanitarian Assistance (3.0); 3 cr.** An introduction to the Humanitarian Charter and Minimum Standards in Disaster Response. These standards cover areas in water supply, nutrition, food aid, shelter & site planning and health services and have been adopted by all major agencies involved in Humanitarian Assistance.

**NGO 403 Social Policy (3.0); 3 cr.** An overview on how social policy is being shaped

and elaborated in Welfare States and countries with emerging Civil Societies in the MENA-region. A special emphasis on networking between the State and NGOs on how to assure basic social rights.

**NGO 404 International Development Cooperation (3.0); 3 cr.** An overview of the strategic framework involving Multilateral and Bilateral agencies, International and Local NGOs and their partnerships, alliances and relations in the MENA-context. The course will also treat the current and past paradigms in Development Cooperation.

**NGO 406 Gender & Development (3.0); 3 cr.** This course will treat gender inequality and its correlation with poverty which results in acute failure of human capabilities. The women's

empowerment deficit in the Arab World will be examined and analysed through the Arab Human Development Reports as well as the strategies to overcome the current obstacles.

**NGO 410 Volunteer Management in NGOs (3.0); 3 cr.** Volunteers are the heart of many NGOs and, like employees, need recruitment, reward, incentives, contracts, termination and committees. This course will study the good practices and ethical issues around management of volunteers in NGOs and community work. *Prerequisite:* NGO 302

**NGO 490 Special Topics (3.0); 3 cr.** Special topics in NGO Management.

**NGO 493 (3.0); 3 cr.** Internship in an NGO, UN agency or social institution.

---

### Undergraduate Courses: Political Science

**POS 101 Principles of Politics & Government (3.0); 3 cr.** Introduces the basic political philosophies and governmental processes, and the relationships between rights, liberties, and responsibilities of individuals and governments.

**POS 201 Introduction to Political Science (3.0); 3 cr.** Covers the basic concepts in political science. *Prerequisite:* ENL 107.

**POS 209 Citizenship (3.0); 3cr.** This course introduces students to the concept of citizenship and the relationship between the individual and the state. Participants learn to recognize the rights and duties of the individual, thus reinforcing their capacity for critical thinking and active engagement in public affairs.

**POS 210 Government and Politics of Lebanon (3.0); 3 cr.** An introduction to the various characteristics and factors that have shaped the Lebanese political system in the first and Second Republics. Special focus will be on democracy and national values, the political processes and national institutions, mainly the Parliament, the Executive/Administrative Branch, and the Judicial System. Attention will be given to studying the national Construction along with the separation of powers and administrative centralization and decentralization policies.

**POS 212 Political History of the Near East Until World War I (3.0); 3 cr.** A survey of political history and culture of the Mediterranean civilizations.

**POS 213 Introduction to Gender Studies (3.0); 3cr.** This course examines how gender plays a pervasive role in structuring social life. It emphasizes how the social constructs of ethnicity, class, gender, colonial legacy, and cultural identity intersect to legitimize the power and privilege of women and men internationally, with a special focus on the Middle East. Topics include the debate between nature versus nurture, intersections of race, class, gender, and social institutions such as family, education, work, and cultural hegemony.

**POS 215 Religion and State (3.0); 3cr.** This course introduces the student to the relationship between religion and politics and the impact of religion on the major dimensions of politics in today world. Religion as defined in the course refers to the social, ideological and economic beliefs associated with various religious communities. This course will focus on the different religious views upon life in society, including economic and political issues and how these different and sometimes opposing views can lead to political strife.

**POS 225: Politics of Catholic Social Theory (3.0); 3cr.** This course introduces students to the origins, application, and debate surrounding the social teachings and policies of the Catholic Church over the last 150 years. It deals with the basic texts and Papal Encyclicals – starting with *Rerum Novarum* in 1891, and other documents included in the *Compendium of Social Doctrine* – as well as Catholic social movements throughout world, thus highlighting the Church's

position on major issues related to politics, good governance, and social affairs. Topics include: peace, social justice, corporate social responsibility (CSR), environmental protection, and the role of the family in a globalized society.

**POS 240 Law and Society (3.0); 3 cr.** Nature, purposes and sanctions of law sources of law private and public law. Common and civil law, courts and administration of justice. This course is a prerequisite to all law courses. *Prerequisite:* ENL 107.

**POS 304 Government and Politics of Israel (3.0); 3 cr.** This course provides an overview of the political system of Israel, highlighting its ideological, economic, social and cultural variables. It will introduce students to the historical, geopolitical and ideological foundations of the Israeli state, the nature of its institutions and their particular embeddedness in the Arab world, focusing on Lebanon and the Eastern Mediterranean in general.

**POS 308 Human Rights in the Middle East (3.0); 3 cr.** Survey of the fundamental political, social and cultural rights of the human being in the MENA region; the course focuses on the principles, conventions, treaties and laws ratified by governments on the international, regional and national levels and the ways through which violations of human rights are documented and countered. Emphasis will be placed on the interplay between the human rights traditions of the West and those on the MENA region.

**POS 315 Conflict Analysis and Intervention: a Multitrack Approach (3.0); 3 cr.** Conflicts are complicated processes. Choosing an appropriate conflict intervention mechanism is largely dependent on the type of conflict under study. Learning the skills to analyze disputes is required to select the most accurate intervention mechanism.

**POS 317 Political Parties, Public Opinion, Pressure Groups (3.0); 3 cr.** Analysis of pressure politics and political behavior. Impact of parties and pressure group on the governmental efficiency and the public good. Evaluation of public opinions impact on governmental decisions.

**POS 319 Democracy and Human Rights (3.0); 3 cr.** This primary aim of this course is to teach students to think critically about the political and cultural dimensions of democracy and human rights. The course focuses on different strategies of democracy and their relationship with human

rights, the origins and maintenance of democracy in the modern world, and the process of democratization and its impact on the state stability and on global protection of human rights.

**POS 320 Media and Politics (3.0); 3 cr.** A study of the ways in which the mass media influence politics and vice-versa. The course explores the role that media play in providing information for citizens in the different political systems. Other topics includes: the role of mass media in campaigns and elections, the ways in which media influence public opinion, how the media influence the political process, and political attitudes and behaviors.

**POS 323 Minority Politics (3.0); 3 cr.** An examination of the social, cultural and economic factors which affect the political choices of minorities. Analysis of minorities political rights and actions.

**POS 331 Judicial Politics (3.0); 3 cr.** Examination of the principal actors in the legal system: police, lawyers, judges, and citizens. About half of the course is devoted to the study of judicial behavior in the courts and political and personal influences on judicial behavior.

**POS 337 Dialogue Among Civilizations (3.0); 3 cr.** This course introduces the concepts of tolerance and dialogue and demonstrates how they are the prerequisites for peaceful coexistence. It also emphasizes that terrorism represents the very embodiment of intolerance, thus raising awareness for the need for core values within the national and international communities. Moreover, makes students aware that in our globalizing and increasingly interconnected world, diverse cultures can provide a needed source of stability and continuity. The challenge is to balance this need against the risk of cultural stagnation. This course assumes that there is no simple solution. Students must always understand that cultures are living, evolving entities, not lifeless artifacts.

**POS 345 Ethics and Leadership (3.0); 3 cr.** An examination of the nature of the relation between authority and moral duty in light of the long tradition of civil and religious statutes.

**POS 350 Comparative Governments and Politics (3.0); 3 cr.** A study of the basic approaches to comparative politics. Constitutional comparisons among the political systems of the United States, Great Britain, France, China, and Japan are highlighted.

**POS 353 Governments of the Middle East (3.0); 3 cr.** A comparative study of the governmental systems and political processes of Middle Eastern countries.

**POS 382 Empirical Research Methods (3.0); 3 cr.** An exposition of the scientific methods for conducting research, collecting and analyzing data, formulating hypotheses and propositions, and developing well-organized reports.  
*Prerequisite:* ENL 213

**POS 403 Arab-Israeli Conflict (3.0); 3 cr.** A study of the Arab-Israeli conflict and its effects on the legal, economic, and political patterns of the region and the international community.

**POS 405 Religion and Politics in the Middle East (3.0); 3 cr.** An exploration of the social, cultural, economic, and developmental roles of religion in the Middle East including the challenges, opportunities and threats that Jewish, Christian and Islamic faith-based political parties and movements are facing in the current context. Emphasis will be placed on the role of religion as a potential force for development, the role of faith-based civil society organizations and the political links to the Mediterranean region and the MENA as a whole.

**POS 406 Cultural Pluralism in the Middle East (3.0); 3 cr.** Survey of the development of Middle Eastern society focusing on the role of linguistic and confessional minorities, concepts of diversity, ethnic oppression and inter-group relations explored within a comparative historical context. Emphasis will be placed on current theoretical discourse on hybridity, diversity and the roles played by globalization, migration and cyberspace in the region.

**POS 408 Gender and the Law (3.0); 3cr.** This course explores the way activism around gender issues has developed into international policies and laws in an attempt to advance gender equality. The course takes a closer look at the implications of such and the political effects of international gender equality policies and laws. It surveys movement, legal and organizational strategies, and explores gender politics in currently salient issue areas ranging from violence and peacemaking to development and international economic restructuring. At the local context this course will cover the major issues concerning gender in Lebanese law.

**POS 415 Diasporas: Conflict and Peacebuilding (3.0); 3 cr.** This class introduces students to the impact of diasporas on

international relations in the 21<sup>st</sup> century. Students will look at diasporas as communities whose impact needs to be understood in the host country, in the homeland and on the actual diaspora community simultaneously. Because of the ability of migration studies to intersect with development studies, international security and peacebuilding, this course will adopt an interdisciplinary approach to the study of diasporic interactions.

**POS 424 Political Economy of the Middle East (3.0); 3 cr.** Studies the major economies of the Middle East and the political-administrative systems shaping these economies. The issues addressed include: the major economic centers in the Middle East, concentration of wealth and poverty, redistributive justice and the international factors shaping Middle Eastern politics and economics. Emphasis will be placed on theories dealing with the role of the state in shaping economic development and the difficulties faced when implementing policy decisions.

**POS 425 Understanding and Creating Social Change (3.0); 3 cr.** This course identifies the causes and patterns of change and explores the origins and types of movements leading social change. Students will be exposed to change agents and change strategies and will learn how to develop a strategic advocacy plan. They will identify proponents and opponents of change and devise a tactic that ensures enough support for the transformation to be sustainable.

**POS 442 Constitutional Law (3.0); 3 cr.** A study of the precepts and provisions of the Lebanese constitution and its contributions to policy, governance, and democracy.

**POS 479 Government and Politics of the United States (3.0); 3 cr.** A study of the constitution of the American government and the determinants of the political process.

**POS 488 Current Issues in Political Science (3.0); 3 cr.** A seminar highlighting topic areas and theoretical approaches of particular interest to political science as a profession. This course will deal with both the critical thinking and practice in a specific area. The content and focus of the course will be altered from semester to semester in order to remain up to date with technical experience and scholarly discourse in the field.

**POS 490 Senior Study - Special Topics in Political Science (3.0); 3 cr.**

## **The Degree of Master of Arts in Political Science**

The Department of Political Science offers graduate work leading to the Master of Art in Political Science. This Master's program is aimed at those students planning or embarking upon a career in public service and in related fields.

### **Mission**

The mission of the Master's Degree in Political Science is to build on the attributes of high intellect, moral integrity, enlightened citizenship, human solidarity, and responsible leadership to provide students with a theoretical and professional foundation for their careers. Rooted specifically in the Maronite Catholic traditions of NDU, graduates will be able to carry out independent and critical original research, work in applied fields such as government, civil society, the media, or private enterprise, and link their scholarly training to the improvement of conditions in society as a whole within a global context.

### **Degree Requirements (36 credits)**

#### **Core Requirements**

IAF 601, PAD 604, POS 681

**9 cr.**

#### **Major Electives**

IAF 604, IAF 605, IAF 615, IAF 633, IAF 641, IAF 645, PAD 618, PAD 627, PAD 652, PAD 654, POS 611, POS 619, POS 651, POS 659

**15 cr.**

#### **Free Electives**

Option I: Thesis (POS 699) in addition to 6 credits of course work.

Option II: Successful completion of 12 credits of course work and a comprehensive written and oral exams.

**12 cr.**

---

## **The Degree of Master of Arts in Political Science, Human Rights Emphasis**

The M.A. in Political Science- Human Rights Concentration inspired by the mission of the University is designed to build on development objectives in the area of forming individuals from Lebanon and the region to acquire the knowledge and tools necessary to become actors of change in their respective societies. Within this context of mainstreaming and networking HR, the master's degree in the field will greatly facilitate its ongoing teaching, service, and research activities. This program will enable its graduates to not only interface with HR studies in the MENA region, but will also help establish a bridge to the latest international discourses and theories.

### **Degree Requirements (36 credits)**

<b>Core Requirements</b>	<b>9 cr.</b>
--------------------------	--------------

IAF 601, IAF 605, POS 681

<b>Major Electives</b>	<b>15 cr.</b>
------------------------	---------------

IAF 604, IAF 609, IAF 617, IAF 641, IAF 665, INL 638, INL 646, NGO 605, POS 602, POS 608, POS 614, POS 615, POS 616, POS 632, POS 649, POS 658

<b>Electives</b>	<b>6 cr.</b>
------------------	--------------

POS 689 Internship in HR and another course related to the major  
Or any two courses related to the major

<b>Thesis</b>	<b>6cr.</b>
---------------	-------------

POS 698

## **The Degree of Master of Arts in Political Science, NGOs Emphasis**

This program is designed to provide students with in-depth knowledge in the field of International and Civil Society Organizations and specifically NGOs and NPOs. The Master's program is aimed at those students planning or embarking upon a career in independent international, regional and local organizations and those that operate under the umbrella of the United Nations and its various agencies, as well as other major development actors in the MENA-region and Arab World, and beyond.

### **Degree Requirements (36 credits)**

<b>Core Requirements</b>	<b>9 cr.</b>
--------------------------	--------------

These are three courses that introduce you to the basic theories and practices of international organizations and specialized agencies, public administration, and scientific methods for conducting research in all later courses.

<b>Major Electives</b>	<b>15 cr.</b>
------------------------	---------------

Five courses of your choice from the NGO program will give you advanced knowledge and varied aspects of Civil Society and development, introduce you to tools for project, human resources and financial management, strategic planning, fundraising, monitoring and

evaluation, as well as advocacy and social marketing, to mention only some of the topics.

### Free Electives

12 cr.

Option I: Thesis (INL 699) in addition to 6 credits of course work.

Option II: Successful completion of 12 credits of course work and a comprehensive written and oral exams.

---

### Graduate Courses: NGOs

**NGO 601 Development Theory and Practice. (3.0); 3 cr.** This course deals with topics and issues related to the current development challenges in the MENA-region in the context of the global order. Case studies of NGOs that are active in different areas will be selected as well as different examples of sustainable projects and programs.

**NGO 602 Changing Role of Civil Society Organizations in the MENA-region (3.0); 3 cr.** The focus of this course is on the changing role of Civil Society Organizations in the MENA-region based on existing and emerging NGO-networks. The concept of Civil Society is being examined and challenged.

**NGO 603 NGO Management (3.0); 3 cr.** A comprehensive overview on issues like good governance and accountability, empowerment, partnership, measuring performance & results as well as the contexts in which NGOs are operating. Issues like advocacy and service-delivery will be examined as well as the existing paradigms in development management.

**NGO 604 Organization Development (3.0); 3 cr.** This course will examine existing theoretical models around Organization Behavior in the Civil Society Sector. Organizational Assessment & Change, OD-interventions, Organizational Culture, Leadership, and principles and practices for Organizational Learning are other main components of the course.

**NGO 605 Civil Society, NGOs, Networking and Advocacy (3.0); 3 cr.** An examination of how NGOs are networking and campaigning for human rights and core social issues with the State, the public opinion, the private sector and decision-makers on different levels.

**NGO 606 Civil Society, Welfare State and Social Policy (3.0); 3 cr.** This course will critically analyze how social policy is being shaped and social services delivered by State, Private and NGO Actors in changing political

and social contexts both globally and in the MENA-region.

**NGO 611 Advanced Course in Project Management for NGOs (3.0); 3 cr.** A comprehensive view with case studies on how NGOs prepare, design, fund, manage, implement, monitor and report projects mainly in the development sector.

**NGO 613 Monitoring and Evaluation (3.0); 3 cr.** A comprehensive overview how development projects are being monitored and evaluated by the main stakeholders. Other central topics include quantitative and qualitative methods on how to collect, store and analyze data and information as well as how to design the M/E-process as an integral part of the project management system. *Prerequisite:* NGO 611

**NGO 615 Strategic Planning for NGOs (3.0); 3 cr.** This course will treat how NGOs can become more proactive, efficient, focused and committed in their service delivery. The main focus will be to assess current strengths, weaknesses, opportunities and threats and elaborate a strategic framework with the vision & mission statements, guiding values & principles and appropriate plans, programs and projects.

**NGO 621 Advanced course on Gender & Development (3.0); 3 cr.** This course will examine and analyze gender inequality and its correlation with poverty which results in acute failure of human capabilities. The capability approach with its systematization and theoritization, based on current case studies, is also a central part of the course.

**NGO 623 Advanced Course on Religion and Development (3.0); 3 cr.** This course will analyze the social and developmental roles of secular and religious NGOs in the Middle East and beyond. The main focus will be on the praxis and the action carried out by Faith Based organizations and Religious Charities.

**NGO 626 Disaster Response & Emergency Preparedness (3.0); 3 cr.** This course will study several cases of relief operations regarding man-made and humanitarian disasters utilizing the Humanitarian Charter and Minimum Standards in Disaster Response.

**NGO 627 Corporate Social Responsibility in the MENA-region (CSR) (3.0); 3 cr.** This course will analyze current models of CSR and how the principles can be applied in the Arab World and beyond. Some real life examples will be studied. Related concepts on Corporate Accountability, Governance & Citizenship as

well as Social Responsibility & Ethical Investments, will be examined.

**NGO 629 Fundraising Strategies and Proposal Writing for NGOs (3.0); 3 cr.** This course will examine how NGOs can look for and approach potential donors and specifically how to prepare a written project proposal with all its components. *Prerequisite:* NGO 611

**NGO 690 Special Topics (3.0); 3 cr.** Special topics in NGO Management.

**NGO 693 (3.0); 3 cr.** Internship in an NGO, UN agency or social institution.

---

### Graduate Courses: Political Science

**POS 601 Contemporary Political Theory (3.0); 3 cr.** Analyzes the dominant and recent trends in political science theory, political philosophy, and Western political thought. It focuses on the major theories and theorists, Western and non-Western, whose writings have influenced the academic field and research institutions, and who have made their impact on the understanding and practice of politics.

**POS 602 Introduction to Human Rights Standards (3.0) 3 cr.** The primary aim of this course is to introduce students who have no knowledge of human rights to the basic concepts and principles of human rights and the theoretical debates that surround them. The course focuses on the origins and sources of human rights and how they developed throughout history to become internationally recognized standards. The course also introduces students to the importance and impact of human rights standards in domestic politics and international relations, in the maintenance of democracy and state stability in the modern world.

**POS 603 Comparative Legislatures and Legislative Processes (3.0); 3 cr.** Analyzes the structures, procedures and norms governing the legislature: making laws, elections, representation, and relations with other branches of government. It focuses on the functions and role of legislatures in general and covers legislatures of select major and non-major states in the international system and the characteristics which make them efficient and influential in the cases of some, or render them ineffective or marginal in the cases of others.

**POS 605 Political Parties (3.0); 3 cr.** Studies the structures, activities, and role of political parties in government and society. Emphasis is on the positive role of the party in developing the citizen, the political process, and political stability of states, and the factors which make parties effective and relevant. It distinguishes between two broad categories of parties: ideological parties and issue-oriented parties.

**POS 607 Civil Liberties (3.0); 3 cr.** Examines the development of constitutional law with regard to civil liberties and the protection of all citizens, including women and children, minorities, and ethnic, linguistic, and religious groups. The functions and roles of the courts to protect civil liberties represent one focus of the seminar, while the role of civic groups to promote them represents another. The course is supplemented by the study of case studies related to civil liberties issues.

**POS 608 International Treaty Systems of Human Rights (3.0) 3 cr.** The course explores the development of the international treaties covering different aspects of human rights through the United Nations, the European Union, and other regional organizations. It introduces the students to the bodies related to these treaties, their importance, functioning, and relevant mechanisms; giving students basic knowledge on how to make use of these bodies to help protect, promote, and implement basic human rights values.

**POS 609 Security and Conflict Resolution (3.0); 3 cr.** Reviews changing patterns of war and security since the early twentieth century. Introduces students to a wide variety of literature

and cases. A special focus is on methods, techniques and the management of conflicts. Different approaches are analyzed: management of conflicts bilaterally between states, multilaterally through international or regional organizations, and through the roles of the good offices of diplomats or personalities of international stature.

**POS 611 The Middle East in International Politics (3.0); 3 cr.** The seminar examines the place of the Middle Eastern countries in the world system and the roles played by outside powers in the Middle East.

**POS 613 Politics and the media (3.0); 3 cr.** Role of the media in shaping local and international politics and in influencing agenda setting nationally and internationally. Emphasis is on the role of the various media at the local, national, and inter-state settings, and on ethical conduct, professional norms, general organization, patterns of ownership, and the use of propaganda for various purposes.

**POS 614 Civil and Political Rights (3.0); 3 cr.** This seminar provides students with a detailed review of current civil and political rights. The review will cover the theoretical debates around the rights and practical challenges in their application in general, and Arab and Lebanese contexts in particular.

**POS 615 Economic, Social and Cultural Rights (3.0) 3 cr.** This seminar provides students with a detailed review of all the economic, social and cultural rights. The review will cover the theoretical debates around the rights and practical challenges in their application in general, and Arab and Lebanese contexts in particular.

**POS 616 Rights of Vulnerable Groups (3.0); 3 cr.** This seminar explores the different treaties created to cover the rights of vulnerable groups including women, children, minorities, indigenous peoples, migrant workers, refugees, and the disabled. The seminar explores the reasons for which those treaties were added to the basic original general human rights treaties and the benefits their application can give to a society, notably their added value for the development processes of individual countries. *Prerequisite:* POS 608.

**POS 619 Political Communication (3.0); 3 cr.** Diffusion of persuasive political communications through standard and created media. Examination of campaign techniques

(i.e., research on issues and themes, electorate polling, thematic media approaches, campaign strategies) in management and administration.

**POS 632 Human Rights in the MENA Region (3.0); 3 cr.** This seminar views human rights in a regional context and evaluates the history, the current situation, and the future prospects for human rights in the MENA region. It explores the structural problems and challenges that the advancement of human rights is facing and introduces successful experience and good practice that have achieved change and made a difference in their respective societies.

**POS 649 Human Rights in Religious Thought (3.0); 3 cr.** Due to the lately increased importance of religion in international politics and to its longstanding importance in societies, politics and conflicts of the MENA region, this seminar provides a review of the different religions' positions and views on human rights. Added focus will be provided for the three monotheistic religions that are the main players and have the most influence in MENA politics. The seminar will also explore the possible conflicts between human rights and religious teachings and survey conciliatory approaches. *Prerequisite:* POS 602.

**POS 651 Contemporary Middle East Governments and Political Processes (3.0); 3 cr.** A comparative study of the governmental systems and political processes of the contemporary Middle Eastern countries and their role in world affairs. Topics include elites and political systems, democratization vs. fundamentalization, internal and external conflicts and their impact on nation-building, and constitutional law in the Arab states.

**POS 658: Information Technology and Human Rights (3.0); 3 cr.** Technological developments in the field of information and communication (ICT) have had a tremendous impact on the field of human rights. This course will emphasize the significance of these changes with respect to freedom of expression, access to information, and protection against undue intrusion in the private sphere. It will also highlight the impact of ICT on protection of cultural rights and innovations in the economic and social fields, including economic opportunities for marginalized groups and regions. *Prerequisite:* POS 602.

**POS 681 Research Methods (3.0); 3 cr.** The course introduces students to the scientific methods for conducting research, collecting data, analyzing these data, formulating hypotheses and propositions, and developing these propositions into coherent, well-organized reports.

**POS 689 Internship in Human Rights (3.0); 3 cr.** This course provides a supervised on-the-job working experience in human rights. The internship will be done in cooperation with recognized international and national institutions and organizations from the public and private sector. Interns will have the opportunity to develop new skills by working under the direction and supervision of an experienced practitioner. A minimum of 120 hours of internship is required. A detailed report is to be submitted as a record of the work accomplished.

**POS 698 Thesis in Human Rights (6.0); 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of human rights. It requires the incorporation of the student's hypotheses, methods of testing, test results, and conclusion in a sound, rigorous, and scholarly report.

**POS 699 Thesis in Political Science (6.0); 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of Political Science. It requires the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound report available to later researchers.

## DEPARTMENT OF PUBLIC ADMINISTRATION

The Department of Public Administration offers three programs leading to the degrees of Bachelor of Arts in Public Administration, and Master of Arts in Public Administration.

---

### The Degree of Bachelor of Arts in Public Administration

#### Mission

The mission of the B.A. program in Public Administration is to teach students the discipline of public administration. The program is designed to provide students an opportunity to gain an in-depth knowledge of the public sector, its organization, operations, structures, and processes of government. Students are given high quality training in order to become more effective participants in a democratic society as managers, policy analysts, public policy makers, and responsible citizens. Students receive instruction in such subjects as public management, budget preparation, techniques, public policy, ethics, and sustainable development. Graduates in public administration are prepared for careers in government at the national and international levels, as well as employment in nonprofit organizations.

#### Degree Requirements (105 credits)

<b>General Education Requirements</b>	<b>33 cr.</b>
<b>Major Requirements</b> IAF 401, PAD 201, PAD 241, PAD 302, PAD 312, PAD 332, PAD 421, PAD 422, PAD 461, PAD 462, PAD 490, POS 210, POS 345, POS 382, POS 442.	<b>45 cr.</b>
<b>Electives in PSPAD</b>	<b>21 cr.</b>
<b>Free Electives</b>	<b>6 cr.</b>
<b>Minor in Public Administration</b> Required: PAD 201, PAD 302, PAD 332 Electives: 9 credits from PAD courses	<b>18 cr.</b>

---

## Undergraduate Courses: Public Administration

**PAD 201 Introduction to Public Administration (3.0); 3 cr.** Role of the Administration in the Political process with an examination of the basic concepts of Bureaucracy. This course is a prerequisite to all PAD courses. *Prerequisite or Corequisite:* ENL 107.

**PAD 241 Administrative Law (3.0); 3 cr.** (Arabic/English) Studies law governing the organization, powers and contracts procedures of the executive and administrative establishments.

**PAD 302 Elements of Public Policy (3.0); 3 cr.** Studies consumer protection, natural resources, environmental protection in relation to science and technology.

**PAD 312 Regulatory Politics (3.0); 3 cr.** Studies the development and implementation of governmental policies regulating business activities, consumer and labor.

**PAD 332 Administration Behavior and Organization Theory (3.0); 3 cr.** Examines the consideration of theories seeking to explain administrative behavior, evidence for and against those theories as applied to governments.

**PAD 421 Fiscal and Budgetary Policy of Lebanon (3.0); 3 cr.** A study of the

budgetary process from a legal and economic perspective. Topics include, among others, the public debt, taxation, and financial policy.

**PAD 422 Political Administration Development (3.0); 3 cr.** Illustrates topics such as: Politics of social changes, comparative urbanization, political administrative development caused by various legal, social, religious and political factors.

**PAD 461 Comparative Public Administration (3.0); 3**

**cr.** Comparative public administration and theory. Bureaucracies and their input on the political development process.

**PAD 462 Public Management (3.0); 3 cr.** Analysis of advanced public management techniques. Problems of implementing techniques: Case study and research.

**PAD 490 Senior Study - Special Topics in Public Administration (3.0); 3 cr.** Special topics in Public Administration.

---

## **The Degree of Master of Arts in Public Administration**

The department of Public Administration offers graduate work leading to the Master of Arts in Public Administration. This Master's program is aimed at those students planning or embarking upon a career in public service.

### **Mission**

The mission of the MA in Public administration is committed to teaching students the different theories and concepts of public administration, and to contribute to finding solutions to public sector challenges by providing a practice-oriented and research-based training. Furthermore, the program will prepare future graduate for careers in the public sector and NGOs locally and internationally.

### **Degree Requirements (36 credits)**

#### **Core Requirements**

IAF 601, PAD 604, POS 681.

**9 cr.**

#### **Major Electives**

IAF 641, IAF 645, INL 626, INL 636, PAD 602, PAD 612, PAD 618, PAD 620, PAD 622, PAD 627, PAD 629, PAD 632, PAD 652, PAD 654, POS 619, POS 625, POS 661

**15 cr.**

#### **Free Electives**

Option I: Thesis 6 cr. (PAD 699) in addition to 30 cr. of course work.

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

**6 or 12 cr.**

---

## Graduate Courses: Public Administration

**PAD 602 Theories of Organization and the Public Sector (3.0); 3 cr.** Examination of theoretical frameworks for studying public and private bureaucracies, with emphasis on ideologies, values, behavioral patterns and concepts of organization.

**PAD 604 Public Administration (3.0); 3 cr.** Theory and practice of program evaluation and evaluative research. Exploration of scope and limitations of current practice in evaluation, considering economic, political, social and administrative.

**PAD 605 Privatization: Theory and Application (3.0); 3 cr.** This course addresses privatization as one of the fastest expanding economic phenomena in market economies, particularly in the developing economies of the Third World. It studies the rationale and significance of privatization in different socio-economic sectors and the various theories on privatization, their applications as well as the future of privatization. The course is supplemented with case studies on different forms of privatization.

**PAD 612 Comparative Development and Administration (3.0); 3 cr.** Analysis of bureaucratic structures and function in Lebanon; industrialized and less developed countries, primarily at national level.

**PAD 613 Planning, Program Analysis and Evaluation (3.0); 3 cr.** Covers the elements of public planning, analysis and evaluation of public policies and strategies in the context of declared governmental and social policies as well as public needs and welfare. This course aims at studying models and programs for assessing and evaluating public policies in relation to the administrative and economic and social performance of the public sector.

**PAD 618 Public Budgeting (3.0); 3 cr.** Theory and techniques of budgeting in governmental fiscal relations and the political processes that relate to decision making within the governmental organization.

**PAD 627 Political Development and Social Change (3.0); 3 cr.** It examines social change in the light of the political structures governing a state. The focus is on various developmental models used to affect or explain social change and on the social environment that may either propel or constrain change.

**PAD 629 Public Sector Labor Relations (3.0); 3 cr.** Nature of labor relations

processes and practices at all levels. Attention to the political variables that distinguish public sector from private sector labor relations.

**PAD 632 Administrative Law (3.0); 3 cr.** The law governing public administration. Attention to legal reasoning, liability, due process, informalism, and public access. The apparatus of administration.

**PAD 652 Organization Leadership (3.0); 3 cr.** This course provides an in-depth examination of the leadership function within the work organization. Essential skills of effective leaders are diagnosed with respect to : Goal setting, written and oral presentation, behavioral flexibility. The behavioral dimension and impact of various skills are emphasized to explain the necessary leadership role of both technical and non-technical personnel in the work organization.

**PAD 653 Comparative Public Policy (3.0); 3 cr.** Comparative analysis of policy formation; process of social and economic policy decision making in selected industrial societies; interaction of institutions, ideas, and power in decisions concerning social welfare, economic planning, and related policy areas.

**PAD 654 Bureaucracy and Public Management (3.0); 3 cr.** Familiarity with the Lebanese government. Nature of bureaucracy in modern government with emphasis on Lebanon. Explanation of why government agencies behave as they do. Focus on real and imagined problems with bureaucratic rule, evaluation of commonly proposed solutions for these problems. Example from schools, armies, welfare bureaus, regulatory agencies and intelligence service among others.

**PAD 699 Thesis or Project, in Public Administration (6.0); 6 cr.** The thesis involves the application of research methods to a significant topic of current relevance to the spheres of Public Administration. The project involves the incorporation of the student's hypotheses, methods of testing, test results and conclusion in a sound, written report available to later researchers.