FACULTY OF ARTS AND SCIENCES

FACULTY LIST

OFFICERS OF THE FACULTY

Warrak Elias	President
Bahr Georges	Acting Provost
Nakat (EL), Hanna	Acting Dean

FACULTY STAFF

Abboud, Abdo	LMS Administrator
Aoun, Amal	Instructor
Bazzi, Samer	Assistant Professor
Borgi, Sabine	Secretary
Elias, Sally	Executive Secretary, Dean's Office
Esber, Michella	Instructor
Chahine, Elias	Laboratory Supervisor
Ghanem, Aline	Faculty Secretary
Habib, Joyce	Laboratory Assistant, Orientation Coordinator
Jabbour, Aline	Administrative Assistant
Khatib, Salah	Laboratory Assistant
Khoury, Bilal	Research Assistant
Nasr, Adele	Faculty Secretary
Nini, Eddy	Information Technology & Systems Manager
Ouaygen, Lama	Instructor
Saba, Jimmy	Instructor, LMS Administratior
Saba, Julie	Faculty Secretary
Salman, Sara	Laboratory Assistant
Shikhani, Miguel	Laboratory Supervisor
Tannous, Nathalie	Administrative Assistant, Dean's Office
Zakhem, Michel	Instructor

FACULTY MEMBERS

Antaki, Patricia	Ph.D., Art history and Archaeology CESCM (Centre d'Etudes Supérieures de Civilisation Médiévale), Poitiers University, France.
Abdelaziz, Abelrahman	Ph.D., Mathematics University of Sydney, Australia
Abla, Maher	Ph.D., Organic Chemistry, University of Avignon
Adra, Omar	Doctor of Education, Educational Leadership Saint Louis University
Alameddine, Abbass	Medical Doctor, Psychiatry Saint Joseph University, Beirut
Ammar, Rachid	Ph.D., Environmental and Physical Chemistry, University Claude Bernard-Lyon 1

Annous, Samer	Ed.D., Education, University of London, UK.
Antoun, Maya	Ph.D., Gifted Education, Monash University, Melbourne, Australia.
Aouad, Samer	Ph.D., Physical Chemistry, Université du Littoral Côte d'Opale, France
Atie, Elie	Ph.D., Physics Université de Franche-Comté, France
Attieh, Jihad	Ph.D., Plant Physiology & Biochemistry, Université de Montréal, Canada.
Bassil, Bassem	Ph.D., Chemistry, Jacobs University, Germany
Bitar, Amine	Ph.D., Computer Science Bedford University, London
Bekaii, Wassim	Ph.D. Linguistics, University of Manchester, UK.
Chami, Riad	M.S., Computer Science, University of Technology, Australia.
Crisan, Alexandre-Dan	TD in Physical Education, University of Bucharest, Romania
Dagher, Charbel	Doctorat, Lettres Arabes, Lebanese University, Lebanon.
Daher, Jalil	Ph.D in molecular Biology Université Libre de Bruxelles (ULB)
Darwiche, Frank	Ph.D., Philosophy, University of Burgundy, France
Debs, Espérance	Ph.D., Food Processing, Université de La Rochelle, France
Debs, Hamid	Ph.D., Biomedical Engineering, Université de Technologie de Compiègne, France.
Deek, Charles	Doctorat, Esthétique de l'Art, Université Paris VIII, France
Dennison, Michael	Ph.D., Comparative literature, Louisiana State University.
Dergham Dargham, Joumana	Ph.D., Computer Science, Université de Montréal, Canada.
Dib, Youssef	PhD in Mathematics, University of Louisiana
Echtay, Karim	Ph.D., Biochemistry, Ludwig Maximillians University, Germany.
Farah, Farah	Ph.D., Mathematics INSA of Strasbourg – University of Strasbourg – France
Ferri, Fawzi	Diplôme, Entraîneur fédéral 3ème degré, CREPS-France.
Fleonova, Olga	Ph.D., Linguistics, Moscow State University, Russia.
Frangieh, Marie Rose	Ph.D., Chemistry, University Claude Bernard-Lyon 1

Greige, Hanna	Ph.D. Mathematical statistics, Data Analysis Pierre & Marie Curie University-Paris 6, France
Haddad, Samir	Doctor of Philosophy in Networking Systems, Ecole Doctoral Every Val d'Essone, Laboratoire Télécom Sud Paris, Ecole de l'Institut Mines-Paris
Hage (El), Rawad	Ph.D., Physical Education, Université D'Orléans, France.
Hagopian, Sareen	Doctoral in Psychotherapy Science Sigmund Freud University,Vienna, Austria M.A., Clinical Psychology, University of Balamand, Lebanon.
Halabi (El), Elias	Ph.D., Philosophy, Birmingham University, United Kingdom.
Haidar, Marwan	BA in Physical Education – University of Balamand
Hitti, Karim	Ph.D., in Applied Mathematics Ecole des mines de Paris - CEMEF
Issa, Carmen	M.Sc., Computer Science, University of Balamand, Lebanon
Issa, Dima	Ph.D, Media and Communication University of Westminster, UK.
Jacob, Christophe	Ph.D., Physical Education, Rennes II University, France
Jourdi, Houssam	Ph.D., Molecular Neurobiology & Neuropharmacology, Brain Research Institute, Niigata University, Japan.
Jreige, Jocelyne	M.Sc., Computer Science, University of Balamand, Lebanon
Kanaan, Marlène	Doctorat des Lettres, Philosophie, Université Saint Joseph, Lebanon.
Karam, Marc	Ph.D., Biology, Surrey University, UK.
Kassab, Rima	Ph.D., Organic Chemistry, Université Claude-Bernard, France.
Keshishian, Sossie	Doctor of Philosophy in English Literature University of Leicester
Kfoury, Adib	Ph.D., Atmospheric Chemistry, Université du Littoral Côte d'Opale, France.
Khairallah, Megan	Ed.D., English Education, Teachers College, Columbia University, NY, USA.
Khoury (El), Georges	Ph.D. Science and Techniques of Sports and Physical Activities Université Rennes 2, France
Khoury (El), Josiane	Ph.D., Sociology of Media, Holy Spirit of Kaslik University, Lebanon.
Koussa, Ziad	Doctor of Philosophy (Dr. PHIL) Friedrich Alexander University Erlangen – Nuremberg, Germany
Melki, Antoine	Ph.D.,Computer Science, University of Patras, Greece.
Merhi, Arij	Ph.D, Chemistry, Institut National des Sciences Appliquées de Rennes

Mir (Al), Ghina	Ph.D., Mathematics, Université de La Rochelle, France.
Mitri, George	Ph.D., Forest Management, University of Trieste, Italy
Moukheiber, Karen	Ph.D., History American University of Beirut, Lebanon
Moussa, Elie	Ph.D., Physiologie et biomécanique de l'exercice musculaire, Rennes II, France.
Nader, Manal	Ph.D., Biology and Aquaculture, Hokkaido University, Japan
Nahas, Nayla	Ph.D., Psychologie, Université de Toulouse Le Mirail, France.
Najjar, Hela	Doctorat en Langues Vivantes, Option Traduction, Université Saint Joseph, Lebanon.
Nakat (El), Hanna	Ph.D., Physical Chemistry, University of New South Wales, Australia.
Nakhlé, Elie	Ph.D candidate in English Linguistics Lebanese University
Nasr, Maria	Ph.D. Translation Studies (Traductologie) ESIT, Université Paris III, Sorbonne Nouvelle, France
Nasr, Zeina	Ph.D., Biochemistry, McGill University, Canada.
Nicolas, Maureen	Ed.D., Educational Management & Leadership, University of Leicester, UK.
Obeid, Pierre	Ph.D., Chemistry, University of Patras, Greece.
Ofeish, Sami	Ph.D., Political Science, University of Southern California, USA.
Riachi, Mireille	Ph.D., Education, Sorbonne Nouvelle University Paris III, France.
Rihan, Mohamad	Ph.D., Islamic History & Middle Eastern Studies, University of Cambridge, United Kingdom
Roumi- Salem, Laure	Ed.D. Education, University of Leicester.
Sabat, Mira	Ph.D., Mathematics, University of Louisiana
Salloum, Sara	Ph.D., Education, University of Illinois at Urbana Champaign, Sorbonne.
Serhan, Carla	Doctorat, I Sciences du Language, Université de Provence, Aix-Marseille I, France.
Shikhani, May	Ph.D., Applied Linguistics, University of London, UK.
Slim, Souad	Ph.D., History, University of Birmingham, England.
Soufi, Aida	Ph.D., Sciences de l'Education, University of Strasbourg, France.
Tannous, Tony	Ph.D., Science, University of Sydney, Australia
Tassone, Giuseppe	Ph.D., Political Philosophy, University of York, England.
Williams, Peter	Ph.D., English Literature, University of Washington, USA

Yaacoub, Guitta	D.E.A., Plant Production, Lebanese University, Lebanon
Yammine, Paolo	Ph.D., Chemistry, Université Paris XIII, France
Younes, Rayya	Ph.D., Mathematics Education Texas A & M University
Zain (Al), Ali	Ph.D., Physical Chemistry of Materials, Université de Montpelier II
Zakhem, Eddy	Doctorat en Sciences et Techniques des Activités Physiques et Sportives (STAPS). Université de Littoral Côte d'Opale-France
Zakhem, Imad	Ph.D., Computer Science URCA-France
Zgheib, Ghania	Ph.D in Education George Mason University, Fairfax, VA, USA

GRADUATE PROGRAM

The Faculty of Arts & Sciences at the University of Balamand offers graduate degrees in most of its Departments. The graduate school follows the American model and relies heavily on research while building theoretical knowledge through advanced course work. The Faculty grants Master degrees in in all the disciplines housed in FAS. Some programs offer non thesis tracks as well as thesis track. To earn a Master's degree, a student must successfully complete 24 credits of course work and a Thesis or a Project.

1. ADMISSION REQUIREMENTS:

A. Refer to General Information.

B. ADMISSION TO THE PROGRAM

1. The student should have completed a Bachelor's degree with a cumulative undergraduate average of 80, unless otherwise approved by the Dean and the Department. The department will decide on a case by case basis if any bridging courses are required before a student can begin the graduate level courses.

2. Students must have a 203 level of English as determined from a placement exam or from having completed equivalent English courses at the undergraduate level.

-Full-time students must finish in 2 years by taking 9 credits in the fall and spring semesters of their first year; and fall of the second year they will take 6 + the thesis; spring of second year they finish the thesis. An additional third year is possible with approval of the supervisor and the Dean.

NOTE: priority for graduate assistantships is given to full-time students.

-Part-time students must finish coursework in 3 years; the thesis takes an additional 2 years. 5 years are allotted in total or the student is out of the program. Part-time students must register every semester. If a semester is missed, the student must reapply to the program.

3. Any extension or leave of absence from the program will require the Dean's approval. If a student does not officially petition for leave and receive approval for the leave the residency requirement will continue to be computed.

II- GRADUATE PROGRAM IN BIOLOGY

The Department offers a two-year graduate program (30 credits) leading to the Master of Science (M.Sc.) degree in Biology and provides training in many areas with particular strengths in Biochemistry, Molecular Biology, Immunology, and Microbiology.

The emphasis in our program is on development of the intellectual and technical skills necessary for independent research. Formal course requirements (24 credits) are largely intended to fill gaps in the student's background and to bring him/her up to date with the most recent findings in the appropriate research areas. A primary component of the degree also is a thesis (6 credits) embodying the results of original research.

The Department's laboratory facilities are well equipped for graduate training and research in a wide variety of biological sciences. Our resources are further extended by association with other faculties, including the Faculty of Medicine and Medical Sciences and the Faculty of Health Sciences.

Program Learning Objectives

1. Develop an in-depth understanding of several biological topics
2. Enhance the ability to analyze and criticize scientific works
3. Develop the skills of writing proposals, conduct experiments and write manuscripts for publication
4. Develop the student's technical skills by offering dedicated courses to provide the student with hands-on one-on-one mentoring in research techniques
5. Promote independent thinking and autonomous research
6. Develop skills for presenting scientific findings
7. Prepare the student to pursue higher education studies (Ph.D.) or direct integration into the workforce.

Program Learning Outcomes

Upon successful completion of the M.Sc. Program in Biology, degree recipients will be able to:

1. Show advanced knowledge and competitive technical skills namely in the student's chosen area of specialization.
2. Critically read, comprehend and evaluate original research papers in Biology and any related fields
3. Apply the scientific method to design and conduct hypothesis-driven experimental research projects
4. Write manuscripts describing experimental results in standard formats for submission to peer-reviewed journals
5. Apply appropriate statistical methods to experimental design and appropriate statistical analysis to evaluate experimental results
6. Use a variety of modern scientific technologies and describe the theoretical bases, applications, and limitations of instruments used
7. Make distinguishable oral presentations to clearly communicate scientific information and personal research Results
8. Develop a research program and write a research thesis and a research proposal based on the student's experimental data.

III. THE THESIS

1. The subject of the thesis, chosen by the student in consultation with a faculty advisor, should conform to the rules and regulations of the Faculty.
2. Before registering for the thesis, the student should acquire the approval of the chairperson of the department and the Dean. The enrollment should be renewed each semester within the deadline indicated by the Faculty.
3. After registering for the thesis, a time period of two years (or four semesters) is given to the student in which to complete the research and present the completed thesis. An extension of this period for a maximum of two semesters may be granted by the Dean, and a fee of 3 additional credits will apply. In the case of an extension, the student must reactivate consecutive semesters.
4. A change in the thesis advisor requires the approval of the Dean, and can be done only once, allowing the student to extend the time period by one academic year.
5. In compliance with University policy, students who need to stop work on their degree at any point during course work or thesis, must petition the Dean of FAS to sop the residency clock.

   NB: maximum residency for a graduate program is 5 years.
6. The student may register a thesis topic after having successfully completed at least 12 graduate credits in ELT or PHED, 18 credits in all other programs. The student must register for the thesis at least one semester prior to the thesis defense.
7. The scope of the thesis will range between 60-120 pages in length or 15,000-30,000 words, plus or minus 10% not including references or appendices, depending on the requirements of the specific discipline.

8. Before submitting the thesis some disciplines may require that the candidate pass a comprehensive examination.

IV. THE THESIS DEFENSE COMMITTEE

1. Approximately six weeks prior to the expected date of defense four copies of the thesis will be submitted to the Dean. The copies must be accompanied by the supervisor's report and a letter from the Chairperson suggesting the names of four-five potential examiners.

2. The Dean nominates the Defense Committee. The Thesis Defense Committee consists of three members of professorial rank: the advisor and two examiners. One of the examiners will be assigned by the Dean to preside over the committee during the thesis defense.

V. PRINTING AND DISTRIBUTION OF THE THESIS

1. After the thesis defense, the student shall make any corrections or changes recommended by the committee, and following the approval of the Dean, present two copies of the revised thesis to the department and to the University Library.
2. Any publication of the thesis mentioning the Faculty or the University requires the formal authorization of the University.

VI. THE THESIS DEFENSE

1. The date of the thesis defense should be advertised approximately two weeks in advance.
2. The thesis defense is held publicly and in the presence of the committee comprised of the thesis advisor, and two examiners.
3. The defense begins with the introduction of the candidate by the chair of the defense committee.

   The candidate then gives a prepared presentation of the thesis that should not last more than thirty minutes.
4. Following the presentation, the defense opens with questions to the candidate.
5. At the conclusion of the defense the members of the committee retire for deliberation.
6. The grade awarded shall be given in consideration of the thesis, the candidate's presentation and participation during the course of the defense. The candidate must submit the final copy of the thesis to the Library, secure the clearance within a period of two months and the grade should be approved by the Dean and sent to the Registrar within a period of one week following the Library clearance. Failing to do so, the candidate must re register for at least one additional semester.
7. Should a grade of "Fail" be given, the candidate may re-submit and defend the thesis after a period of no less than three months and register for another semester as well. Failure in the second attempt is final.

VII. ACADEMIC RULES & REGULATIONS

(Kindly refer to the "Graduate Manual", General Section, Graduate Catalogue

دائرة اللغة العربية وآدابها

رئيس الدائرة: د. عمر عدرا omar.adra@balamand.edu.lb

في إمكان الطالب الحاصل على بكالوريوس في اللغة العربية وآدابها تحصيل ماستر في الدائرة، في اختصاصين

ماستر في اللغة العربية

ماستر في آداب العربية

يشترط في طالب هذا البرنامج أن يكون من حملة شهادة البكالوريوس في اللغة العربية وآدابها بمستوى جيد. ويمكن أن يُقبل أيضاً حملة البكالوريوس في اختصاصات أخرى بمستوى جيد، على أن يجري إعدادهم في الدائرة عن طريق إلزامهم بالضروري من مقررات تأهيلية إضافية. كما يمكن لمن كانت معدلاتهم في البكالوريوس دون الجيد إنما قريبة منه، أن يقبلوا في البرنامج قبولاً مشروطاً بحيث لا يقبلون نظاميين إلا بعد أن يستوفوا الشروط.

كما يشترط في طالب الماستر أن يتمم ما مجموعه أربعة وعشرون (٢٤) رصيداً من الدروس المرقمة ٣٠٠ وما فوق، مع المحافظة على معدل عام لا يقل عن الثمانين، ومن غير الهبوط في معدل أي من الدروس المقررة إلى ما دون السبعين. كما يترتب على الطالب، بعد إتمام دروسه المقررة، أن يعدّ رسالة تقدر بستة أرصدة، تحت إشراف أحد الدكاترة المختصين، بعد أن تقر لجنة الإشراف على الرسائل مخططها البحثي. ولا ينهي الطالب درس الماستر إلا بعد نجاحه في مناقشة رسالته أمام لجنة تحكيمية.

إن مجموع الأرصدة المطلوب من الطالب هو: ٣٠ رصيداً، وتتوزع كما يلي: على الطالب أن يدرس ثمانية مقررات دراسية (٢٤ رصيداً)، خمسة إلزامية وثلاثة اختيارية، وأن ينجح بمعدل ٨٠ بالمئة، وأن يدافع عن رسالته (٦ أرصدة) تتخذ الدروس في الماستر شكل محاضرات، وحلقات بحثية، حول إشكاليات وقضايا في كل مقرر، ويقوم الطالب في كل مقرر بتقديم بحثين مركزين.

ماستر في اللغة العربية:

مقررات إلزامية (١٥ رصيداً): مقاربات في درس الأدب (ARAB 301) مقاربات في درس اللغة (ARAB 302))، بين الخبر والسرد (ARAB 303)) النقد بين القديم والجديد (ARAB 304)، العربية واللغات: مقاربات لسانية (ARAB 305))

مقررات إختيارية (٩ أرصدة): للطالب أن يختار ثلاثة من أصل خمية مقررات، هي التالتة: قضايا في العربية واللغات القديمة (ARAB 320)، العربية بين السليقة والتقعيد (ARAB 321) المعجم العربي وتاريخية العربية (ARAB 322)، اللغة والنص (ARAB 323) اللغة والعلوم الإنسانية (ARAB 324)

ماستر في آداب العربية

مقررات إلزامية (١٥ رصيداً): مقاربات في درس الأدب (ARAB 301)، مقاربات في درس اللغة (ARAB 302)، بين الخبر والسرد (ARAB 303)، النقد بين القديم والجديد (ARAB 304)، العربية واللغات: مقاربات لسانية (ARAB 305).

مقررات اختيارية (9 أرصدة): للطالب أن يختار ثلاثة من أصل خمس مقررات، هي التالية: أشكال الأدب القديم (ARAB 310)، من نقد البيت إلى نقد القصيدة (ARAB 311)، ألف ليلة وليلة: مقاربات سردية (ARAB 312)، بين النهضة والحداثة في الأدب (ARAB 313)، والأدب والعولمة (ARAB 314).

جدول مقررات الماستر :

ARAB 301 مقاربات في درس الأدب APPROACHES TO LITERATURE STUDY 3.0:3 cr.
يتوقف هذا المقرر عند درس عدد من المناهج في درس الأدب، على تنوعها واختلافها في المدارس الحديثة، لتمكين الطالب من الاطلاع عليها، والتمرس بها، بما يفيد إعداده المنهجي العالي في دراسة الأدب

ARAB 302 مقاربات في درس اللغة APPROACHES TO LANGUAGE STUDY 3.0:3 cr.
يتوقف هذا المقرر عند درس عدد من المناهج في درس اللغة، على تنوعها واختلافها في المدارس الحديثة، لتمكين الطالب من الاطلاع عليها، والتمرس بها، بما يفيد إعداده المنهجي العالي في درس اللغة

ARAB 303 بين الخبر والسرد FROM NEWS STORY TO NARRATIVE 3.0:3 cr.
يعالج هذا المقرر قضايا بحثية متصلة بمواد وأساليب الخبر في العهد العربي-الإسلامي، وأخرى متصلة بفنون السرد الحديث، كما يدرس جوانب من العلاقات بين هذين الميدانين

ARAB 304 النقد بين القديم والجديد CRITICISM BETWEEN ANCIENT AND MODERN 3.0:3 cr.
يدرس هذا المقرر قضايا بحثية متصلة بالنقد العربي القديم، وأخرى متصلة بالنقد الأدبي الحديث، مركزاً على إشكاليات بعينها، أو على أعلام أو على كتب مميزة

ARAB 305 العربية واللغات مقاربات لسانية ARABIC AND OTHER LANGUAGES: LINGUISTIC APPROACHES 3.0:3 cr.
يدرس هذا المقرر قضايا اللغة من منظور لساني، متوقفاً عند العربية وعلاقاتها باللغات الأخرى المتفاعلة معها في نشأتها وتبلورها، بما يسلط الضوء على تاريخية العربية من جهة وأصولها ومبانيها وإشتقاقاتها ومعانيها

ARAB 310 أشكال الأدب القديم FORMS OF ANCIENT ARABIC LITERATURE 3.0:3 cr.
يدرس هذا المقرر بعض الأشكال المخصوصة التي تميز بها الأدب العربي القديم، سواء في النثر أم في الشعر (القصيدة المدحية، المقامة، الترسل الفني، الموشح...)، بما يدل على الخصائص الفنية لكل شكل

ARAB 311 من نقد البيت إلى نقد القصيدة FROM CRITIQUE OF A BEYT TO CRITIQUE OF A POEM 3.0:3 cr.
يعالج هذا المقرر مسائل وقضايا في نقد الشعر، سواء القديم أو الحديث، بما يدل على خصائص المدرسة القديمة (نقد البيت) من خلال عدد من أعلامها أو كتبها، وعلى خصائص المدرسة الحديثة (تحليل الخطاب)، من خلال عدد من دارسيها المجددين أو من خلال كتبهم

ARAB 312 ألف ليلة وليلة: مقاربات سردية ONE THOUSAND AND ONE NIGHTS: NARRATOLOGICAL APPROACHES 3.0:3 cr.
يختص هذا المقرر بدرس جوانب وقضايا مختلفة من هذا الأثر، سواء عند دارسيه العرب أم الأجانب، منها: التوقف عند تاريخيته، أو عند عالمه «العجيب»، أو عند مسائل دالة على اعتقادات «شعبية» قديمة وغيرها

ARAB 313 بين النهضة والحداثة في الأدب LITERATURE BETWEEN RENAISSANCE AND MODERNISM 3.0:3 cr.

يبني هذا المقرر ميداناً واصلاً بين «عصر النهضة» والعصر الحديث، دارساً، من جهة، المباني الحديثة لإنتاج الأدب وترويجه (بما فيها ظهور «القارىء»)، ودارساً، من جهة ثانية، جوانب من الاتصال والتمايز بينهما، في أنواع الأدب المختلفة.

ARAB 314 الأدب والعولمة LITERATURE AND GLOBALIZATION 3.0:3 cr.

يعالج هذا المقرر وضعية الأدب العربي في العصر الحديث، بما فيها دخوله في العولمة، بما يعين موقعه وعلاقاته بالآداب في العالم، وفق مقاربات تعتمد على المنهج المقارن، وعلى «التناص»، في درس أشكال التفاعل والتأثر الأدبيين

ARAB 320 قضايا في العربية واللغات القديمة TOPICS IN ARABIC AND ANCIENT LANGUAGES 3.0:3 cr.

يتناول هذا المقرر قضايا بحثية مختارة، سواء في العربية القديمة أو في اللغات المتصلة بها، بما يمكن الطالب من درس أصول مشتركة ومتفاعلة بينها، بين تاريخية وتكوينية ومعجمية وغيرها

ARAB 321 العربية بين السليقة والتقعيد ARABIC: INNATENESS AND GRAMMATIZATION 3.0:3 cr.

يتوقف هذا المقرر عند مسائل محددة في تاريخ نحو العربية، عارضاً لنظريات النحويين القدامى في نشأة اللغة (خصوصاً ابن جني)، دارساً في الوقت عينه نمو اللغة بين تعويله على السليقة، من جهة، وعلى مساعي النحاة في التقعيد، من جهة ثانية

ARAB 322 المعجم العربي وتاريخية العربية ARABIC DICTIONARY AND HISTORICITY OF ARABIC 3.0:3 cr.

يتوقف هذا المقرر عند مساع قديمة (الفراهيدي أو غيره)، أو متأخرة (مشروعات المجامع اللغوية)، في بناء المعاجم العربية، عارضاً لمشاكلها، وللتوجهات المختلفة التي تتحكم بعمليات وضعها

ARAB 323 اللغة والنص LANGUAGE AND TEXT 3.0:3 cr.

يتناول هذا المقرر درس علاقة النص باللغة، واللغة بالنص، ابتداء من اللسانية الحديثة (مع فردينان دو سوسور وغيره)، وبما يظهر العلاقات بين أبنية اللغة ومقاصد التعبير؛ كما يعرض هذا المقرر طرقاً مختلفة في درس النصوص، بين شعر وسرد وخطبة وخلافها

ARAB 324 اللغة والعلوم الإنسانية LANGUAGE AND HUMANITIES 3.0:3 cr.

يدرس هذا المقرر علاقات وقضايا بحثية متصلة باللغة عموماً وبالعلوم الإنسانية (بين الفكر الإغريقي وفلاسفة اللغة المعاصرة)، ومنها بين العربية (الإعراب) والعلوم المنقولة إليها (الفلسفة)، فضلاً عن البلاغة التي تجمع بين الإقناع والجودة

ARAB 399 رسالة الماستر Thesis 6 cr.

MASTER'S DEGREE IN BIOLOGY

Chair of Division: Houssam Jourdi, Ph.D., hussam.jourdi@balamand.edu.lb

SEMESTER 1

Course Code	Course Title	Credit
BIOL 301	Techniques of Scientific Communication & Bioethics	3
BIOL 308	Techniques in Biological Research	3
	Elective 1	3
Total		**9**

SEMESTER 2

Course Code	Course Title	Credit
BIOL 303	Quantitative Analysis & Biostatistics	3
	Elective 2	3
	Elective 3	3
Total		**9**

SEMESTER 3

Course Code	Course Title	Credit
BIOL 399	Thesis	6
	Elective 4	3
Total		**9**

SEMESTER 4

Course Code	Course Title	Credit
BIOL 399	Thesis (continued)	-
	Elective 5	3
Total		**3**

Total Credits **30**

ELECTIVE COURSES:

Course Code	Course Title	Credit
BIOL 305	Enzymology & Metabolic Biochemistry	3
BIOL 307	Advanced Molecular Biology	3
BIOL 311	Advanced Cell Biology	3
BIOL 321	Advanced Topics in Cellular & Molecular Immunology	3
BIOL 323	Advanced Topics in Microbiology	3
BIOL 341	Plant Growth & Development	3
BIOL 343	Biochemistry of Plant Secondary Metabolism	3
BIOL 345	Biochemistry of Plant Cell Walls	3
BIOL 371	Stem Cell Biology	3
BIOL 381	Recent Advances in Biological Research	3
BIOL 382	Graduate Seminars in Biology	1

Electives may be chosen from the above list to provide an in-depth knowledge of a specific field of research. Presently, the Department offers research options in the fields of plant and animal biochemistry, genetics, molecular biology and physiology, in addition to microbiology and immunology.
Alternatively, up to 12 credits of elective courses may be chosen from outside the Department, with the consent of the supervisor, to complement the knowledge within a related field of research.

COURSE DESCRIPTIONS

BIOL 301 TECHNIQUES OF SCIENTIFIC COMMUNICATION & BIOETHICS 3.0: 3 cr. E

A graduate-level overview of techniques for platform, poster and written scientific presentations, as well as an understanding of the fundamentals of environmental and bioethics. After having successfully completed this course, students will be able to form and critique a logical argument, discuss the mission of making scientific presentations, dissect and summarize scientific papers, constructively critique scientific presentations, and draft a scientific proposal.

BIOL 303 QUANTITATIVE ANALYSIS & BIOSTATISTICS 3.0: 3 cr. E

This course provides students in the field of biological sciences and health care disciplines with the statistical tools and skills necessary to organize and summarize data in a meaningful way and to interpret and analyze data intelligently to reach sound decisions. There is an emphasis on computer applications for most of the statistical techniques covered in the course using SPSS as statistical software.

BIOL 305 ENZYMOLOGY & METABOLIC BIOCHEMISTRY 3.0: 3 cr. E

This is a lecture and discussion course designed for graduate students whose educational goals require more extensive exposure to biochemistry. The course provides detailed insights into the mechanisms of catalysis of various classes of enzymes including kinetic analysis, catalytic mechanisms, transition state stabilization and regulation of activity, strategies for active site characterization and regulatory properties. Cellular metabolism of carbohydrates, lipids, amino acids and nucleotides are also studied.

BIOL 307 ADVANCED MOLECULAR BIOLOGY 3.0: 3 cr. E

The course objective is to initiate graduate students to consider advanced topics in Molecular Biology in greater depth and detail. The course covers the fundamental aspects of Recombinant DNA Technology, the molecular mechanisms of Gene Expression and Regulation, DNA Replication, Telomeres, cellular senescence and immortalization, and the Molecular Pathobiology of Neural Disease. These major topics will be further analyzed during the presentation and the discussion of selected peer-reviewed articles.

BIOL 308 TECHNIQUES IN BIOLOGICAL RESEARCH 3.0: 3 cr. E

This course emphasizes the learning of new research and technical skills needed by graduate students in Biological Sciences who are about to start their thesis work. It exposes students to necessary research resources and provides them with hands-on technical training of current laboratory techniques. The course consists of lectures that accompany laboratory sessions aimed at giving practical experience in recombinant DNA technology, chromatography, microscopy, gene cloning and bioinformatics in addition to commonly-used basic and applied techniques. The students are trained to understand, select, organize and analyze relevant information, and to critically think about results. The course also aims at consolidating the students' understanding of various molecular and biochemical techniques necessary to develop their abilities to trouble-shoot technical problems so as to better appreciate biological facts, principles and concepts.

BIOL 311 ADVANCED CELL BIOLOGY 3.0: 3 cr. E

Advanced Cell Biology is designed for graduate students who need in-depth knowledge in the area of cell biology and related fields. The course is based on the critical reading and discussion of selected journal reviews and articles in cell biology. It is a discussion-based course. The goals include learning basic principles in cell structure and function and developing analytical skills in experimental cell biology. The course puts a special emphasis on instructing the students on how to formulate specific research aims and on how to address these aims with relevant research approaches and methods. Based on all of the above factors, the students are required to build up and defend a highly specific and original proposal for a research project.

BIOL 321 ADVANCED TOPICS IN CELLULAR & MOLECULAR IMMUNOLOGY 3.0: 3 cr. E

This is a lecture- and discussion-based advanced Immunology course designed for graduate students whose educational goals require more extensive exposure to immunological concepts, mechanisms, recent findings and techniques. The purpose of this course is to provide an advanced knowledge of the immune response and its involvement in health and disease, albeit. Basic and updated concepts of immunity, structure and function of the immune system, antigens and antibodies, complement, genetic basis of the immune response, humoral and cellular immunity, immunological tolerance, organ and tissue transplantation, allergy and autoimmunity. This course also introduces the graduate students to critical reading of scientific papers.

BIOL 323 ADVANCED TOPICS IN MICROBIOLOGY 3.0: 3 cr. E

The course provides an in-depth discussion of major intracellular bacteria and protozoa as well as 3 families of viruses, which commonly lead to chronic diseases. The pathogenesis and the immune evasion strategies used by these microbes are elucidated. By the end of the course, students would have acquired detailed description of key obligate and facultative intracellular bacteria (Mycobacteria, Listeria, Chlamidya, Brucella and Legionella), key intracellular protozoa (Plasmodium, Leishmania, Toxoplasma, and Trypanosoma) and key viral families (retroviruses, hepatitis viruses and herpes viruses) causing chronic diseases. The aspects of microbial growth, virulence, identification, and biological characteristics are elaborated. Disease epidemiology, pathology, diagnosis, treatment, and prevention are also discussed.

BIOL 336 ADVANCES IN CANCER IMMUNOTHERAPY 3.0: 3 cr. E

The main goal of this course is to provide graduate students with the fundamental information about novel immunotherapies currently used in cancer treatment. The course will cover five major types of cancer immunotherapy: therapeutic cancer vaccines (dendritic cell-based vaccines, peptide vaccines, DNA vaccines and tumor cell vaccines), adoptive cell therapy (T cells, NK cells, and macrophages), cytokine-armed oncolytic viruses, monoclonal antibody therapy (naked, drug-conjugated and bispecific antibodies), and immunomodulators (cytokines and TLR agonists). Graduate students will also have the chance to present and discuss recent research articles related to the aforementioned cancer immunotherapy concepts.

BIOL 341 PLANT GROWTH & DEVELOPMENT **3.0: 3 cr. E**

This course focuses on developmental processes of plant growth from a structural and organismal approach. Biophysical and biochemical processes involved in plant growth are discussed: Synthesis, functions and mechanisms of action of phytohormones; endogenous rhythms: tropisms, circadian rhythms, and translocation. Exogenous signals (light and temperature) controlling plant development from seed germination to senescence are also covered. A student completing this course should have an understanding of the developmental processes of plant growth and how environmental factors affect plant growth and development.

BIOL 343 BIOCHEMISTRY OF PLANT SECONDARY METABOLISM **3.0: 3 cr. E**

This course constitutes a detailed survey of the field of natural products, which are referred to as 'secondary metabolites'. The core focus will be on the structure and biosynthesis of the four main classes of plant secondary metabolites: polyketides, shikimate derivatives, isoprenoids and nitrogen-containing natural products. Synthesis and structure elucidation are covered only to the extent needed to understand how biosynthetic pathways are uncovered. The course will also touch on the various uses of secondary metabolites including medicinal use of plants, plant-insect interaction (chemical ecology), and the future of natural product research.

BIOL 345 BIOCHEMISTRY OF PLANT CELL WALLS **3.0: 3 cr. E**

This course provides information in areas of biochemistry unique to the plant cell wall. Its objective is to describe the complexity of cell wall structure, study its biosynthesis, and to relate cell wall structure with different aspects of the life of the plant. It includes a discussion of recent developments emphasizing understanding of the research approaches used to elucidate major processes in plant cell wall biosynthesis. Each chapter has a required list of scientific papers to help the students learn how to read and analyze scientific papers.

BIOL 371 STEM CELL BIOLOGY **3.0: 3 cr. E**

This course examines, in details, critical concepts of stem cell (SC) biology. Extensive reading assignments and detailed in-class discussions shape up the student's knowledge of key signaling pathways involved in generation and maintenance of various SC types, in SC interaction with their microenvironment (niche), and of relevant ethical issues. Students are required to develop and defend an original and highly specific project proposal based on rigorous instructions on formulating specific research aims, designing experimental approaches and tackling them with relevant methodologies.

BIOL 381 RECENT ADVANCES IN BIOLOGICAL RESEARCH **3.0: 3 cr. E**

The course is focused on an in-depth analysis of the literature through critical analysis of original research articles in a contemporary and highly specialized field of biological sciences. Journal papers and review articles will be analyzed in terms of background, hypothesis, use of experimental methods, and interpretation of results. The course is not limited to any specific topic and is intended to cover a wide range of subjects in biochemistry, genetics, microbiology, cell, molecular and developmental biology.

BIOL 382 GRADUATE SEMINARS IN BIOLOGY **0.3: 1 cr. E**

The course is dedicated to student seminars, and occasionally, to invited lectures, in which students play the principal role in preparation and delivery. Topics include theoretical concepts and current investigations in the field of Biology and related disciplines.

BIOL 390 MASTER'S PROJECT **3 cr.**

Under exceptional circumstances, or in response to specific opportunities in the industry, students may be advised to complete a Master's Project instead of the Thesis. In such case, the student will complete the 3 credit balance with a course chosen from the list of department electives or the courses available in the Faculty. A Project should be completed within one academic semester, but may be extended over one additional semester.

BIOL 399 MASTER'S THESIS **6 cr.**

The research part of the MSc program is represented by the thesis which is undertaken with the supervision of a full-time Faculty member. A thesis must embody original research and is defended before a Jury, upon completion of the research work. The thesis must be completed within two regular semesters, but may be extended for two additional semesters.

GRADUATE PROGRAM IN CHEMISTRY

Chair of Division: Paolo Yammine, Ph.D., paolo.yammine@balamand.edu.lb

Mission Statement

The Department of Chemistry aims to provide its students, within the MS program, with advanced knowledge regarding the traditional four main fields of chemistry. As well, it aims to provide its students with specialized knowledge in (available) specific fields of interest. This will be done through selected classroom elective courses and research. Students are anticipated to acquire enough knowledge to operate specific research equipment, acquire critical and analytical thinking to analyze results and propose solutions, develop communication skills to present and defend their work. This will qualify them for opportunities in fields of education, industry, research (science, environment, health) and present them as scientifically literate citizens.

Program Learning Objectives

The MS program in Chemistry aims at furnishing students with the following knowledge and skills:
1. Acquire advanced knowledge of theories and concepts in major areas of chemistry
2. Acquire specialized knowledge in focused areas related to thesis project
3. Apply fundamentals of research methodologies to interpret and evaluate scientific data
4. Be able to explore new areas of research based on efficient literature review
5. Be able to communicate knowledge, write a scientific manuscript and defend a thesis
6. Be able to join Ph. D. programs or research projects in related fields.

Program Learning Outcomes

Upon the successful completion of the MS curriculum in Chemistry, graduates are anticipated to:
1. Operate specific instruments
2. Work safely and independently in a Chemistry Lab
3. Carry out a Bibliography search
4. Design or modify a procedure
5. Analyze and discuss data; draw conclusions and take decision for future work
6. Write, present, discuss and defend their project
7. Demonstrate in depth information about area of specialty
8. Demonstrate ability to receive professional training to enhance employability and success in a doctoral program.

I- Core Courses

The Department of Chemistry offers a Master of Science Degree for students who have successfully completed a minimum of thirty credits (30 cr) of required courses provided that they satisfy the standards set by the University and the Faculty. The credits are distributed as follows:
I- Chemistry Courses
MS students are anticipated to successfully pass a minimum of four Advanced Level Chemistry courses, including three of the courses CHEM 300, 302, 304, and 306 mentioned below. These courses add up to twelve credits (12 cr) and aim to provide advanced knowledge in the main fields of Chemistry:

CHEM 300	Advanced Analytical Chemistry	3 credits
CHEM 302	Advanced Organic Chemistry	3 credits
CHEM 304	Advanced Physical Chemistry	3 credits
CHEM 306	Advanced Inorganic Chemistry	3 credits

II- Elective Courses

Students are requested to choose four elective courses that constitute a total of twelve credits **(12 cr)**. Such courses are selected from within or outside the Departement to suit the area of specialty that each student is pursuing in the Master's degree.

III- Master's Thesis (CHEM 399)

Upon enrollment in the Master's Program, each student will be assigned an advisor(s) to help plan and supervise the Master's thesis. The thesis accounts for six credits **(6 cr)** and can be done in collaboration with other local or foreign universities. Students will officially register for CHEM 399 at the last year of the Master's Program, however, throughout the two years of the program, research group seminars will be held including discussion, oral presentation, problem solving and reading of current literature pertinent to research interests. (Upon a recommendation from the Curriculum Committee in the Department, a student may substitute **CHEM 399** by a 3 cr. elective course and a 3 cr Master's project **CHEM 390)**.

1. A Master's thesis represents the experimental or theoretical research studies that are anticipated to be completed within one academic year. However, if needed, this period can be extended for another year.
2. A Master's project represents the experimental or theoretical research studies that are anticipated to be completed within one semester. However, if needed, this period can be extended for another semester.

SEMESTER 1

Course Code	Course Title	Credit
CHEM 300/302/304/306	Advanced Chemistry Course	3
CHEM 300/302/304/306	Advanced Chemistry Course	3
Elective 1		3
Total		**9**

SEMESTER 2

Course Code	Course Title	Credit
CHEM 300/302/304/306	Advanced Chemistry Course	3
CHEM 300/302/304/306	Advanced Chemistry Course	3
Elective 2		3
Total		**9**

SEMESTER 3

Course Code	Course Title	Credit
CHEM 399	Master's Thesis	6
Elective 3		3
Total		**9**

SEMESTER 4

Course Code	Course Title	Credit
CHEM 399	Master's Thesis continued	-
Elective 4		3
		3
Total credits		**30**

COURSE DESCRIPTIONS

CHEM 300 ADVANCED ANALYTICAL CHEMISTRY **3.0: 3 cr. E**

The course focuses on major separation techniques employed in chemistry, and illustrates the methodology applied for treating analytical data. Key issues will be covered in the areas of chromatography, extraction, electrochemical analysis and chemometrics. Optimization and qualification of several analytical tools will be also discussed.

CHEM 302 ADVANCED ORGANIC CHEMISTRY **3.0: 3 cr. E**

Pinacol, Tiffeneau–Demjanov, Favorskii, Wolff, Curtius, Hofmann, Beckmann, Wittig, Benzylic, Schmidt, Sigmatropic rearrangement, Cope, Claisen, Allylic reactions, Fragmentation.

CHEM 304 ADVANCED PHYSICAL CHEMISTRY **3.0: 3 cr. E**

The course is intended to provide the physical fundamentals of mass spectrometry (MS), nuclear magnetic resonance (NMR), X-ray diffraction (XRD) and interface chemistry. In-depth knowledge of these instruments, the interpretation of spectra and the applications (of such instruments) in different areas will be also revealed.

CHEM 306 ADVANCED INORGANIC CHEMISTRY **3.0: 3 cr. E**

The course is divided into two parts:

The major part builds on the undergraduate Inorganic Chemistry courses taken. It discusses in depth the chemistry of main group elements, organometallic compounds (properties and reactions), and the parallels between both chemistries. The main discussion is on the chemical and electronic properties, as well as reactivity of the two groups of inorganic compounds.

The second additional part introduces general concepts of Nanochemistry and Solid State/Materials Chemistry, as these represent core members of modern Inorganic Chemistry. The main discussion is on the structural and chemical properties of such composites.

CHEM 320 ADVANCED POLYMER CHEMISTRY **3.0: 3 cr. E**

New controlled polymerization methods for the synthesis of well defined materials. Some specialty polymers for future technologies (isomers, liquid crystals, active surfaces). Properties of common polymers in bulk. Crystallitic and aPmorphous polymers. Morphology. Mechanical, thermal and chemical properties. Polymer mixtures and composites. Soft polymer materials. Degradation and stabilizing of polymers.

CHEM 322 ADVANCED ORGANIC SYNTHESIS **3.0: 3 cr. E**

Heterocyclic compounds, Organo-metallic compounds in organic synthesis, homogenous and heterogeneous catalysis, protection of functional groups, enols and enones: Michael and Robinson reactions, clean synthesis.

CHEM 324 PHYSICAL ORGANIC CHEMISTRY **3.0: 3 cr. E**

Physical fundamentals of organic chemistry; thermodynamics, kinetics, molecular orbital theory, theory of concerted reactions, isotope effects, aromaticity, linear free energy relationships, acidity functions, photo- and free-radical chemistry.

CHEM 326 NUCLEAR CHEMISTRY **3.0: 3 cr. E**

Properties of nucleons and nuclei, nucleus models, radioactivity, nuclear reactions, nuclear fission, nuclear reactors, detection and measurement of activity, applications of radioactivity, elements of radiation chemistry.

CHEM 328 SURFACE CHEMISTRY AND CATALYSIS **3.0: 3 cr. E**

The structure of surfaces. Thermodynamics, dynamics and electrical properties of surfaces. The surface chemical bond. Catalysis by surfaces.

CHEM 330 ELECTROCHEMISTRY **3.0: 3 cr. E**

Principles of electrochemistry and their relation to the newer Electro-Analytical methods. Electrochemistry applied to heterogeneous and homogeneous processes, with emphasis on cyclic voltammetry and AC polarography. Use of the Laplace transforms and infinite different methods. Students explore the kinetics and thermodynamics of fast reactions by computer simulation of electrochemical data.

CHEM 332 LAB-ON-A-CHIP: A REVOLUTION IN NATURAL SCIENCES **3.0: 3 cr. E**

State-of-the-art technology. Miniaturization of analytical techniques and instrumentation. Theory and applications. Downsizing Chemistry by introducing microchips. Benefits of miniaturization. Types of microchips, basic concepts and novel components used to construct the microchips as well as their applications. Micro-fluidics. Miniaturized total-analysis systems. DNA Micro-Array Technology and its benefits.

CHEM 334 BIOCHEMICAL TECHNIQUES AND INSTRUMENTATION **3.0: 3 cr. E**

Theory and practice of advanced biochemical techniques. Topics may include buffer and reagent preparation, protein assay, protein purification, electrophoresis, enzyme kinetics, DNA isolation, and molecular visualization and modeling.

CHEM 336 CHEMISTRY AND BIOCHEMISTRY OF MACROMOLECULES **3.0: 3 cr. E**

The course covers the basic concepts of molecular biology intended for discussion on the application of molecular techniques in the analysis and understanding of macromolecules (DNA, RNA, Proteins) as well as their diagnosis.

CHEM 338 SUPRAMOLECULAR CHEMISTRY **3.0: 3 cr. E**

Starting from the basics, this course introduces the concepts as well as the historical development of supramolecular chemistry and its applications. The course will focus on the bottom up approach to prepare self-assembled nanomaterials by non-covalent interactions, which are employed in life chemistry as well as in potential industrial uses. The course also covers the most useful synthetic strategies to build such complex systems and the most practical techniques needed by supramolecular chemists.

CHEM 340 LIQUID CRYSTALS AND THEIR APPLICATIONS **3.0: 3 cr. E**

Liquid crystals combine the material properties of solids with the flow properties of liquids. They have provided new photonic applications from which the flat-panel liquid crystal displays technology (LCD). In this course, the fundamentals of liquid crystals science are introduced and explained revealing the different phases that can be generated and the different molecular architectures that affect liquid crystalline properties. The course also spotlights the various applications of the liquid crystalline materials (displays, memory devices, switches, lasers).

CHEM 342 MOLECULAR MODELING **3.0: 3 cr. E**

Molecular Modeling implies the use of methods of calculation (mechanic or semi-empirical) allowing the chemists to determine the chart of the geometry or the configuration of the atoms in a molecule and to evaluate some physical properties.

CHEM 344 SURFACE ANALYSIS: PRINCIPLES AND TECHNIQUES **3.0: 3 cr. E**

This course provides the chemist with the chief tools used to analyze surfaces, and thin films. The focus will be towards the principles, instrumentations and applications of such techniques based on electronic, ionic, and X-ray sources. Furthermore, microscopic methods, such as, scanning tunneling microscopy (STM), and atomic force microscopy (AFM) will be discussed.

THE MASTERS DEGREE IN CHRISTIAN-MUSLIM STUDIES

1- The Center for Christian-Muslim Studies is an institute of higher learning. It accepts graduate students from various fields of study, with a preference given to Arts and Social Sciences graduates.

2. Two years of study at the Center are required to obtain the M.A. in Christian-Muslim Studies, at the end of which the student writes a thesis.

3. The requirements for the MA, in Christian-Muslim Studies are: 24 credits (eight courses) + 6 credits for the thesis, for a total of 30 credits.

4. The Curriculum: The Curriculum consists of the following prerequisites and eight major courses.

Perquisites:

CHMS 210 Introduction to Christianity. **3.0: 3 cr. A/E**
This course presents a comprehensive introduction to Christianity, stressing the main points of its development throughout history. It introduces the students to the Gospels, the main themes of Christian doctrine, the Sacraments, the Church, the Fathers and the Ecumenical Councils, the various sects, and Monasticism.

CHMS 220 Introduction to Islam. **3.0: 3 cr. A/E**

This course is a comprehensive introduction to Islam and its main developments throughout history. It introduces the students to the Qur'an, the Hadith, the life of the prophet, the Five Pillars of Islam, the main points of Muslim theology, and Sufism.

Major Courses:

CHMS 313 BIBLICAL EXEGESIS **3.0: 3 cr. A/E**
This course studies the variety of the Biblical exegesis methods that have prevailed from early times until the present day. In this course, the students study the methodologies of exegesis as they developed in the main religious schools and according to the most famous exegetes like Origen and St. John Chrysostom, as well as in view of the most recent scientific theories of scriptural, literary and historical exegesis.

CHMS 321 QUR'ANIC EXEGESIS **3.0: 3 cr. A/E**
This course studies the various Qur'anic exegeses that have prevailed from ancient times till now. Also studied in this course are the methodology of Qur'anic Tafsir, its origins and rules in the different Islamic traditions or schools (madhahib) according to the main ancient and modern exegetes.

CHMS 330 HISTORY OF THE CHRISTIAN MUSLIM DIALOGUE IN THE ARAB CULTURAL REALM. **3.0: 3 cr. A/E**
This course studies the history of relations between the two monotheistic religions: Christianity and Islam. By analyzing their interaction between Christians and Muslims throughout history, this course studies texts and explores the modalities of cooperation and communication between these them.

CHMS 333 CHRISTIAN MUSLIM EMCOUTRERS IN THE LEBANESE CONTEXT. 3.0: 3 cr. A/E
The Christians and Muslims in Lebanon have engaged is a series of encounters with the aim of reaching a level of mutual openness, knowledge and trust needed to be able to engage in true dialogue. This course focuses on the major of all the interfaith events that took place in Lebanon and analyzes documents produced with special attention on the changes in the modalities and in the settings of these encounters.

CHMS 340 CHRISTNITY AND ISLAM IN THE ARABIC LITERATURE. 3.0: 3 cr. A/E
This course studies the influence of Christianity and Islam on the Arab Christian and Muslim writers. It studies and analyzes the main modern literary texts with special focus on religious metaphors, symbols, polemics and possible cross fertilizations.

FASS 300 RESEARCH METHODOLOGY / CHMS 300 APPROACHES TO CHRISTIAN MUSLIM DIALOGUE 2.1: 3 cr. A/E
This course includes two components: the research methodology that intends to familiarize the students with all the components of research where students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research and the approaches to Christian Muslim Dialogue. At the end of the course student will submit a research proposal.

CHMS 390 CHRISTANITY ISLAM AND CONTEMPORARY ISSSUES. 3.0: 3 cr. A/E

This course deals with the issues of Christian-Muslim dialogue in the context of contemporary social and political issues such as coexistence among the people of different religions, the relation between the religious and the socio-political spheres, democracy, the relation of religion to the everyday world, world civilizations: dialogue or clash, and other topics.

CHMS 345 PHILOSOPHY OF RELIGION. 3.0: 3 cr. A/E
This course focuses on the philosophical foundations of interreligious dialogue through studying the ideas and writings of the main schools of thoughts vis-à-vis philosophical approach to religious understanding.

GRADUATE PROGRAM IN COMPUTER SCIENCE

Chair of Division: Amine Bitar, Ph.D., Amine.Bitar@balamand.edu.lb

MASTER'S DEGREE IN COMPUTER SCIENCE OPTION INFORMATION SYSTEMS

Program Features

The primary goal of the program is to meet the increasing demand for knowledgeable personnel who possess a balanced combination of technical and managerial skills. The interdisciplinarity of the program and its integration of the different fields help reducing the training needed by the graduates. Upon completing the first year, the student has the choice of selecting one of two alternative paths: A Thesis (6 credits) or a Project (3 credits) with one elective (3 credits). The thesis option normally prepares students for doctoral studies or for a career with a more research-oriented flavor.

Objectives of the Program

1.Focus on organizational and managerial issues at the level of the enterprise as a whole in order to support an integrated view of the functional applications that meet business needs
2.Understand and evaluate how to align IS needs with the strategies and policies of the enterprise
3.Manage the IS functions as they relate to the enterprise's policy and strategies on a day-to-day basis
4.Prepare students with both the domain knowledge and practical competencies to compete in the ever-changing technical landscape of information system business requirements

Career Prospects

Graduates of this program are expected to fill a growing demand for professional IT managers who have the technical knowledge, business acumen, and management skills to deliver IT solutions in a rapidly changing business environment.

MASTER'S DEGREE IN COMPUTER SCIENCE OPTION SOFTWARE ENGINEERING

Objectives of the Program

1.Students will become successful professionals able to gain employment and/or to be accepted into a Computer Science Ph.D. program.
2.Provide students with a combination of theory and practice to develop a solid understanding of the fundamentals of software systems as well as a working knowledge of the many languages, methods and systems used in the field.
3.Help to advance to senior managerial and executive positions or become successful entrepreneurs in the field as professional computer software engineers.
4.An ability to understand the fundamental questions relevant to state of research in sub-disciplines related to software engineering.

Learning Outcomes of the Program

1.Demonstrate an understanding of advanced knowledge of the practice of software engineering, from vision to analysis, design, validation and deployment.
2.Be able to tackle complex engineering problems and tasks, using contemporary engineering principles, methodologies and tools.

3.Be able to demonstrate leadership and the ability to participate in teamwork in an environment with different disciplines of engineering, science and business.
4.Be able to advance successfully in the engineering profession, and sustain a process of life-long learning in engineer or other professional areas.
5.An ability to advance the field in the core subject areas through the production of new software, algorithms, and models.
6.Be able to communicate effectively, in both oral and written forms.
7.Successfully adapt to evolving technologies throughout their professional careers.

Career Prospects

Graduates of this program are expected to fill the continuous demand for good software engineers on the world job market. This demand for software engineers will increase as computing continues to grow and more software engineers will be needed to implement, safeguard, and update systems and resolve problems. Because the program is oriented to high quality software and good knowledge of recent advanced methods, opportunities for graduates to find a job are extensive.

MASTER'S DEGREE IN COMPUTER SCIENCE OPTION HEALTH INFORMATION SYSTEMS

Program Features

The complexity of health information is growing and giving rise to the need for a new health care profession which is based totally on information and accordingly comes as an the intersection of information science, computer science, and health care. The main concentration is on the resources, devices, and methods required to optimize the acquisition, storage, retrieval, and use of information in health care organizations. The program of MS in Computer Science option Health Information Systems is designed to provide the correct coursework and training as to prepare qualified professionals in this multidisciplinary field.

Learning Outcomes

1. Acquire an understanding of the functional areas of information systems with emphasis on health information systems
2. Show an understanding of the legal and social environment of the health care industry
3. Demonstrate an understanding of the ethical obligations and responsibilities of information handling in health informatics
4. Demonstrate an understanding and appreciation of the use of computerized information systems in health care, and the ability to effectively work with these systems
5. Acquire knowledge about basic health informatics including: electronic health, medical records, Telemedicine, medical imaging, standards, patient privacy and security issues
6. Achieve an integration of the necessary clinical, technical and leadership skills common in the health care delivery sector
7. Demonstrate the ability to develop strategy, create policy and assist in decision making
8. Exhibit the ability to analyze and assess information systems and solutions
9. Prove an ability to manage the setup and changes of applications taking into consideration the organizational, clinical and technology structures of the health care delivery system.

Career Prospects

Specialists in Health Information Systems are expected to work in governmental agencies, hospitals, clinics, health insurance companies, medical software firms, health information technology suppliers, consulting organizations and more.

MASTER'S DEGREE IN COMPUTER SCIENCE
OPTION INFORMATION SYSTEMS

SEMESTER 1

Code	Course Title	Credit
CSIS 322	IT Infrastructure	3
CSIS 374	Advanced Database Applications	3
MATH 340	Multivariate Statics	3
Total		**9**

SEMESTER 2

Code	Course Title	Credit
CSIS 376	Human-Computer Interaction	3
CSIS 379	Emerging Technologies and Issues	3
CSIS 3**	Elective	3
	Elective	3
Total		**12**

SUMMER TRAINING

Eight (8) weeks of field experience in a company ending with a report

PATH 1

SEMESTER 3

Code	Course Title	Credit
CSIS 377	Enterprise Information Systems	3
CSIS 390	Master's Project	3
	Elective	3
Total		**9**

PATH 2

SEMESTER 3

Code	Course Title	Credit
CSIS 337	Enterprise Information Systems	3
CSIS 399	Master's Thesis	6
Total		**9**

SEMESTER 4

Code	Course Title	Credit
CSIS 399	Thesis (Continued)	-
Total credits		**30**

MASTER'S DEGREE IN COMPUTER SCIENCE
OPTION SOFTWARE ENGINEERING

SEMESTER I

Code1	Course Title	Credit
CSIS 305	Distributed Programming	3
CSIS 313	Software Modeling and Architectural Design	3
CSIS 378	Formal Methods and Models in Soft. Eng.	3
	Elective	3
Total		**12**

SEMESTER II

Code	Course Title	Credit
CSIS 374	Advanced Database Applications	3
CSIS 375	Software Engineering Management	3
CSIS 376	Human-Computer Interaction	3
Total		**9**

SUMMER TRAINING

Eight (8) weeks of field experience in a software company ending with a report

SEMESTER III

Code	Course Title	Credit
CSIS 322	IT Infrastructure	3
CSIS 390	Master's Project	3
CSIS 3**	Elective	3
Total		**9**
Total credits		**30**

MASTER'S DEGREE IN COMPUTER SCIENCE
Option HEALTH INFORMATION SYSTEMS

Bridging Courses (Depending on the student's case)

CSIS 245	Seminar in Computer Programming
CSIS 246	Survey of Telecommunications and Computer Networks
CSIS 247	Survey of Database Systems and Technologies
CSIS 3**	Elective

SEMESTER 1

Code	Course Title	Credit
BIOL 303	Quantitative Analysis and Biostatistics	3
CSIS 333	Survey of Clinical Activities	3
	OR	
CSIS 337	Health Care Information Technology	3
CSIS 334	Health Care Enterprise & Systems	3
CSIS 374	Advanced Database Applications	3
Total		**12**

SEMESTER 2

Code	Course Title	Credit
CSIS 335	Health Informatics	3
CSIS 339	Health Information Technology Management	3
CSIS 373	Information Systems Policy	3
Total		**9**

SUMMER TRAINING

CSIS 391	Internship	3

PATH 1
SEMESTER 3

Code	Course Title	Credit
CSIS 390	Master's Project	3
CSIS 3**	Elective	3
Total		**9**

PATH 2
SEMESTER 3

Code	Course Title	Credit
CSIS 399	Thesis	6
Total		**9**

SEMESTER IV

Code	Course Title	Credit
CSIS 399	Thesis (Continued)	0
Total credits		**30**

COURSE DESCRIPTIONS

CSIS 305 DISTRIBUTED PROGRAMMING **3.0: 3 cr. E**
This course aims to develop an in-depth understanding of both the programming tools and the paradigms necessary to develop complex distributed systems. It covers the fundamental concepts and techniques of distributed programming needed to build reliable, scalable, and highly flexible and dynamic distributed computing framework with emphasis on systems-level technologies that create a homogeneous view of the network. The model introduced in this course leverages the student's ability, as a programmer, to safely move code during runtime and make it possible to add new services or devices with minimum configuration requirements.

CSIS 310 REAL-TIME COMPUTATIONS **3.0: 3 cr. E**
Software design in real-time systems, software design methods, verification and validation of real-time systems, real-time structured analysis and design, applications of real-time systems, steps for applying real-time systems, design of interactive and distributed systems with real-time methods. Parallel computations.

CSIS 311 ADVANCED COMPILER CONSTRUCTION **3.0: 3 cr. E**
Advanced topics in the design and implementation of programming language translators. Data flow analysis and optimization, code generation and register allocation, attribute grammars and their evaluation, translation within programming environments, and the implementation of advanced language features.

CSIS 312 ADVANCED COMPUTER ARCHITECTURE **3.0: 3 cr. E**
A quantitative study of RISC architecture. Advanced pipelining and instruction-level parallelism (ILP): Hazards detection, and solutions such as using dynamic scheduling, dynamics hardware, prediction and compiler support for exploring ILP. Memory-hierarchy design: cache issues and virtual memory. Multiprocessors.

CSIS 313 SOFTWARE MODELING AND ARCHITECTURAL DESIGN **3.0: 3 cr. E**
Concepts and methods for the architectural design of large-scale software systems. Fundamental design concepts and design notations are introduced. Several design methods are presented and compared. In-depth study of object-oriented analysis and design modeling using the Unified Modeling Language (UML) notation.

CSIS 320 ADVANCED OPERATING SYSTEMS **3.0: 3 cr. E**
This course explores both advanced topics and in-depth design and analysis of operating systems concepts. Advanced topics may include security and access control, object and capability-based systems, multiprocessor support, and fault-tolerant systems, transaction processing systems, and distributed operating systems. Laboratory sessions include programming and modification of operating systems components.

CSIS 321 COMPUTER NETWORKS: ARCHITECTURE & PROTOCOL **3.0: 3 cr. E**
The course introduces the design of protocols for error recovery, reliable delivery, routing, and congestion control, store-and-forward networks, satellite networks, local-area networks, and locally distributed systems. Case studies of networks, protocols, and protocol families. Emphasis is on software design issues in computer communication. In addition, students are exposed to fundamental knowledge and hands-on exercise of the UNIX networking software design and in-depth client/server applications development.

CSIS 322 IT INFRASTRUCTURE **3.0: 3 cr. E**
The course aims at enabling the students to develop an integrated technical architecture (hardware, software, networks, and data) to serve organizational needs in a rapidly changing competitive and technological environment. Topics covered comprise telecommunications fundamentals including data, voice, image, and video. The concepts, models, architectures, protocols, standards, and security for the design, implementation, and management of digital networks, server architectures, server farms, cluster computing, and grid computing, Storage area networks and network attached storage, data center design and implementation.

CSIS 324 TELECOMMUNICATION SYSTEM PRINCIPLES 3.0: 3 cr. E
This course with its integrated lab gives Computer Science students the understanding of both analog and digital communication principles in general and their direct applications on networking devices and systems. Different signaling, coding, and transmission methods will be demonstrated in the lab.

CSIS 325 DATA COMMUNICATION & TELECOMMUNICATIONS 3.0: 3 cr. E
Data communications, networks and protocols are discussed in this course. Topics include networks and protocols as well as the integration of those networks, the protocols used for signaling in the telecommunication networks. It aims to make the students familiar with the principal signaling protocols implemented in the general telecommunication networks.

CSIS 326 TELECOMMUNICATION PROTOCOLS 3.0: 3 cr. E
This course is directed towards the protocols used for signaling in the telecommunication networks and uses the GSM network as an example. It aims to make the students familiar with the principal signaling protocols implemented in the general telecommunication networks. The main signaling protocols covered are ISDN, SS7, ATM and WAP.
Prerequisite: CSIS 325 or advisor's permission.

CSIS 327 NETWORK PROGRAMMING 3.0: 3 cr. E
This course gives the students a fundamental knowledge and hands-on exercise of the UNIX networking software design and client/server applications development. Topics include the TCP/IP model, UNIX model, communication protocols, Berkeley sockets, Unix transport layer interface (TCP & UDP), client and server software design, introduction to Remote Procedure Calls, and network applications development.

CSIS 329 NETWORK MANAGEMENT & SECURITY 3.0: 3 cr. E
This course is an introduction to network management and security. Topics include TMN concepts such as what is TMN, different TMN architectures, interfaces and reference points, as well as management protocols used in TMN such as ACSE, CMISE, SNMPv1, SNMPv2, and SNMPv3. Topics related to computer security will be also covered like encryption, digital signatures, s-http, ssl, Kerberos, and firewall.

CSIS 332 PARALLEL PROGRAMMING 3.0: 3 cr. E
This course examines how to program parallel processing systems. Various parallel algorithms are presented to demonstrate different techniques for mapping tasks onto parallel machines. Parallel architectures to be considered are: SIMD (synchronous), MIMD (asynchronous), and mixed-mode (SIMD/MIMD hybrid). Emphasis will be on MPI parallel programming language.

CSIS 333 SURVEY OF CLINICAL ACTIVITIES 3.0: 3 cr. E
This course provides an introduction to the clinical environment throughout the health center. It is designed for students not previously involved in clinical medicine. The course features traditional health informatics task domains and covers medical terminology and basic pathophysiology. Topics include the clinical setting, eliciting information from patients, synthesizing the history and physical examination, establishing diagnosis, treatment planning, integrating evidence-based medicine, and using an intelligent medical record in a complex environment.

CSIS 334 SURVEY OF HEALTH CARE ENTERPRISE & SYSTEMS 3.0: 3 cr. E
This course covers the components of the health care system, including the government's role in health care, health industry management, cost and quality issues, managed care, reimbursement mechanisms, legal and regulatory issues, profit vs. nonprofit care, the role of technology and technology assessment. It also takes account of a number of management issues including patient access services, ambulatory care, clinical practice and organization, nursing services, managing facilities and resources, personnel and staffing, and finance.

CSIS 335 HEALTH INFORMATICS **3.0: 3 cr. E**

This course is a survey of fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, knowledgebase systems, decision theory and decision support, human-computer interfaces, systems integration, and digital library. Specific applications such as pathology, radiology, psychiatry, and intensive care are also discussed. Legal, ethical, and social issues in health care informatics in order are tackled including: privacy and security, fraud and abuse, confidentiality, antitrust law, intellectual property, disclosure, and compliance programs.

CSIS 337 HEALTH CARE INFORMATION TECHNOLOGY **3.0: 3 cr. E**

This course provides the details of standards and interoperability of both health care technology and nonmedical standards. Discussions include multi-institutional issues and telemedicine, e-commerce, and standards compliance. Telemedicine and MHealth systems are highlighted.

CSIS 339 HEALTH INFORMATION TECHNOLOGY MANAGEMENT **3.0: 3 cr. E**

The course deals with management issues including: routine procedures, acquiring and assessing new medical technology, from both point of views of service provider and customer. Also covered in detail: cost analysis and justification, economic models, capital purchase, leasing strategies, the application service provider or risk-sharing model, purchase agreements and contracts, writing an RFP, analyzing a RFP response, and the industry business trends.

CSIS 350 DIGITAL IMAGE PROCESSING **3.0: 3 cr. E**

Image acquisition and storage. Imaging geometry: transformations and camera models. Image transforms: Fourrier transform FT and FFT. Image enhancement: in frequency domain and spatial domain (filtering). Image restoration. Image compression. Image segmentation.

CSIS 351 ADVANCED COMPUTER GRAPHICS **3.0: 3 cr. E**

Morphing. 3D graphics. Bezier and B-Spline modeling surfaces. Hidden surface elimination algorithms (Painter algorithm, Robert algorithm, Z-buffer algorithm). Color theory, illumination, and shading models. Rendering. Texture. Introduction to ray tracing. Virtual Reality.

CSIS 352 COMPUTER VISION **3.0: 3 cr. E**

Introducing fundamental techniques for low-level and high-level computer vision. Examining image formation, early processing, boundary detection, image segmentation, texture analysis, shape from shading, photometric stereo, motion analysis via optic flow, object modeling, shape description, and object recognition. Models of human vision, subjective contours, visual illusions, apparent motion, mental rotations, and cyclopean vision.

CSIS 353 COMPUTER SIMULATION **3.0: 3 cr. E**

Introduction to simulation and examples. General principles and programming languages. Statistical models in simulation. Queuing models. Random number generation. Input modeling. Input data analysis. Verification and validation of simulation models. Output analysis for a single model. Alternative system designs. Virtual reality.

CSIS 355 MULTIMEDIA COMMUNICATIONS **3.0: 3 cr. E**

This course provides an overview of enabling multimedia communications technologies with a goal of better understanding the Internet's support for popular applications. Core topics will include voice over IP, media server architectures and enabling speech technologies, media server control interfaces, session control protocols, and multimedia applications support. In addition to the technologies covered, the course will provide insight to the commercial application of such technologies through consideration of market drivers and industry trends. Students taking the course will gain practical experience of developing applications using such technologies and enjoy exposure to a host of established and emerging Internet protocols.

CSIS 360 EXPERT SYSTEMS 3.0: 3 cr. E
Symbolic computation. Knowledge representation formalisms. Associative nets and frame systems. Logic and inference. Automated reasoning. Heuristics. Representing Uncertainty. Quantitative models of plausible inference. Knowledge acquisition.

CSIS 361 ADVANCED ARTIFICIAL INTELLIGENCE 3.0: 3 cr. E
Foundational issues in the construction of intelligent machines. The first half of the course covers forms of inductive inference, including machine learning, Bayesian networks, speech perception, machine vision, discussion of simulated annealing and genetic algorithms as optimization techniques for inductive inference. The second half covers deductive inference including reasoning from constraints, automated theorem proving, syntax and semantics of natural language, and the relationship between language and reasoning.

CSIS 362 NEURAL NETWORKS 3.0: 3 cr. E
Neural dynamics: architecture and signals, activation model, unsurprised learning, surprised learning, architectures and equilibrium. The Hopfield model and recurrent networks. The self- organizing map. Adaptive resonance theory.

CSIS 363 OPTIMIZATION THEORY AND STOCHASTIC PROCESSES 3.0: 3 cr. E
This course covers various methods in optimizations: Deterministic models, probabilistic models, and non-linear models. It discusses the concept of stochastic theory, Queuing systems, and Markov processes.

CSIS 364 NATURAL LANGUAGE & SPEECH PROCESSING 3.0: 3 cr. E
This course is an introduction to computational linguistics and Speech. It requires the ability to program and assumes the student is familiar with basic computer science terminology. The course will be covering traditional foundations of computational linguistics areas such as finite-state methods, context-free and extended context-free models of syntax, parsing, and semantic interpretation; basics of more recent corpus-based and stochastic methods such as n-gram models, hidden Markov models, probabilistic grammars, and statistical methods for word sense disambiguation; traditional foundations of Speech Processing, computational phonology, models of pronunciation and spelling, text to speech and speech recognition; and some selection of application areas from among such topics as information retrieval, machine translation, computational psycholinguistics, and computational lexicography. Concepts taught in class will be reinforced in practice by hands-on programming assignments.

CSIS 370 DISTRIBUTED DATABASE SYSTEMS 3.0: 3 cr. E
This course discusses the concept of distributed databases and handles data distribution, distributed query optimization and transaction concurrency control. It also deals with recovery, integrity, and security in distributed databases. In addition, it covers the concepts of next generation databases such as object-oriented databases, expert, and multimedia systems.

CSIS 371 SOFTWARE TESTING, VERIFICATION & VALIDATION 3.0: 3 cr. E
Software quality and diversity. Specification and design. Unit testing, including testing and its relationships to specifications, structural testing, error-oriented testing and analysis, and managerial aspects of unit testing and analysis. Verification and validation, including objectives, theoretical limitations, integration and systems testing, regression testing, simulation and prototyping, requirements tracing, proof of correctness, code reviews, and planning for verifications and validation. Formal verification methods including Hoare logic, weakest preconditions and others.

CSIS 372 DATA-FLOW ARCHITECTURE & LANGUAGES 3.0: 3 cr. E
The data-flow model as a basis for the design of parallel systems. Static and dynamic data-flow graphs. Implicit parallel programming using functional languages and their extensions. Higher-order functions, non-strictness, polymorphism. Nondeterministic programming and resource managers. Operational semantics and term rewriting systems. Optimizations and static analysis. Compiling into data flow graphs. Cryptography and computer security: design and use of cryptographic systems and cryptanalytic attacks; a history of cryptographic systems and the mathematics behind them; shift register sequences; random number generators: DES, public systems, and theft applications.

CSIS 373 INFORMATION SYSTEMS POLICIES 3.0: 3 cr. E
The course is intended to provide a layout of the IS policies foundation and the major areas they address. The course covers the process of starting, writing and maintaining the policies. Topics include: determination of policy needs, physical security, authentication and network, Internet, Email, viruses, encryption, software development, and acceptable use policies.

CSIS 374 ADVANCED DATABASE APPLICATIONS 3.0: 3 cr. E
This course handles the different aspects of data warehousing and data mining, data warehouse building, the difference between data warehouses and OLTP systems, the business requirements to build a data warehouse, information analysis: OLAP and ROLAP, star schema design and its variants.

CSIS 375 SOFTWARE ENGINEERING MANAGEMENT 3.0: 3 cr. E
The objective of this course is to provide a well-engineered software development process from software requirements and specification towards software delivery through system modeling, requirement specification, software design, software validation, and programming techniques and tools. Project planning and scheduling as well as software quality assurance for software development will be also discussed.

CSIS 376 HUMAN-COMPUTER INTERACTION 3.0: 3 cr. E
The course presents the techniques facilitating effective human-computer interaction including the basic elements, procedures, tools, and environments contributing to the development of a successful user interface. Design principles, guidelines, and methodologies for building, installing, managing, and maintaining interactive systems that optimize user productivity are reviewed. Topics include the multidisciplinary dynamics of human-computer interaction, current and projected developments in HCI research, usability engineering, computer-supported cooperative work, and strategies for implementing and evaluating human-computer dialogues.

CSIS 377 ENTREPRISE INFORMATION SYSTEMS 3.0: 3 cr. E
In this course, emphasis will be placed on the concept of enterprise data management solutions that include all the tools used in the corporate context to handle the company's information. Focus is placed on the systems integration issue with the aim of a comprehensive management of the company. Topics discussed in the course include, but are not limited to: integration approaches and trends, process management, workflows, business process management, and knowledge management.

CSIS 378 FORMAL METHODS AND MODELS IN SOFT. ENG. 3.0: 3 cr. E
Formal mechanisms for specifying, validating, and verifying software systems. Program verification through Hoare's method and Dijkstra's weakest preconditions. Formal specification via algebraic specifications and abstract model specifications, including initial specification and refinement towards implementation. Integration of formal methods with existing programming languages, and the application of formal methods to requirements analysis, testing, safety analysis, and object-oriented approaches.

CSIS 379 EMERGING TECHNOLOGIES AND ISSUES **3.0: 3 cr. E**

This course addresses emerging technologies, how they evolve, how to identify them and the effect of international, political, social, economic and cultural factors on them. Topics covered in the course include accuracy of past technology forecasts, how to improve them, international perspectives on emerging technologies, future organizational and customer trends, and forecasting methodologies including monitoring, expert opinion, trend analysis and scenario construction.

CSIS 380 ADVANCED THEORY OF COMPUTATION **3.0: 3 cr. E**

Computational complexity, abstract complexity, NP and PSPACE completeness, polynomial hierarchy, cryptography, Kolgomorov complexity, parallel algorithms, and random algorithms.

CSIS 381 SOFTWARE EVOLUTION **3.0: 3 cr. E**

This course introduces the problems and solutions inherent in developing large software systems, and aims to make students aware of the challenges of maintenance and evolution of software systems, and provides a working understanding of some of the techniques and best practices in use for changing software safely. Students work in groups on projects.

CSIS 382 SEARCH ENGINES AND INFORMATION RETRIEVAL **3.0: 3 cr. E**

This course is to prepare the student for a complete treatement of web search engines, by acquiring deep knowledge of the foundation, principles, elements, ranking, crawling, content analysis and detection, and query models. In addition, students are exposed to practical experience and the state-of-the-art research and future trends through a set of papers and projects.

CSIS 390 MASTER'S PROJECT **3.0: 3 cr. E**

Under exceptional circumstances, or in response to specific opportunities in the industry, students may be advised to complete a Master's Project instead of the Thesis. In such case, the student will complete the 3 credit balance with a course chosen from the list of department electives or the courses available in the Faculty. A Project should be completed within one academic semester, but may be extended over one additional semester.

CSIS 391 INTERNSHIP **3.0: 3 cr. E**

The internship course is designed to enhance the learning experience through reflection and critical analysis of the work environment that involves healthcare delivery, public health, management, health or medical education, planning or research. Students are expected to earn credit for learning, not just for working. Internship should be for 8 weeks (minimum 160 hours) and when finished, the student will submit a report evaluated by both the department and the host organization.

CSIS 399 MASTER'S THESIS **6 cr. E**

The research part of the MSc program is represented by the thesis which is undertaken with the supervision of a full-time Faculty member. A thesis must embody original research and is defended before a Jury, upon completion of the research work. The thesis must be completed within two regular semesters, but may be extended for two additional semesters.

ISYS 330

Refer to the Faculty of Business and Management.

MATH 340

Refer to the Department of Mathematics.

DEPARTMENT OF EDUCATION

Chair of Division : Maureen Nicolas, Ph.D., maureen.nicolas@balamand.edu.lb

MASTER OF ARTS IN EDUCATION

CURRICULUM AND EDUCATIONAL MANAGEMENT

Objectives:

This degree to develop future curriculum and instructional supervisors for schools. This program of study allows present educators to develop their career by moving from teaching to the larger and broader skills of curriculum supervision and enhancement. Students will be prepared to lead innovative educational processes within the larger domains of educational cycles or discipline units, as well as competitively apply for jobs as curriculum consultants in the governmental and non-governmental domains.

Program Learning Outcomes:

- Demonstrate effective, advanced communication in academic and professional settings.
- Apply technology-integration frameworks and use learning technologies to promote innovation and enhance learning environments.
- Analyze and design assessment(s) to evaluate effective teaching and learning.
- Develop and implement instructional methods based on pedagogical models and learning theories.
- Design and conduct various types of research in an ethical manner to reform educational practice.
- Critically reflect on practices of teaching and learning for the continuous improvement of professional practice and learning environments
- Evaluate national and international curriculum frameworks based on major curriculum theories on philosophies
- Design curricula that nature the organizational culture on both micro and macro levels.

REQUIRED COURSES

4 Core Courses (These 4 courses are in common with the MA in Educational Technology and the MA in English Language Teaching)
FASS 300 Research Methodology
EDUC 331 Advanced Instructional Methodology
EDUC 340 Technology Integration in Education
EDUC 352 Evaluation and Assessment

4 Emphasis Courses + a research thesis
EDUC 320 Curriculum Management
EDUC 353 The Analysis of Resources
EDUC 392 Seminar on Educational Management
EDUC 399 Thesis
EDUC ??? A department elective

COURSE DESCRIPTION

EDUC 320 CURRICULUM MANAGEMENT: PHILOSOPHY OF EDUCATION ACROSS LEVELS AND SUBJECTS **3.0: 3 cr. E/F**

In this course students will follow the coherence and structure of curriculum objectives and intended learning outcomes from the pre-school to secondary levels. The students will study how acquisition of knowledge and competencies are linked from one level to the other and from one subject to the other. Students will be asked to analyze and compare curricula of different subjects and different levels.

EDUC 331 ADVANCED INSTRUCTIONAL METHODOLOGY **3.0: 3 cr. E/F**

This course focuses on the different classroom methodologies and their coherence with curriculum choices. Students will be asked to recommend methodologies that can be used to enhance learning across disciplines. Special attention will be given to adapting different methodologies used in the inclusion of special needs students and multilevel teaching.

EDUC 340 Technology Integration in Education **3.0: 3 cr. E/F**

In this course, students will be introduced to instructional theory and its application to technology. Principles and issues concerning the appropriate use of technologies are also discussed. Students will critically analyze existing technologies taking into consideration instructional theory. They will apply the instructional theory related to technology to a real life learning problem/topic. Finally, they will describe the strengths and limitations of educational technology and articulate a personal philosophy of how technology should be used in schools.

EDUC 341 Theories of Learning in Education Technology **3.0: 3 cr. E/F**

This course introduces various active learning strategies such as project learning, problem solving, collaborative learning and technology trends applicable to the design, development and integration of technology-based instruction. Students will conduct basic and applied research related to technology integration and implementation. The course is a comprehensive introduction to technology through using a technology oriented delivery that exposes students to much of the technology taught throughout the program

EDUC 352 EVALUATION AND ASSESSMENT **3.0: 3 cr. E/F**

In this course evaluation and assessment will be approached not only as a summative outcome but will be understood to transparently assess elements which directly reflect school vision, aims and students' performance and progress. Students will analyze and construct evaluation and assessment tools which are directly related to course and school-level intended learning outcomes. Special attention will be given to evaluation and assessment of interdisciplinary projects.

EDUC 353 THE ANALYSIS OF RESOURCES **3.0: 3 cr. E/F**

This course will begin with the philosophical and theoretical decisions used in the selection of textbooks and other materials. Students will be asked to critique resource choices in direct comparison with school aims and curriculum as a whole. By the end of the course, students will evaluate resource choices across different levels within a school in relation to the intended learning outcomes and to the chosen teaching methodologies.

EDUC 392 SEMINAR ON SCHOOL MANAGEMENT **3.0: 3 cr. E/F**

This course serves as an introduction to the different roles and functions of school management and introduces students to the difference between management and leadership. The course emphasizes practices in managing teacher development through exposure to professional development strategies and managing organizational culture through constructing behavior intervention strategies at all levels throughout a school. Students will be provided with a theoretical framework for these key management issues and apply them to specific case students.

This course is equivalent to ENGL 348 or to FREN 358.

EDUC 399 MASTERS THESIS **6cr. E/F**

The master's thesis should represent a culmination of knowledge on curriculum and instruction. Students must demonstrate the ability to conduct empirical research that investigates relevant problematic or issue using ethical and scientific research techniques.

FASS 300 RESEARCH METHODS **3.0: 3 cr. E/F**

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course students will submit a research proposal.

EDUCATIONAL TECHNOLOGY

The Master of Arts in Educational Technology is a project-based graduate program that prepares educational professionals to use information and communication technologies to support teaching and learning. Students will be introduced to theories, methodologies, methods and techniques used to design and develop multimedia instructional products as well as introduced to educational theory that supports the use of technology in the teaching and learning process. The graduates from this program can apply for jobs as technology coordinators or administrators, teacher leaders, instructional technologists and curriculum integration specialists.

Program Learning Outcomes:

- Demonstrate effective, advanced communication in academic and professional settings.
- Apply technology-integration frameworks and use learning technologies to promote innovation and enhance learning environments.
- Analyze and design assessment(s) to evaluate effective teaching and learning.
- Develop and implement instructional methods based on pedagogical models and learning theories.
- Design and conduct various types of research in an ethical manner to reform educational practice.
- Critically reflect on practices of teaching and learning for the continuous improvement of professional practice and learning environments.
-Analyze and use a variety of instructional design models to conduct a full instructional design process.
- Evaluate technology-supported learning environments.
- Create effective digital instructional materials and online learning environments.

COURSES THAT COMPRISE THE PROGRAM

4 Core courses (these courses are common to the MA in Curriculum and Educational Management and to the MA in English Language Teaching)
FASS 300 Research Methodology
EDUC 340 Technology Integration in Education
EDUC 352 Evaluation and Assessment
EDUC 331 Advanced Instructional Technology

6 Emphasis courses
EDUC 341 Theories of Learning in Educational Technology
EDUC 342 Instructional Design
EDUC 344 Designing Multimedia
EDUC 343 Seminar in Online Teaching & Learning
EDUC 345 Emerging Learning Technologies
EDUC 349 Internship and Final Project

COURSE DESCRIPTION

EDUC 331 ADVANCED INSTRUCTIONAL METHODOLOGY **3.0: 3 cr. E/F**

This course focuses on the different classroom methodologies and their coherence with curriculum choices. Students will be asked to recommend methodologies that can be used to enhance learning across disciplines. Special attention will be given to adapting different methodologies used in the inclusion of special needs students and multilevel teaching.

EDUC 341 THEORIES OF LEARNING IN EDUCATIONAL TECHNOLOGY **3.0: 3 cr. E/F**

This course introduces students to the different learning paradigms (Behaviorism, Cognitivism, Constructivism, and Connectivism) and their corresponding models and strategies as they relate to the field of instructional technology and design. As a result of this exposure to different learning theories, students will create an Instructor Guide to demonstrate the application of the learned strategies to a lesson or a module.

EDUC 342 INSTRUCTIONAL DESIGN **3.0: 3 cr. E/F**

In this course students will explore theories of designing instruction and will focus on a variety of instructional design models such as the ADDIE model and will be introduced to recent contributions from cognitive science and related fields. Through this foundation students will be able to discern what model is best for a particular context, audience, and content. Through the identification of an instructional problem students will learn how to implement an instructional needs assessment, analyze situational characteristics, and prepare appropriate assessment instruments and procedures. Students will investigate various Learning Technologies and methods to be able to select appropriate instructional media for the instructional situation. Students will be able to write fitting objectives for specific content and outcome levels and categorize them using an appropriate schema or taxonomy. Students will also explore the role of instructional designers defining the tasks and responsibilities of on-line course developers.

EDUC 343 SEMINAR IN ONLINE TEACHING AND LEARNING **3.0: 3 cr. E/F**

This course is evenly divided between theoretical and practical exploration of the fast growing field of distance and on-line learning. Students explore all aspects of distance learning including interactivity, course design, on-line teaching strategies, global and regional trends, and the various multimedia and Internet-based technologies needed for planning, implementing, and evaluating distance education programs. Based on content standards and instructional design models students will create complete distance or on-line learning lessons including lectures, assessment activities, interactive multi-media content and supplemental materials for various grade levels using different mediums such as CD, website, other web-tools, Wiki, and learning management systems and MOOCS. Pre-requisites EDMM 310 and 311

EDUC 343 SEMINAR IN ONLINE TEACHING AND LEARNING **3.0: 3 cr. E/F**

This course will introduce students to the literature to the role of multimedia (audio, images, and video) in teaching and learning. This course will also help students explore and develop expertise with the various audio, video creating and editing, and image editing programs and techniques available for constructing and editing multimedia. By the end of this course, students will be able to produce multimedia to create presentations and supplementary materials for instructional and professional purposes.

EDUC 345 EMERGING LEARNING TECHNOLOGIES **3.0:3.cr.E/F**

In this course, students will explore social software and Web 2.0 tools. The focus will be on the pedagogical use of social media and its application in the field of education. Students will be introduced to different social media tools, analyze their use, and apply them to learning environments. At the end of the course, students will create a social media strategy for a learning environment of their choice to promote networked learning.
Pre-requisites: EDMM 310, 311 and 336

EDUC 349 INTERNSHIP AND FINAL PROJECT **3.0:3 cr. E/F**

This is the final course in the MA Educational Technology program. It will guide students to develop their comprehensive MA ePortfolio. It will also guide them to select a location for an Internship in Instructional Design and Technology. Students in this course will reflect on their overall experience in the MA program and in the internship in particular.

EDUC 352 EVALUATION AND ASSESSMENT **3.0:3 cr. E/F**

In this course evaluation and assessment will be approached not only as a summative outcome but will be understood to transparently assess elements which directly reflect school vision, aims and students' performance and progress. Students will analyze and construct evaluation and assessment tools which are directly related to course and school-level intended learning outcomes. Special attention will be given to evaluation and assessment of interdisciplinary projects.

FASS 300 RESEARCH METHODS **3.0: 3 cr. E/F**

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course students will submit a research proposal.

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Chair of Division: Omar Adra. Ph.D., omar.adra@balamand.edu.lb

The Department of English Language and Literature offers 2 master programs:

- A Master of Arts in English Language Teaching (ELT), thesis and non-thesis tracks
- A Master of Arts in English Language and Literature

MASTER OF ARTS IN ENGLISH LANGUAGE TEACHING (ELT)

MISSION STATEMENT

The mission of the MA ELT Program is to prepare English language teachers in Lebanon and the Arab region by providing specialist training and research opportunities. The wide-ranging program equips students with the skills for advanced research and key employment positions. It also offers opportunities to link theory with both practice and research.

DESCRIPTION OF THE PROGRAM

The Department of English Language and Literature offers a Master of Arts degree in English Language Teaching to students, who successfully complete twenty four credits of course work, and complete a Masters thesis or a field project for the non-thesis professional track. The applicants to this program should normally hold a Bachelor degree. The Department reserves the right to ask applicants to take additional courses to make up for deficiencies in undergraduate preparation.

The program consists of 30 credits, 24 credits of course work and 6 credits for thesis or project. The course work is comprised of 7 required courses and 1 elective course chosen by the department. Students normally take two courses each semester. The second semester includes a research methodology course that prepares the students to begin work on their thesis. Their thesis proposal is submitted and approved by the end of the second semester and students conduct their research and the write-up of the thesis while finishing their coursework during the second year.

For this professional, non-thesis degree the student is required to produce a project in place of the thesis and also takes ENGL 347 Language Analysis for Language Teachers in place of ENGL 344 Practicum.

Program Learning Outcomes

- Demonstrate effective, advanced communication in academic and professional settings.

- Apply technology-integration frameworks and use learning technologies to promote innovation and enhance learning environments.

- Analyze and design assessment(s) to evaluate effective teaching and learning.

- Develop and implement instructional methods based on pedagogical models and learning theories.

- Design and conduct various types of research in an ethical manner to reform educational practice.

- Critically reflect on practices of teaching and learning for the continuous improvement of professional practice and learning environments.

-Apply major second language acquisition theories to promote active language learning.

REQUIRED COURSES

4 CORE COURSES (These 4 courses are in common with the MA in Curriculum and Educational Management and the MA in Educational Technology)

FASS 300 Research Methodology

ENGL 340 ELT Methodology I

ENGL 345 Information Technology in ELT

ENGL 346 ELT Testing and Assessment

4 EMPHASIS COURSES

ENGL 341 Second Language Acquisition

ENGL 342 ELT Methodology II

ENGL 348 ELT Management

ENGL 344 Practicum (for thesis track)

ENGL 347 Language Analysis for Language Teachers (for project track)

ENGL 398 Project

ENGL 399 Thesis

ENGL 340 ELT METHODOLOGY I **3.0: 3 cr. E**

This course focuses on the different classroom methodologies and their coherence with curriculum choices. Students will be asked to recommend methodologies that can be used to enhance learning across disciplines. Special attention will be given to adapting different methodologies used in the inclusion of special needs students and multilevel teaching.

ENGL 341 SECOND LANGUAGE ACQUISITION **3.0: 3 cr. E**

This course provides structured opportunities for participants to reflect on (a) the factors - including learner factors - that affect language learning and the nature of the learning process, with particular reference to second language learning in Lebanon and the region (b) the implications of the resulting insights for their own teaching.

ENGL 342 ELT METHODOLOGY II **3.0: 3 cr. E**

This course is the second stage of a two-stage program of advanced instruction in the methodology and practice of English language teaching. It aims to develop a basic understanding of the principles of teaching the skills of listening, speaking, reading and writing as well as the essential components of the language including pronunciation, vocabulary and grammar, and provide practice in applying the methods and techniques introduced in this course to English language teaching.

ENGL 344 PRACTICUM **3.0: 3 cr. E**

This course enables students to develop personal practical knowledge about how to create an effective learning environment for pupils by integrating the knowledge gained from other subjects in the program with their progressive experience in classrooms. ***(This course is taken by students in the thesis track)***

ENGL 346 ELT TESTING AND ASSESSMENT **3.0: 3 cr. E**

In this course evaluation and assessment will be approached not only as a summative outcome but will be understood to transparently assess elements which directly reflect school vision, aims and students' performance and progress. Students will analyze and construct evaluation and assessment tools which are directly related to course and school-level intended learning outcomes. Special attention will be given to evaluation and assessment of interdisciplinary projects.

ENGL 347 LANGUAGE ANALYSIS FOR LANGUAGE TEACHERS **3.0: 3 cr. E**

This course is intended to help students improve their knowledge of phonological, grammatical, lexical and discourse systems in English. The course provides students with a theoretical framework and set of categories for the description and analysis of the English language, and practice in English language use, which will benefit them in their work as teaching practitioners. ***(This course is taken by students in the non-thesis track).***

ENGL 348 ELT MANAGEMENT **3.0: 3 cr. E**

This course aims to develop students' ability to identify the features, and processes involved in ELT management. Students will gain understanding of how the relationship between these elements impact change. The course begins with an introduction to management models and functions. How management impacts classroom level business and how management can support teacher development are areas that are highlighted in the course.

ENGL 398 MA PROJECT **6 cr. E**

ENGL 399 MA THESIS **6 cr. E**

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E**

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course students will submit a research proposal.

ELECTIVE COURSES

ENGL 321 TOPICS IN SOCIOLINGUISTICS **3.0: 3 cr. E**

An examination of the relations of mutual influence between society and language. Any of a number of recognized approaches may form the basis of the course.

ENGL 343 THE SOCIAL CONTEXT OF LANGUAGE LEARNING **3.0: 3 cr. E**

This course aims to further develop students' awareness of how social and cultural factors affect language use and second language learning, to consider the implications of social factors for notions of 'correctness' and 'appropriacy' in language use and learning, to develop a better understanding of the opportunities and problems of English language learning in Lebanon, and to develop insights into the nature of the classroom as a context for second language learning.

ENGL 345 INFORMATION TECHNOLOGY IN ELT **3.0: 3 cr. A/F**

In this course, students will be introduced to instructional theory and its application to technology. Principles and issues concerning the appropriate use of technologies are also discussed. Students will critically analyses existing technologies taking into consideration instructional theory. They will apply the instructional theory related to technology to a real life learning problem/topic. Finally, they will describe the strengths and limitations of educational technology and articulate a personal philosophy of how technology and articulate a personal philosophy of how technology should be used in schools.

ENGL 349 PSYCHOLOGY AND THE LANGUAGE LEARNER **3.0: 3 cr. E**

The aim of the course is to help students understand the role of certain psychological processes in second language acquisition. Students will be introduced to the ways in which mature learners perceive, produce, and remember a second language; they will learn about processes involved in production and comprehension of the second language. The focus will be on the potential effects of these factors in a classroom situation.

ENGL 351 LITERATURE IN THE ELT CLASSROOM **3.0: 3 cr. E**

This course is designed to give ELT students an introduction to the literature subject knowledge desirable for English language teachers (covering English-language poetry, literary prose and drama). It introduces students to techniques and language of literary appreciation and provides them with the socio-historical/cultural background needed to understand works discussed.

ENGL 352 CURRICULUM DESIGN AND EVALUATION **3.0: 3 cr. E**

This course aims to encourage students to integrate knowledge of basic curriculum concepts and second language learning to carry out a critical examination of components of the current English language secondary school syllabus.

ENGL 353 SELECTED TOPICS IN ENGLISH LANGUAGE TEACHING **3.0: 3 cr. E**

This course is a study of a special topic in ELT that is outside the routine offerings of the department. It is often taught by visiting professors.

MA IN ENGLISH LANGUAGE AND LITERATURE

The Department of English Language and Literature offers a Master of Arts in English Language and Literature to students who successfully complete twenty-four credits of course work and 6 credits for a thesis. The applicants to this program should normally hold a Bachelor degree in English literature. Majors from other disciplines can be considered in light of their proficiency in English and their undergraduate academic standing. The Department reserves the right to ask applicants to take additional courses to make up for deficiencies in undergraduate preparation.

The Master of Arts in English Language and Literature serves a variety of academic and professional goals. Students may enter the program in order to prepare for a doctorate degree, to develop their professional skills as a teacher, or to develop skills in research, analysis and writing that are useful across the professions. The program provides students with grounding in connecting literary texts to one another, to historical contexts and to theoretical concerns, and trains students to produce work that has academic and professional merit. In recognition of the global reach of English, the program has a truly international scope as it examines literatures and cultures from around the world, while focusing in particular on modern literatures and cultures from the early nineteenth century onwards. The program is designed to provide students with a sophisticated understanding of the place of literature within contemporary global cultures. The program is comprised of three core courses, five elective courses, and a thesis.

CORE COURSES

ENGL 310 LITERARY THEORY AND METHODS **3.0: 3 cr. E**

An examination of the fundamental approaches and theoretical debates in English literary studies. The course covers many of the key theorists and movements in literary theory and criticism.

ENGL 338 LEGACIES OF ROMANTICISM **3.0: 3 cr. E**

An examination of the key role Romanticism has played in the literature and culture of modernity. The course may cover any period or movement, or a number of periods or movements, from Romanticism to the present-day. Through readings of literary and theoretical texts, the course traces how key elements of Romanticism have been inherited by subsequent literary and critical movements.

ENGL 339 LITERATURE, POSTCOLONIALISM, AND NATIONAL IDENTITY **3.0: 3 cr. E**

An examination of the relations between literary and cultural production, colonial power, and the formations and deformations of national identity. It focuses on literary texts and theories that have emerged out of the experience of colonialism, and addresses issues such as displacement, appropriation, authenticity, fragmentation, and hybridity.

ENGL 399 MA Thesis **6 cr. E**

ELECTIVE COURSES

ENGL 311 TOPICS IN MEDIEVAL LITERATURE **3.0: 3 cr. E**
A study of any authors, genres or themes of the period.

ENGL 312 TOPICS IN RENAISSANCE LITERATURE **3.0: 3 cr. E**
A study of any authors, genres or themes of the period**.**

ENGL 313 TOPICS IN VICTORIAN LITERATURE **3.0 : 3 cr. E**
A study of any authors, genres or themes of the period.

ENGL 314 TOPICS IN ENGLISH LITERATURE 1660 – 1800 **3.0: 3 cr. E**
A study of any authors, genres or themes of the period.

ENGL 315 TOPICS IN ROMANTICISM **3.0: 3 cr. E**
A study of any authors, genres or themes of the period.

ENGL 316 TOPICS IN MODERNISM **3.0: 3 cr. E**
A study of any authors, genres or themes of the period.

ENGL 317 TOPICS IN AMERICAN LITERATURE **3.0: 3 cr. E**
A study of any authors, periods, regions, movements, or themes in American literature.

ENGL 318 TOPICS IN WORLD LITERATURE **3.0: 3 cr. E**
A study of texts of diverse origins that have come to be considered part of international literary culture. The course may explore the variables of canon formation and the constitution of world literature as a category.

ENGL 319 TOPICS IN THE HISTORY OF THE ENGLISH LANGUAGE **3.0: 3 cr. E**
An historical survey of the development of Old, Middle, and Modern English.

ENGL 320 TOPICS IN GENERAL LINGUISTICS **3.0: 3 cr. E**
An examination of general linguistics, or a particular area within general linguistics. The course may cover traditional areas of linguistics such as phonetics, phonology, morphology, syntax or semantics.

ENGL 321 TOPICS IN SOCIOLINGUISTICS **3.0: 3 cr. E**
An examination of the relations of mutual influence between society and language. Any of a number of recognized approaches may form the basis of the course.

ENGL 322 TOPICS IN LITERARY THEORY **3.0: 3 cr. E**
An examination of any theorist, school, tradition or question within literary theory.

ENGL 323 LITERATURE AND PHILOSOPHY **3.0: 3 cr. E**
An examination of issues within the relation between literature and philosophy.

ENGL 324 TOPICS IN LITERATURE **3.0: 3 cr. E**
A study of any author, period, topic, genre or issue in literature.

ENGL 325 POETRY **3.0: 3 cr. E**
The reading and analysis of poetry in its many forms. The course may include an emphasis on a particular poet, historical period, poetic form or cultural and/or aesthetic movement; it may also include a consideration of the art of poetry, its formal and technical features, and the criteria that distinguish it from other creative forms.

ENGL 326 DRAMA **3.0: 3 cr. E**
The reading and analysis of plays. The course may include an emphasis on a particular playwright, historical period, theatrical form or cultural and/or aesthetic movement; it may also include a consideration of the theories of drama, its formal and technical features, and the criteria that distinguish it from other creative forms.

ENGL 327 THE NOVEL **3.0: 3 cr. E**
The reading and analysis of novels. The course may include an emphasis on a particular novelist, historical period, or cultural and/or aesthetic movement; it may also include a consideration of the theories of the novel, its formal and technical features, and the criteria that distinguish it from other creative forms.

ENGL 328 TOPICS IN VISUAL CULTURES **3.0: 3 cr. E**
An examination of cultural forms that depend on the visual image. The course may consider the relation between literature and visual culture or it may consider forms of visual culture, such as art, photography, film, video and the internet, as forms in their own right.

ENGL 329 TOPICS IN POSTMODERNISM AND CONTEMPORARY LITERATURE **3.0: 3cr.E**
A study of any authors, genres or themes of the period.

ENGL 330 CRITICAL THEORY **3.0: 3 cr. E**
An examination of theoretical and critical accounts of aesthetic, cultural and social practices. The course may focus on particular theorists, or a particular school or tradition.

ENGL 332 NON-FICTION CREATIVE WRITING **3.0: 3 cr. E**
This course explores the provocative "fourth genre" of contemporary writing known as creative or literary non-fiction, which applies the elements of fiction writing such as point of view, descriptive style, characterization, and complex plotting to non-fiction works such as personal essays, historical witness, and the non-fiction novel.

ENGL 333 TRAVEL WRITING **3.0: 3 cr. E**
This seminar examines the wide diversity of travel writing from Classical times to the present, including imaginary as well as real travels to other countries and continents. It will focus on the narratives, chronicles, and memoirs of encounters with new sights, populations and cultures, and the emotions, feelings, and insights these engendered in their authors.

ENGL 334 LITERATURE AND GENDER **3.0: 3 cr. E**
A study of any works of literature in relation to both theories of gender and gender as lived social experience.

ENGL 335 TOPICS IN MODERN ARABIC LITERATURE **3.0: 3 cr. E**
A study of any Arabic literature of the twentieth and twenty-first centuries. In general, texts will be studied in translation, but authors with an Arab identity who write in English may also be studied.

ENGL 336 TOPICS IN COMPARATIVE LITERATURE **3.0: 3 cr. E**
A study of any author, period, or topic in comparative literature.

ENGL 354 AESTHETICS **3.0: 3 cr. E**
The study of aesthetics and its application to literary and visual forms. The course may examine particular forms of the aesthetic, and may include an investigation of its philosophical, political and cultural aspects.

DEPARTMENT OF ENVIRONMENTAL SCIENCES MASTER OF SCIENCE PROGRAM

The Department of Environmental Sciences offers a Master of Science (MSc) degree program consisting of 30 credits and divided as follows: 24 credits for course work and 6 credits for a thesis. The program includes six core Environmental Sciences courses (18 credits). These mandatory courses provide the students with a general understanding of the field and discussions regarding basic and advanced science, management and the major problems at the root of the environmental crisis. The program also includes two elective courses (6 credits) from a variety of options offered by the Department of Environmental Sciences as well as other departments. The range of the available elective courses covers a wide array of science topics, including Biology, Chemistry, Mathematics, Physics, Information Technology and other relevant fields.

Program Mission:

The overall mission of the program is to promote students understanding of environmental science, and their capability to apply that knowledge to current environmental issues. It aims to develop the necessary intellectual skills and the practical expertise that prepare students for careers as leaders in understanding and addressing complex environmental issues from a problem-oriented, interdisciplinary perspective.

Program Learning Objectives:

1. A command of the range of subjects necessary to understand and resolve environmental problems and the ability to apply the knowledge to practical issues.
2. Specialization on certain areas in greater depth.
3. Understanding of the fundamental mechanisms operating in the environment and the principles underlying the tools for sustainable environmental management.
4. Development of interpersonal and transferable quantitative and qualitative skills.
5. Development of the ability to conduct independent rigorous research into environmental problems with confidence.

Program Learning Outcomes:

1. Master core concepts and methods from ecological, physical, economic, political and social sciences and their application in environmental problem-solving and policy-making.
2. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
3. Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales.
4. Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.
5. Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to conduct high-level work as interdisciplinary scholars and/or practitioners.

MASTER'S DEGREE IN ENVIRONMENTAL SCIENCES

SEMESTER 1

Code	Course Title	Credit
EVSC 303	Pollutants and their Impacts on Ecosystems	3
EVSC 315	Advances in Coastal Zone Management	3
EVSC 331	Environmental Management and Policy	3
Total		**9**

SEMESTER 2

Code	Course Title	Credit
EVSC 311	Environmental Remediation and Restoration	3
EVSC 333	Forest Resources Management	3
Elective [1]		3
Total		**9**

SEMESTER 3

Code	Course Title	Credit
EVSC 305	Climate Change: A Global Environmental Crisis	3
EVSC 399	Master's Thesis	6
Elective [1]		3
Total		**12**

SEMESTER 4

Code	Course Title	Credit
EVSC 399	Master's Thesis (Reactivation)	-
Total credits		**30**

[1] Elective courses: EVSC 301, EVSC 313, EVSC 317, EVSC 335, EVSC 337.

COURSE DESCRIPTIONS

EVSC 301 ADVANCED ECOLOGY (Elective) 3.0: 3 cr. E

Students will study the interaction of organisms with their environment, the basic concepts of exponential and logistic population growth, age-structured demography, competition, predation, succession, and factors that control growth and dispersal. Students will examine current topics in ecology, including environmental and demographic stochasticity, ecosystem and landscape ecology, evolutionary ecology and behavioral ecology.

EVSC 303 POLLUTANTS AND THEIR IMPACTS ON ECOSYSTEMS (Major) 3.0: 3 cr. E

This course defines the major classes of pollutants as well as their fate in the environment including their entry and transport routes in ecosystems. It stresses the environmental toxicology of heavy metals, pesticides, insecticides and organic solvents. Topics include dose-response relationships, absorption, distribution, toxicity mechanisms, risk assessment, biochemical and physiological effects of single pollutants as well as the interactive effects of many pollutants. Special attention is given for toxicity testing and pollutant effects identification through the use of biomarkers. Additional discussions about the impacts of pollutants on species populations and communities are covered.

EVSC 305 CLIMATE CHANGE: A GLOBAL ENVIRONMENTAL CRISIS (Major) 3.0: 3 cr. E

This course will tackle the science of climate change, drawing attention to the latest research and evolving patterns of scientific data on climate that has emerged in recent years. Emphasis will be given to the scientific aspects of the elements of climate change, measurements, natural and human causes of climatic variations, past and current climates, future projections, economic and ecological impacts, analyzing the social changes and adaptations that human communities have already made and those they will most likely have to make as the Earth's climate continues to change in the coming years. Special attention will be given to the mitigation options.

EVSC 311 ENVIRONMENTAL REMEDIATION AND RESTORATION (Major) 3.0: 3 cr. E

This course provides students with an overview of environmental remediation and restoration principles to follow in the case of environmental disturbances. It includes general principles for landscape restoration, populations and species perspectives in restoration, technologies and techniques including best practices for addressing contaminants in soil, groundwater, running and still waters, and different marine ecosystems. Course discussions will address site characterization requirements for effective remediation and restoration system designs. Emphasis will be placed on the current remediation and restoration techniques. Case studies, including successes and failures, will be discussed.

EVSC 313 ENVIRONMENTAL STATISTICS: METHODS AND RESEARCH (Elective) 3.0: 3 cr. E

Ecology and environmental science disciplines increasingly require training in sophisticated statistical thinking and methodology. Students will examine how statistical principles and methods can be used to study environmental issues. Concern will be directed to: probabilistic, stochastic and statistical models; data collection, monitoring and representation; drawing inferences about important characteristics of the problem; and using statistical methods to analyze data to aid policy and action.

EVSC 315 ADVANCES IN COASTAL ZONE MANAGEMENT (Major) 3.0: 3 cr. E

Students will learn how to integrate marine sciences with planning, designing, and executing effective solutions to coastal zone problems. Accordingly, students will understand both the scientific nature of contemporary issues affecting the coastal zone and the socio-economic, political, legal and practical approaches to solving conflicting interests of the different sectors. All themes will be taught within the context of the Integrated Coastal Zone Management Protocol for the Mediterranean and its application.

EVSC 317 SUSTAINABLE FISHERIES MANAGEMENT (Elective) 3.0: 3 cr. E

Fishing provides food, income and employment for millions of people, and is one of the most widespread human activities in the marine environment and can therefore threaten marine ecosystems. This course will cover theoretical elements of fisheries sciences and how to put those theories into practice for the sustainable management of marine biological resources. This course covers approaches commonly used to assess and evaluate the dynamics of stock assessments including data requirements and analysis, assumptions, limitations and uncertainties. Contribution of marine protected areas, ecosystem-based management as well as other approaches and parameters will be thoroughly examined and discussed.

EVSC 331 ENVIRONMENTAL MANAGEMENT AND POLICY (Major) 3.0: 3 cr. E

This course will examine the principles, procedures, and methods of good environmental management against the background of Lebanese, European Union and international policy requirements and market instruments. Students will be provided with an opportunity for more in-depth study of selected areas of environmental management, as related to current needs. They will be enabled to develop the research and management skills required to collect, analyze and present information in the context of environmental policy, monitoring and auditing.

EVSC 333 FOREST RESOURCES MANAGEMENT (Major) 3.0: 3 cr. E

This course will address sustainable planning and management of forest resources. Students will study how to develop a forest inventory, a forest management plan, and a forest harvesting plan with focus on ecological, social, economic, and cultural considerations in decision-making. Special attention will be given to forest conservation, forest landscape restoration, afforestation and reforestation, wood and non-wood products, forest fires, policies and strategies, and laws and regulations in the Mediterranean with focus on case studies from Lebanon. Students will learn how to practically address current challenges affecting the forest cover, while increasing direct and indirect benefits to people and the environment.

EVSC 335 GEO-INFORMATION IN ENVIRONMENTAL MANAGEMENT (Elective) 3.0:3cr.E

This course focuses on the increasing demand for using geo-information in tackling significant environmental issues in today's natural environment. The course addresses the use of satellite remote sensing data and Geographical Information System, and their application to environmental management. Students will be exposed to the principles of spatial data interpretation and to traditional and advanced analysis of remotely sensed data. Geo-information of watersheds, forest resources, land use planning, environmental monitoring, and urban sprawl will be discussed and illustrated using research examples. Students will learn a wide variety of interpretation, measurement, and analysis including environmental change detection and map-making skills specific to moderate and high spatial and spectral resolution satellite imagery.

EVSC337 ENVIRONMENTAL ECONOMICS AND SUSTAINABLE DEVELOPMENT (Elective) 3.0:3cr.E

Within the current context of resource depletion, environmental challenges and needs for social development, the impact of environmental decisions and economic activities must be measured at the level of the three spheres of sustainability: Environment, Economics and Society. The "Environmental Economics and Sustainable Development" course provides a set of environmental and economic tools and methodologies to link those spheres based on case studies. Students will examine different available valuation approaches of natural resources and will strengthen their capacities in critical analysis required for building environmental decisions.

EVSC 399 MASTER'S THESIS (Major) 6.0: 6 cr. E

The research part of the MSc program is represented by the thesis which is undertaken with the supervision of a full-time Faculty member. A thesis must embody original research and is defended before a Jury, upon completion of the research work. The thesis must be completed within two regular semesters, but may be extended for two additional semesters.

GRADUATE PROGRAM IN FOOD SCIENCE AND TECHNOLOGY

Coordinator: Mireille Serhan, Ph.D., Mireille.serhan@balamand.edu.lb

This is a multidisciplinary program. It is offered mainly for students from Science or Engineering background. In their second year of study, students from Science background are better prepared to go for concentration 1 in Food Quality Assurance, while students from Engineering background are better prepared to go for concentration 2 in Food Processing Control.

• Program of study

MAJOR	YEARS	DEGREE	STATUS
Food Science and Technology	2	MS	Offered

• Sample description of curriculum

The Program is organized in four semesters that span across two years. The first year is dedicated to common core and basic courses in Food Science and Technology. In the second year, the Program splits into two concentrations Food Quality Assurance and Food Processing Control.

SEMESTER 1 : Fundamentals of Food Science and Technology

Code	Course Title	Credit
FSCT 500	Introduction to Food Science and Technology	3
FSCT 540	Industrial Physical Methods	3
FSCT 570	Principles of Management in Food Industry	3
FSCT xxx	Elective course	3
Total		**12**

SEMESTER 2: Solid Common Bases in Food Science and Technology

Code	Course Title	Credit
FSCT 501	Food Processing and Preservation	3
FSCT 502	Food Commodities	2
FSCT 520	Physical Food Analysis	3
FSCT 590	Research Methods	1
FSCT xxx	Elective course	3
Total		**12**

SEMESTER 3 :

Concentration I: Food Quality Assurance

Code	Course Title	Credit
FSCT 600	Food Microbiology	3
FSCT 601	Food Allergies and Toxicology	3
FSCT 602	Food Quality Assurance and Legislations	3
FSCT 530	Nutrition Through the Life Cycle	3
FSCT xxx	Elective course	3
Total		**15**

Concentration II: Food Processing Control and Management

Code	Course Title	Credit
FSCT 640	Measurement Chain and Signal Acquisition	3
FSCT 641	Non-Destructive Testing and Instrumentation	3
FSCT 642	Processing and Exploitation of Signals	3
FSCT 643	Food Process Development	3
FSCT xxx	Elective course	3
		15

SEMESTER IV: Internship and Projects

Code	Course Title	Credit
FSCT 690	Placement and Thesis	**3**
Total credits		**42**

ELECTIVE COURSES

FSCT 670	Organization and Methods in Project Management
FSCT 671	Food Marketing
FSCT 672	Business Communication
FSCT 673	Case Studies in General Management
FSCT 700	Microbial Fermentation in Food Technology
FSCT 701	Biotechnology and the Food Industry
FSCT 702	Food Product Development
FSCT 703	Food Packaging Technology
FSCT 704	Functional Food and Nutraceuticals
FSCT 720	Advanced Food Chemistry
FSCT 740	Transfer Phenomena and Industrial Physics
FSCT 741	Thermodynamics and Fluid Mechanics in Food Media
FSCT 750	Statistics
FSCT 770	Computer Based Management System

COURSE DESCRIPTIONS

FSCT 500 INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY 3.0: 3cr.E

The aim of the course is to take a multidisciplinary approach by integrating advances in Food Science and Food Processing in order to introduce students to the main principles of science and technology and their implementation in the food industry. The course covers the basic principles and practices of the major techniques used in food processing and preservation along with critical issues in food regulations and nutrition.

FSCT 501 FOOD PROCESSING AND PRESERVATION 3.0: 3 cr. E

To introduce the principles of the manufacturing processes and technologies used in the production of food products and the preservation issues associated with food quality and safety in food production.

FSCT 502 FOOD COMMODITIES 2.0: 2 cr. E

The main objective of the course is to teach the categories and properties of food commodities and food products, and to outline their health, social and market relations surrounding their production, distribution, preparation and consumption.

FSCT 520 PHYSICAL FOOD ANALYSIS **3.0: 3 cr. E**
This course is intended to introduce the application of physical, chemical and biological methods and techniques of analysis used for in-line and off-line quality control laboratory measurement for process optimization and product quality assurance in the food industry.

FSCT 530 NUTRITION THROUGH THE LIFE CYCLE **3.0: 3 cr. E**
The objectives of this course are to introduce nutrition and nutritional requirements in relation to human growth and development (pregnancy, lactation, infancy, childhood, adolescence, adulthood and ageing) and the regulations and legislation associated with nutrition and healthy living.

FSCT 540 INDUSTRIAL PHYSICAL METHODS **3.0: 3 cr. E**
The course deals with the physical and engineering principles which are important in the food processing industry and with the measurements and computations required in analyzing the performance of food process equipment and related quality control activities in unit operations.

FSCT 570 PRINCIPLES OF MANAGEMENT IN FOOD INDUSTRY **3.0: 3 cr. E**
This course aims to provide students with a comprehensive coverage of the management of food and agribusiness firms from a managerial perspective by covering the areas of expertise that a manager must master (finance, marketing, operations principles and concepts, business ownership, organizational management and human resources) as well as a number of unique issues which confront the food industry (nature and weather, politics and international trade, food safety risks, environmental risks and emerging technologies).

FSCT 590 RESEARCH METHODS **1.0: 1 cr. E**
The course offers a framework for conducting applied research in a scientific manner. Students, within the context of Food Science and Technology learn to develop practical knowledge and skills to design, undertake and report research projects in a systematic way using statistical methods for the qualitative/quantitative analysis of data and references to the scientific literature available.

FSCT 600 FOOD MICROBIOLOGY **3.0: 3 cr. E**
To provide modern knowledge and skills in food microbiology with regard to food quality and health safety as it applies in the various sectors of the food chain, including food production, processing, storage and transport and as it relates to food systems monitoring within the food industry or other sectors.

FSCT 601 FOOD ALLERGIES AND TOXICOLOGY **3.0: 3 cr. E**
The main objective of the course is to introduce the principal concepts and techniques in the toxicological evaluation of foods, allergen evaluation of food components, and of intentional or incidental additives and to develop the knowledge and skills needed for the identification, assessment, and management of health hazards in foods.

FSCT 602 FOOD QUALITY ASSURANCE **3.0: 3 cr. E**
This course will introduce the concepts of food safety management in the food processing industry through the ISO system and it will provide the standard occupational skills for the use of HACCP (Hazard Analysis and Critical Control Points) in the management of food quality and safety.

FSCT 603 FOOD LAW AND LEGISLATION **3.0: 3 cr. E**
This course provides an overview of the role of legislation in protecting consumers by ensuring the production of a safe and wholesome food supply and of the legislative framework required to develop and maintain a food control system nationally and internationally.

FSCT 640 MEASUREMENT CHAIN AND SIGNAL ACQUISITION 3.0: 3 cr. E
The main objectives of the course are to introduce the underlying principles for the generation of data imprecision and the implications of imprecision in signal data acquisition and interpretation with regard to effectively control a physical, chemical, or biological process in food chain industrial applications.

FSCT 641 NON DESTRUCTIVE TESTING AND INSTRUMENTATION 3.0: 3 cr. E
The main objectives of the course are to present the principles and approaches for Nondestructive Testing (NDT) used to control food quality with particular emphasis to provide the knowledge and skills relating to the use of the selected non-destructive testing techniques in the food manufacturing environment.

FSCT 642 PROCESSING AND EXPLOITATION OF SIGNALS 3.0: 3 cr. E
The objectives of the course are to introduce the students to the signal processing and signal generation concepts necessary to understand multimedia systems, which use input/output in the human/system interface in the food industry. The signal processing concepts are emphasized in relation to applications in basic signal generation and the use of optimal and adaptive filtering.

FSCT 643 FOOD PROCESS DEVELOPMENT 3.0: 3 cr. E
The objectives of the course are to introduce, in a systematic way, the most common food engineering unit operations required to design food processes and the equipment needed to carry them out as well as the economic, sanitation and safety design aspects in food plant operations to successfully produce food products with maximum quality.

FSCT 670 ORGANIZATION AND METHODS IN PROJECT MANAGEMENT 3.0: 3 cr. E
The objectives of the course are to teach the main principles and techniques that can be used in order to select, organize, run and manage a project or to terminate a project while dealing with the demands of the people working in the project and with the rest of the managers and stakeholders of the organization.

FSCT 671 FOOD MARKETING 3.0: 3 cr. E
This course introduces students to marketing concepts and theories, from product development and research to packaging and advertising in the food industry. The course aims at teaching the critical tools and techniques of marketing including how to develop a marketing plan, segment and target markets, implement merchandising strategies, set prices, advertise and handle public relations.

FSCT 672 BUSINESS COMMUNICATION 3.0: 3 cr. E
The course is a study of the various aspects of business communication. The course is designed to help students develop and sharpen their written, oral, and presentational speaking skills for effective communication in the business world.

FSCT 673 CASE STUDIES IN GENERAL MANAGEMENT 3.0: 3 cr. E
The objectives of the course are to present the issues related to the field of production and operations management in the food industry and the practical and applied techniques, which can be used to improve product quality and productivity through better management. Management of product development, technological development, and consumer and market research are highlighted through case studies.

FSCT 690 PLACEMENT AND RESEARCH PROJECT 3.0: 3 cr. E
This is the research or industrial project to be performed by the students at the end of the second year. For industrial projects, the subject will be defined by the industrial representative and a professor making sure that the project will use a significant percentage of the student's competences and skills. A close follow up is performed by both advisors.

FSCT 700 MICROBIAL FERMENTATION IN FOOD TECHNOLOGY **3.0: 3 cr. E**
The main objective of the course is to introduce students to the microbiology, biochemistry, and physiology of microorganisms in food fermentations, and the use and manipulation of relevant microorganisms in the production of a variety of fermented food products.

FSCT 701 BIOTECHNOLOGY AND THE FOOD INDUSTRY **3.0: 3 cr. E**
The main objective of this course is to provide students with the knowledge and skills in the various techniques in Biotechnology and their current and future applications in the manufacturing of food and agricultural products, and to offer a perspective on the social and ethical implications of Biotechnology.

FSCT 702 FOOD PRODUCT DEVELOPMENT **3.0: 3 cr. E**
The aim of this course is to provide to students with the theoretical elements and experience needed to integrate the knowledge and training in Food Science and Technology towards being effective in improving food products and/or developing new ones. The course also aims to identify the relations between the market and innovation strategies and the interfaces between R&D, marketing and production.

FSCT 703 FOOD PACKAGING TECHNOLOGY **3.0: 3 cr. E**
The objectives of the course are to introduce the types and properties of the various packaging materials used in the food industry in relation to food quality and food contamination as well as the equipment and methods of packaging food with reference to the most recent advances in food packaging and systems used.

FSCT 704 FUNCTIONAL FOOD AND NUTRACEUTICALS **3.0: 3 cr. E**
To present the classification, properties, and source of functional foods and bioactive food components in conjunction with the latest scientific and technological methods used in food industry towards improving their bioavailability/stability as well as towards complying with local and global laws and regulations in food marketing.

FSCT 720 ADVANCED FOOD CHEMISTRY **3.0: 3 cr. E**
The objectives of the course are to explore advanced physicochemical and functional properties of food constituents, the variable effects of food processing and food storage on these constituents and the relationship between these properties and food/industrial use of these constituents, as well as the analytical methods used to assess these properties.

FSCT 740 TRANSFER PHENOMENA AND INDUSTRIAL PHYSICS **3.0: 3 cr. E**
In this course, the fundamentals of heat and mass transfer are presented, advanced topics such as diffusions in solids, liquids, polymer films, and diffusions coupled with heat transfer and/or chemical reactions are studied, and finally, several applications to cases of interest in food products and processes are tackled. The various food refrigeration technologies will be considered.

FSCT 741 THERMODYNAMICS AND FLUID MECHANICS IN FOOD MEDIA **3.0: 3 cr. E**
In this course, the thermodynamic properties of food materials are described. The first and second laws of thermodynamics are reviewed in the context of food products. The basic equations of fluid mechanics are reviewed for the case of ideal and viscous Newtonian fluids. The general Navier Stokes equation is presented and reduced to certain particular cases. Fluid flow in food processing is considered.

FSCT 750 STATISTICS **3.0: 3 cr. E**
The objectives of the course are to teach how data related to Food Science and Technology can be analyzed using advanced variance and nonparametric statistical methods.

FSCT 770 COMPUTER BASED MANAGEMENT SYSTEM **3.0: 3 cr. E**

The objectives of the course are to introduce the students to the use of computers and IT-based systems in the organization, management and design processes of production, manufacturing, distribution and in identifying and coping with the challenges facing a firm for decision-making.

DÉPARTEMENT DE LANGUE ET LITTÉRATURE FRANÇAISE

Chef de division: Omar Adra. Ph.D., omar.adra@balamand.edu.lb
Le département de Langue et Littérature Françaises prépare les étudiant(e)s à l'obtention:
- D'un Master à 3 options: Littérature française, Linguistique ou Français langue étrangère et seconde.

PROGRAMME DU MASTER EN LANGUE ET LITTÉRATURE FRANÇAISES

Le Master en langue et littérature françaises se divise en trois composantes, l'une Littéraire, l'autre Linguistique et la troisième Français langue étrangère et seconde.
Pour s'inscrire au Master de Langue et Littérature françaises, l'étudiant devra être titulaire d'un B.A. en Langue et Littérature françaises avec une moyenne de 80/100. Les étudiant(e)s ayant obtenu moins que 80, pourraient être acceptés sous surveillance académique.
Pour obtenir un Master en Langue et Littérature Françaises, l'étudiant(e) devra obtenir 24 crédits dans les séminaires détaillés ci-dessous, en plus des six crédits réservés au mémoire de recherche.

SÉMINAIRES COMMUNS

FASS 300	Méthodologie de la recherche	3.0: 3 cr
FREN 322	Exploration du tragique	3.0: 3 cr.
FREN 342	Questions de Linguistique	3.0: 3 cr.
FREN 350	Plurilinguisme et Contact des Langues	3.0: 3 cr.
FREN 399	Mémoire de recherche	6 cr.

SÉMINAIRES DE LITTÉRATURE

FREN 320	Littérature et sciences humaines	3.0: 3 cr.
FREN 321	Physique et métaphysique des passions	3.0: 3 cr.
FREN 332	Le théâtre	3.0: 3 cr.
FREN 334	La poésie	3.0: 3 cr.
FREN 335	La narrativité	3.0: 3 cr.
FREN 336	Le Roman	3.0: 3 cr.
FREN 341	Poétique des genres littéraires	3.0: 3 cr.

SÉMINAIRES DE LINGUISTIQUE

FREN 340	Linguistique et textes littéraires	3.0: 3 cr.
FREN 343	Questions de sémantique et de lexicologie	3.0: 3 cr.
FREN 344	Analyse du discours	3.0: 3 cr.
FREN 345	Linguistique comparée	3.0: 3 cr.
FREN 346	Théories de la phrase	3.0: 3 cr.
FREN 347	Linguistique et enseignement du français	3.0: 3 cr.
FREN 348	Sociolinguistique et technolectes	3.0: 3 cr.
FREN 349	Dialectologie	3.0: 3 cr.

SÉMINAIRES DE FLE/S

FREN 345	Linguistique comparée	3.0: 3 cr.
FREN 347	Linguistique et enseignement du français	3.0: 3 cr.
FREN 351	Stage professionnel	3.0: 3 cr.
FREN 352	Particularités arabophones et expression française	3.0: 3 cr.
FREN 353	Enseignement du français sur objectifs spécifiques FOS	3.0: 3 cr.
FREN 354	Les Technologies de l'information et de la Communication en FLE/S	3.0: 3 cr.
FREN 355	Acquisition du langage	3.0: 3 cr.
FREN 358	Gestion d'établissements scolaires (equivalent de EDUC 392)	3.0: 3 cr.

LES SÉMINAIRES COMMUNS

FASS 300 MÉTHODOLOGIE DE LA RECHERCHE **3.0: 3 cr. F**

Ce séminaire vise à la familiarisation des étudiant(e)s à la recherche dans le monde littéraire et linguistique. Dans ce but, le travail sera orienté vers le choix et la mise en relief d'un corpus et d'une problématique, vers la planification du travail et l'établissement et l'exploitation d'une bibliographie. La fin de ce séminaire sera couronnée par la présentation d'un travail de recherche.

FREN 322 EXPLORATION DU TRAGIQUE **3.0: 3 cr. F**

A partir d'œuvres représentatives, ce séminaire vise à tracer, de Sophocle à Pascal et Freud, les contours de la conception tragique de la destinée humaine, et approfondir l'influence de cette vision tragique sur la littérature.

FREN 342 QUESTIONS DE LINGUISTIQUE **3.0: 3 cr. F**

Ce séminaire est appelé à élargir et approfondir la réflexion touchant les grandes questions, tant anciennes qu'actuelles, que pose la science linguistique: l'arbitraire du signe, la double articulation, les universaux du langage, synchronie/diachronie, énoncé/énonciation, etc.

FREN 350 PLURILINGUISME ET CONTACT DES LANGUES **3.0: 3 cr. F**

Le contact des langues nous situe au sein de la question de la dynamique et de l'évolution des langues. Seront abordés les cas du plurilinguisme de l'hybridation, de l'emprunt etc., entre différentes langues.

FREN 399 MÉMOIRE DE RECHERCHE **6 cr. F**

1. SÉMINAIRES DE LITTÉRATURE

FREN 320 LITTÉRATURE ET SCIENCES HUMAINES **3.0: 3 cr. F**

Au contact de la littérature, toutes les disciplines relevant des sciences humaines ou sociales (philosophie, sociologie, psychologie, histoire, etc.) ont élaboré des discours analytiques, voire des méthodes d'analyse d'une œuvre littéraire. Ce séminaire a pour objectif de privilégier une ou plusieurs approches que les disciplines humanistes ont mises au point pour lire et comprendre la production littéraire, sans pour autant oublier l'influence que la littérature elle-même exercera à son tour sur les sciences humaines.

FREN 321 PHYSIQUE ET MÉTAPHYSIQUE DES PASSIONS **3.0: 3 cr. F**

La genèse des passions comme source de la création littéraire fera l'objet de ce séminaire dont l'objectif est de réfléchir sur les liens entre les énigmes passionnelles et la rationalité scripturale.

FREN 332 LE THÉÂTRE **3.0: 3 cr. F**

L'œuvre d'un dramaturge ou un choix de pièces choisies d'un courant théâtral donné, constituera l'objet d'une réflexion sur le théâtre en tant que genre se situant au carrefour de plusieurs modes d'expression artistiques.

FREN 334 LA POÉSIE **3.0: 3 cr. F**

A partir de l'œuvre d'un poète ou d'un choix d'œuvres poétiques, ce séminaire est censé approfondir les contraintes et les limites spécifiques à l'acte poétique au contact d'un poète ou d'un courant poétique.

FREN 335 LA NARRATIVITÉ **3.0: 3 cr. F**

Séminaire où seront abordées et traitées les grandes questions théoriques et pratiques de la narration : le temps, le mode, la voix etc. Et ce en se basant sur une ou plusieurs œuvres narratives en plus des ouvrages théoriques.

FREN 336 LE ROMAN **3.0: 3 cr. F**

A partir d'un thème librement choisi, ce séminaire étudiera plusieurs romans ayant marqué l'histoire de la littérature française.

FREN 341 POÉTIQUE DES GENRES LITTÉRAIRES **3.0: 3 cr. F**

Dans ce séminaire, seront abordés les genres littéraires non en tant que données transcendantes mais en tant que formes immanentes de l'imaginaire. De Platon et Aristote à Gérard Genette, on étudiera les grandes formes de la littérarité et les questions relevant du statut social et historique du genre et en particulier les problèmes touchant sa structure interne comme la mimésis et l'originalité, la spécificité et les frontières, etc.

2. SÉMINAIRES DE LINGUISTIQUE

FREN 340 LINGUISTIQUE ET TEXTES LITTÉRAIRES **3.0: 3 cr. F**

Séminaire où sera abordé le fonctionnement interne et immanent du texte littéraire à partir des acquis méthodologiques et conceptuels de la linguistique: actes du langage, théorie des champs lexico sémantiques, statut actantiel du personnage, etc.

FREN 343 QUESTIONS DE SÉMANTIQUE ET DE LEXICOLOGIE **3.0: 3 cr. F**

Centré sur les unités de première articulation (monèmes ou morphèmes), ce séminaire a pour objectif de préciser le statut du mot (lexème) dans sa double fonction comme unité de langue et comme unité de discours. Outre la «dérivation» et la «composition», la lexicologie est aussi l'étude du sens des mots dans une double perspective, synchronique (rapports sémantiques entre les unités, champs sémantiques, homonymies, polysémies, figures, etc.) et diachronique ou socio-historique (évolution du sens des mots, la néologie, etc.).

FREN 344 ANALYSE DU DISCOURS **3.0: 3 cr. F**

Dans ce séminaire seront traités les phénomènes oraux et scripturaux marqués par des situations de production. Y seront abordés la cohérence textuelle (continuité sémantique d'un texte), les ruptures énonciatives (locuteur/énonciation, locuteur/énoncé) et les processus interprétatifs (construction du sens : paraphrases interprétatives, paradigmes désignationnels). Des théories de l'énonciation à la statistique linguistique, les analyses s'appuieront sur la pluralité des approches théoriques afin d'établir des instruments d'analyse dans leurs relations étroites aux objectifs linguistiques ou extralinguistiques des recherches.

FREN 345 LINGUISTIQUE COMPARÉE **3.0: 3 cr. F**

Au-delà des «universaux du langage», les langues diffèrent les unes des autres sur bien des points. Ce séminaire se propose de décrire les grands traits phonologiques, lexicaux, sémantiques et morphosyntaxiques des deux langues arabe et française. Cette description sera suivie d'une analyse comparative de ces divers traits entre les deux langues en question.

FREN 346 THÉORIES DE LA PHRASE **3.0: 3 cr. F**

Séminaire centré sur la syntaxe et les questions touchant les théories de la phrase que proposent les différentes écoles linguistiques: approfondissement d'une école ou mise en parallèle de deux ou trois conceptions afin d'en dégager divergences et points communs.

FREN 347 LINGUISTIQUE ET ENSEIGNEMENT DU FRANÇAIS **3.0: 3 cr. F**

Séminaire ayant pour objectif de développer et d'approfondir les éléments linguistiques qui contribuent à une amélioration de l'apprentissage du français dans un milieu non particulièrement francophone.

FREN 348 SOCIOLINGUISTIQUE ET TECHNOLECTES **3.0: 3 cr. F**

Le technolecte touchant à tous les domaines de l'activité humaine : sciences et techniques, activités artistiques, économie, politique… est profondément ancré dans la vie sociale d'une communauté linguistique et ne pourra par suite être dissocié des études sociolinguistiques. Le technolecte n'est pas à confondre avec la terminologie, puisqu'en plus du niveau lexical, l'étude d'un technolecte concerne aussi bien le style et la phraséologie.

FREN 349 DIALECTOLOGIE **3.0: 3 cr. F**

La dialectologie étant l'étude linguistique des dialectes et des patois, elle s'intéresse aux variétés linguistiques non standardisées. La description dialectale ne diffère pas de toute autre description linguistique, puisqu'elle nécessite la description des traits phonétiques, l'étude des traits phonologiques, morphologiques, lexicaux et sémantiques de ce dialecte. La comparaison entre différents dialectes de la même famille est possible grâce à des enquêtes qui permettront de décrire la répartition spatiale des traits spécifiant les membres de cette famille.

3. SÉMINAIRES DE FLE/S

FREN 345 LINGUISTIQUE COMPARÉE **3.0 : 3 cr. F**

Au-delà des « universaux du langage », les langues diffèrent les unes des autres sur bien des points. Ce séminaire se propose de décrire les grands traits phonologiques, lexicaux, sémantiques et morphosyntaxiques des deux langues arabe et française. Cette description sera suivie d'une analyse comparative de ces divers traits entre les deux langues en question.

FREN 347 LINGUISTIQUE ET ENSEIGNEMENT DU FRANÇAIS **3.0: 3 cr. F**

Séminaire ayant pour objectif de développer et d'approfondir les éléments linguistiques qui contribuent à une amélioration de l'apprentissage du français dans un milieu non particulièrement francophone.

FREN 351 STAGE PROFESSIONNEL **3.0: 3 cr. F**

Ce stage professionnel sera effectué ou bien dans le cadre d'une institution ou d'une école pratiquant l'enseignement du français en tant que langue étrangère. Une petite période d'observation de classe devra être suivie d'une pratique de l'enseignement. Un rapport sera fourni en fin de stage.

FREN 352 PARTICULARITÉS ARABOPHONES ET EXPRESSION FRANÇAISE **3.0: 3 cr. F**

Ce séminaire est un laboratoire d'analyse des particularités de l'expression française de l'apprenant(e) arabophone, que la langue française soit sa deuxième ou sa troisième langue. Ces particularités seront étudiées par rapport au français appelé standard.

FREN 353 ENSEIGNEMENT DU FRANÇAIS SUR OBJECTIF(S) SPÉCIFIQUES (FOS) 3.0: 3 cr. F

Ce séminaire est une initiation à l'enseignement de la communication professionnelle à des publics adultes souhaitant atteindre des objectifs d'apprentissage précis dans un court delai afin de communiquer en français dans le cadre de leur travail (enseignants, avocats, médecins, cadres d'entreprises, ouvriers,...). L'étudiant(e) apprendra à définir les besoins de son public, à étudier les spécificités discursives et linguistiques d'un domaine particulier et à concevoir une formation adaptée à chaque contexte.

FREN 354 LES TECHNOLOGIES DE L'INFORMATION ET DE LA COMMUNICATION EN FLE/S (ÉQUIVALENT À EDUC341) **3.0: 3 cr. F**

Ce cours initie les étudiants aux différents paradigmes d'apprentissage (behaviorisme, cognitivisme, constructivisme et connectivisme), aux modèles correspondants et aux stratégies qui ont trait au domaine de la technologie de l'enseignement et de la conception. Il leur permet également de découvrir d'autres approches liées à l'intégration des technologies éducatives et les initie à répertorier, analyser, adapter et didactiser les outils et les ressources numériques pour les intégrer dans des séquences dynamiques favorisant à la fois le travail de groupe et l'autonomie des apprenants. À la suite de cette exposition aux théories de l'apprentissage, les étudiants vont créer un « guide de l'instructeur » afin de mettre en application les différentes stratégies apprises dans la préparation d'une leçon ou d'un module.

FREN 355 ACQUISITION DU LANGAGE **3.0: 3 cr. F**

L'acquisition du langage chez l'enfant commence par le babillage pour aboutir à la construction de phrases, en passant par le développement progressif d'un lexique plus au moins élaboré. Est-ce que la compréhension du phénomène d'apprentissage de la langue maternelle chez l'enfant, pourrait nous éclairer sur les mécanismes de l'apprentissage d'une langue seconde ou étrangère chez l'enfant ou peut-être même chez l'adulte?

FREN 358 Gestion d'établissements scolaires (Equivalent de EDUC 392) 3.0: 3 cr. F
Ce séminaire est une introduction aux différentes fonctions à remplir dans le cadre de la gestion d'établissements scolaires. Il trace la différence entre gestion et leadership, et insiste sur la gestion du développement professionnel des enseignants à travers des stratégies bien précises, ainsi que sur la création d'une stratégie d'intervention à tous les niveaux de la vie scolaire. Les étudiants seront munis d'un cadre théorique qu'ils appliqueront à des études de cas.

DEPARTMENT OF HISTORY & MUSEUM STUDIES

Chair of Division: Mohamad Rihan, Ph.D., mohamad.rihan@balamand.edu.lb

Languages of Instruction: French, Arabic, English

HISTORY GRADUATE COURSES

MASTER OF ARTS IN HISTORY

The History Department in the Faculty of Arts and Sciences offers a Master of Arts in History which broadly contextualizes the program content within the frame of the Middle East and North Africa (MENA) during the medieval and modern periods. The program's essential focus is on the exploration of Historical methodologies and the recording and analysis of the experience of the peoples of Lebanon. The applicants to this program should normally hold a Bachelor's degree in History. Majors from other disciplines can be considered in light of their undergraduate academic standing. The Department would reserve the right to ask applicants to take bridging courses to make up for deficiencies in undergraduate preparation.

The MA program consists of 30 credits, 24 credits from 8 courses and 6 thesis credits. The coursework is comprised of 6 core, required courses and 2 department electives. The core courses emphasize the essential cultural literacy and methodological training consistent with a master's level education in History with a content focus on the Middle East and North Africa. The Master's thesis is the culminating work of the MA program. When working on the thesis the MA student puts into practice the skills and knowledge they have acquired in historical conceptualization, the organization and evaluation of various species of evidence, critical analysis of competing sources, and the communication of their findings to produce an original work of scholarship.

CORE COURSES:

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. A/F/E**

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles, and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course students will submit a research proposal.

HIST 322 METHODOLOGY OF HISTORICAL SOURCES **3.0: 3 cr. A/F/E**

This course focuses on the understanding of historical sources, ancient, medieval, and modern. It examines both previously archived historical sources, such as records, manuscripts, diaries, and chronicles, and the collection and cataloging of new sources such as contemporary photographs, government, ecclesiastical and non-governmental organization (NGO) records, and oral history interviews. Students will discover the nature of archival organization and come to understand the important teamwork that takes place between archivists and historians. At each step, students will learn about the methodologies that correspond to the collection and the analysis of these different forms of documentation. To facilitate this work, the course will include visits to family and monastic archives. By the end of the course, students will have demonstrated a firm grasp of organizational and analytical practices in the historical profession, a prerequisite for any future work in archives and other institutions of public history.

HIST 324 MODERN AND CONTEMPORARY ARAB WORLD **3.0: 3 cr. A/F/E**
This course investigates development in the Arab world from the Ottoman period to the present, with emphasis on the rise of nationalist and ideological political parties, the emergence of independent states, the Arab-Israeli conflict, the rise of petroleum-based industries, religious resurgence, and the influence of democratic ideals and globalization. It provides the essential contextual grounding for any further work in the history of Lebanon and its region. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 325 NEW TRENDS IN THE PHILOSOPHY OF HISTORY **3.0: 3 cr. A/F /E**
This course will examine new currents in the writing of history, combining the textual and the contextual, the anthropological and the cultural, the material and the intellectual, and the specific and the general to generate a comprehensive understanding of our current moment in the history and philosophy of history. The knowledge base at the core of this course is essential for any future graduate work in history. By the end of this course, students will have exhibited a high degree of accomplishment in their understanding of the role of conceptualization in historical analysis and demonstrated their communication skills through substantial written assessments.

HIST 330 HISTORY OF THE LEBANESE CIVIL WARS IN THE NINETEENTH AND THE TWENTIETH CENTURIE **3.0: 3 cr. A/F/E**
This course investigates the histories of Lebanese various internal conflicts from 1840 to the present. It examines the social and economic background of the region, the development of communitarian and sectarian institutions, and the political regimes that arose and fell during this period. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 333 BILAD AL-SHAM UNDER THE MAMLUKS **3.0: 3 cr. A/F/E**
This course examines state, society, and religion in the Levant under the rule of these medieval slave soldiers as well as their continuing influence during the pre-Ottoman period. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

ELECTIVE COURSES

HIST 321 BYZANTIUM AND EARLY ISLAM **3.0: 3 cr. A/F/E**
This course covers the history of the Near East during the transition from Roman to Islamic rule (550-850 C.E.) with its emphasis on the Islamic conquest of the late Roman Levant, the early Umayyad state, and the continuing development of Christian communities and establishment of new Islamic communities in this region. This course will discuss the different interactions between these two civilizations in art, economics, and social issues. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 323 MIDDLE EASTERN ART IN THE MEDIEVAL PERIOD **3.0: 3 cr. A/F/E**
This course examines the flourishing art of the medieval period. It looks at both military and non-military architecture as well as religious works of art such as icons, mural painting, illumination, and calligraphy. The value of all of these works of human expression will be analyzed both as individual texts and in their relation to the larger world of which they were a part. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 327 DIVISIONS IN THE HISTORY OF THE ORIENTAL CHURCHES 3.0: 3 cr. A/F/E
This course examines the origin and development of divisions within the church in the Near East, emphasizing the impact of political, economic, social, and cultural factors upon theological and dogmatic exegesis and the formation of linguistic and ethnic identities. The study of Christology, philokalia, and the role of ecclesiastical authority will be central to this course. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 329 THE SECOND ARAB NAHDA 3.0: 3 cr. A/F /E
This course examines the intellectual, political, and economic developments that took place in the geographical area of Syria and Egypt in the nineteenth and early twentieth century. It stresses the Western intellectual impact upon Arab thinkers and compares this period with the first Nahda of the Abbasid Empire, when Arab thought came into contact with Greek, Persian, and Hindu traditions. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 331 HISTORY OF MODERN ARAB CITIES 3.0: 3 cr. A/F/E
This course examines traditional theses concerning the decline and disorder of Middle Eastern cities and the role of religious life in defining public and private spaces. It will also review new research and theories, which hope to provide models for the good organization and governance of cities as centers of political power and places of commercial and cultural services. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 332 HISTORY OF ARTISTIC AND SCIENTIFIC DEVELOPMENT UNDER THE ARAB CALIPHATES 3.0: 3 cr. A/F/E
This course challenges the thesis that emphasizes the decline of the Arab Caliphate as concomitant to the flourishing of the sciences and art and advances a thesis that links this period of renewal in philosophy, medicine, astronomy, as well as the arts to other forms of official patronage. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 334 SILK ROADS CONNECTIONS 3.0: 3 cr. A/F/E
This course studies the importance of the Silk Roads as a conveyor belt for the transmission of material goods and cultural traits from Chinese-dominated East Asia, Tibet, South Asia, Southeast Asia, and the Middle East. While every region touched by the Silk Roads experienced fundamental change, this course will emphasize the impact of these interactions on the Arab Mediterranean world. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 335 HISTORY OF THE LEBANESE MIGRATIONS 3.0: 3 cr. A/F/E
This course examines the Lebanese migratory waves of the nineteenth and twentieth centuries. It discusses the Lebanese selection of different migratory destinations in North and South America, Africa, Egypt, and the Gulf States, the impact of the migrants on their new home countries, and the impact of these places on Lebanese social, political, and cultural life in Lebanon and abroad. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 336 THE FRANKS IN THE ARAB WORLD 3.0: 3 cr. A/F/E
This course studies the history of the Crusades and the medieval Frankish kingdoms in the East Mediterranean. It emphasizes the motivations for the Crusades, the clash of West European and East Mediterranean military traditions, and the political, social, and cultural interactions between the invaders and the Levantine population. Finally, it examines the factors behind the survival of these states for roughly two centuries as well as their ultimate demise. In addition to mastering the content of this course, students will develop their critical thinking and communication skills through substantial written assessments.

HIST 398 TOPICS IN MODERN MIDDLE EASTERN HISTORY **3.0: 3 cr. A/F/E**
This course examines a specific historical topic to be announced at the time of offering.

HIST 399 MA Thesis

6 cr. A/F/E

MASTER DEGREE IN MUSEUM STUDIES & CULTURAL HERITAGE MANAGEMENT (MMCM)

VISION & MISSION

We seek to graduate professionals capable of leading and directing centers or institutions that deal with cultural management such as museums, research and archive centers, and art galleries.

The growth of museums throughout the Middle East, the Gulf Region and West Asia Region indicates that there is a new museum paradigm in the 21st Century. This Master Program combines academic, cultural heritage sites' management and museum studies' courses.

WHAT ARE THE MASTER PROGRAM'S OBJECTIVES?

• Offering a complete program including specialized courses in museum studies and practices so that people of the region who wish to work in museums will be able to acquire the skills to do so.

• Securing employment for promising students in museums in the region and throughout the world.

• Furthering the aspirations of Lebanon to be the cultural center of the Middle East in the future.

• Taking full advantage of the museums under construction, which are part of the region as best-practice environments in which to study, learn and work.

WHAT DOES THIS PROGRAM INVOLVE?

The Master program in Museum Studies & Cultural Heritage Management comprises:

33 credits required for graduation:

• Core module (24 cr.):

  o 6 courses (18 cr.)

  o 9-week internship / 40 hours per week: hands-on, practical training (3 cr.)

  o An extended piece of written work - either a Final Research Project or a Directed Applied Research. (3 cr.)

• Optional module (3 courses to be chosen out of 5) (9 cr.)

HOW LONG DOES IT TAKE?

This is a 2-year program for full-time students; it may take a maximum of 4 years for part-time students.

WHAT ARE THE ENTRY REQUIREMENTS?

This program of study is mainly for residents of the Middle East and Arab countries who wish to work in museums, heritage sites and cultural institutions.

Who may join the program:

• BA and BS holders who wish to obtain professional museum qualifications in order to improve their chances for employment in the field.

• Those working or volunteering in museums but lack museum qualifications who wish to gain the knowledge, skills and competencies to undertake museum work at a professional level.

• Corporate professionals seeking to upgrade their technical knowledge and skills for museum work.

Professionals may choose to enroll in one course or more without enrolling in the entire program. They will get a certificate of attendance issued by the University of Balamand.

JOB OPPORTUNITIES

• Museum Director (management)

• Curator (museums, art galleries and exhibitions)

• Archivist

• Museum Education Officer

• Heritage Sites Manager (development & promotion)

• Cultural Center Manager

1. Core Module (24 cr.)

Course #	Course Title
MUSE 310	Theory & History of Museums and Collections
MUSE 352	Management of Museums & Cultural Heritage Sites (CHS)
MUSE 354	Curatorship: Museum Exhibitions, Curational Practice & Planning
MUSE 355	Learning & Public Programming in Museums & CHS
MUSE 356	Conservation & Preservation of Collections & CHS
MUSE 358	Inventories & Archives
MUSE 390	Internship
MUSE 399	Project

2. Optional Module (3 courses to be chosen; 9 cr.)

Course #	Course Title
MUSE 331	Lebanese and Near-Eastern Museums
MUSE 332	Lebanese and Near-Eastern CHS
MUSE 341	Modern and Contemporary art Collections
MUSE 382	Museums and the Law
MUSE 383	Technology in Museums & CHS

COURSE DESCRIPTIONS

MUSE 310: THEORY & HISTORY OF MUSEUMS AND COLLECTIONS 3.0: 3 cr. E
This course is divided into two major parts.
The first part will introduce the students to the history and development of the museum as well as the evolution of its role in our world today. Students will get familiarized with the different types of museums and the individuals involved in the wide range of activities such as the curator, the docents, the audiences, etc.
The second part will be about the museum's collections that will be studied based on their curatorial, research and educational functions. It will mainly cover the ethics and politics of collecting/acquisition, exhibiting/ accessioning, controlling and protecting (security, insurance, disaster plans and risk management), writing plans and policies (copyright, rights and reproductions, loans, shipping etc.), documenting and inventorying. It will also explore the roles and responsibilities of individuals involved with the collections (collections managers, conservators, etc.).

MUSE 331: LEBANESE AND NEAR-EASTERN MUSEUMS 3.0: 3 cr. E
This course will introduce the major museums of Lebanon and its surrounding regions. These institutions will be presented and studied, according to their creation date/circumstances and the type they belong to. The study will cover different themes and the emphasis will be put on the management and the conservation of their collection(s), their cultural/mediation program, as well as the interest and impact they have in their immediate environment/ host country. Even though the focus of this course will mainly be global, some case studies will be deepened especially those with innovative ideas and virtual approaches.
Pre-requisite: MUSE 310.

MUSE 332: LEBANESE AND NEAR-EASTERN CHS 3.0: 3 cr. E
A selection of Cultural Heritage sites of Lebanon and the Near-Eastern area will be thoroughly analyzed during this course. The focus will be on the two aspects of CH, that is tangible, related to the history, archaeology and architecture of each site and intangible, related to oral traditions, locally transmitted history, folk, ancestral/ inherited skills, etc. In addition, conservation, restoration and museology issues, in relation with these sites, will be discussed. Even though the focus of this course will mainly be global, some case studies will be deepened.
Pre-requisite: MUSE 310..

MUSE 341: MODERN AND CONTEMPORARY ART COLLECTIONS 3.0: 3 cr. E
This course offers a brief overview on the international major modern and contemporary art collections and will focus on the local and regional important ones. Since private collections are rarely open to the public, this course will give the student the opportunity to visit some of them. This course will try to explain the direct relationship between art and socio-politics.
Pre-requisite: MUSE 310.

MUSE 352: Museums & Cultural Heritage Sites (CHS) Management 3.0: 3 cr. E
This course will provide students with an understanding of basic management and planning concepts related to museums and cultural heritage sites. Drawing on case studies and on the personal experiences of guest lecturers, the course will introduce students to key topics such as creating, planning, organizing and directing a museum or a CHS. It will provide an introduction to sources of funding, grant writing, business planning, non-profit fiscal management and budgeting. The course will touch on marketing the museum, audience development, and public relations. Students will also be introduced to key legal and ethical issues as they relate to museum management. Many of these topics can be explored further through specialized elective courses. Managing people will also be introduced, in particular staff, guides, docents and volunteers.
Pre-requisite: MUSE 310

MUSE 354: CURATORSHIP: MUSEUM EXHIBITIONS, CURATIONAL PRACTICE AND PLANNING 3.0: 3 cr. E

Curatorship has been a core function of museums since they first emerged, but has evolved over the years as the role of the museum in society has also changed. This course focuses on the role of curators, with a particular focus on their responsibility in creating permanent collection and temporary exhibitions for museums, art galleries, and cultural heritage sites. Traditionally, curators are responsible for the acquisition, research and interpretation, and display of objects with the goal of increasing understanding of objects and communicating that knowledge to visitors. Most early exhibitions were focused solely on the objects, but today many exhibitions aim for a more experiential approach. This course will cover topics such as the ethics of collecting, community involvement, the production of meaning, and the politics of exhibiting. Students will be introduced to the topics of exhibition planning and design, which they can study further in their second year. This course will also look at how the role of curators is changing today, with the emergence of "idea museums," virtual exhibitions, traveling and temporary exhibitions programs, integrated programming, and visitor-created content. *What is the future of curatorship in the 21st century museum?*

Pre-requisite: MUSE 310.

MUSE 355: LEARNING & PUBLIC PROGRAMMING IN MUSEUMS & CHS 3.0: 3 cr. E

Educational and public programming are key functions of almost all museums and cultural heritage sites. What motivates visitors—of all ages—to learn in a museum setting? What kinds of learning experiences can museums offer that are different from traditional educational settings, and how do they complement each other? This course will explore the theoretical background and practical application of communication and learning in museums, so that students will be able to apply this knowledge in designing, delivering, and evaluating their own programs in the future. They will have the opportunity to try out and experiment with new programming strategies during class time, through project work, and on museum visits. Different techniques and media for delivering education and public programs will be explored, including objects, text, design, interactivity, and various forms of technology such as the online experiences, mobile applications, and social media. Students will learn to devise visitor studies and evaluation techniques for audience research, in order to assess if a program is meeting its objectives and encouraging human development and lifelong learning.

Pre-requisite: MUSE 310.

MUSE 356: CONSERVATION & PRESERVATION OF COLLECTIONS & CHS 3.0: 3 cr. E

This course focuses on one of the key challenges that museums and cultural heritage sites—face: conservation and preservation of their resources. This course will approach "resources" broadly, to encompass artifacts, architecture, archaeology, and archival materials. Preventive conservation is extremely important, and means focusing on identifying and quantifying the risks to resources and developing strategies to avoid those risks and possible damages. Students will learn how to handle objects, do condition reporting, and work with conservators. They will also learn about the materials of collections, and how particular materials degrade and react to their environment. The course will also address the ethics involved in conservation. Students will learn how to evaluate the conservation and preservation requirements for the safe exhibition and storage of museum collections, and use of heritage architecture and archaeological sites.

Pre-requisite: MUSE 310.

MUSE 358: INVENTORIES & ARCHIVES **3.0: 3 cr. E**

This main course is the most important one regarding the sustainability of the collections' data. Students will learn about different ways of recording the objects making up the museum's collection. This must be followed by a computerized version. This action makes it possible to outline the collection (Type of items, number, history, etc.). This operation is only effective if it is combined with the marking of each item and later the verification step, which we designate under the term proofing. The proofing consists in "verifying, on document and on site, from a good or its inventory number, the presence of the good in the collections, its location, the state of the good, its marking, the conformity of the entry in the inventory with the property as well as, where applicable, the various documentary sources, archives, work files, catalogs". All this work offers museums the opportunity to learn about the history of the constitution of their collections and to have a "legal" document about the ownership of the object.

Pre-requisite: MUSE 310.

MUSE 382: MUSEUMS AND THE LAW **3.0: 3 cr. E**

This course builds on some of the topics related to museums and the law introduced in the core courses. In this course students will gain a deeper understanding of the legal and ethical issues surrounding museums, cultural heritage sites, and cultural property. Specific topics will include the issues involved with ownership and restitution of stolen art and other cultural property unethically or illegally taken from its owner or country of origin. Examples of reported claims brought against museums will be used to examine current museum policies and procedures on acquisition, exhibition, repatriation, retention and restitution of museum collection objects. These ethical and legal issues are of great importance in this field, and the course will focus on those particularly relevant in Lebanon and the region, for example those associated with archaeological heritage. Other topics to be explored will include intellectual property law, contracts (public tender), governance, the legal structure of museums and heritage sites, and more.

Pre-requisite: MUSE 310.

MUSE 383: TECHNOLOGY IN MUSEUMS & CHS **3.0: 3 cr. E**

New technologies, such as virtual or augmented reality, virtual visits, 3D models, digital catalogues, etc., are some of the new applications used in Museums and CHS. These technologies are considered as one of the tools that leaves an amazing impression on visitors. The more technology is integrated, the more educational, experimental, knowledge, cultural, social and economic values increase and the greater the satisfaction and the experience of the visitors. This course will familiarize the students with these innovative technologies as well as their use, advantages and disadvantages. Pre-requisite: MUSE 310.

MUSE 390 INTERNSHIP **3.0: 3 cr. E**

9-week internship, 40 hours per week. Internships must be primarily hands-on, practical training.
This course is free of charge.

MUSE 399 PROJECT **3.0: 3 cr. E**

A final research Project /Directed Applied Research. Depending on the subject of their research, students may choose to study what is more practical/hands-on, e.g. a study of a particular artifact, cultural heritage site.

DEPARTMENT OF LANGUAGES AND TRANSLATION

Chair of Division: Omar Adra. Ph.D., omar.adra@balamand.edu.lb

Languages of instruction: Arabic, French, and English

The objective of the Department of Languages and Translation is to graduate translators who are specialized in various fields of human knowledge with a high proficiency in the three main languages of instruction, in addition to an optional command of a fourth foreign language.

The curriculum provides the translation student with the efficient translation techniques and methodology from and into Arabic, French and English in the specialized fields of editorial translation, audio-visual translation (subtitling and dubbing), and interpretation along with the appropriate and comprehensive theoretical background to enhance the translator's skills and professional performance.

The program of study leads to the following Graduate degrees:

1. A Translator Diploma
2. A Master in Translation

3. A Master in Interpretation

TRANSLATION GRADUATE PROGRAM (DIPLOMA & MASTER)

1) COMMON COURSES FOR MASTER AND DIPLOMA

TRAN 334	Translation Workshop I	3.0 : 3 cr.
TRAN 335	Translation Workshop II	3.0 : 3 cr.
TRAN 246	Translation Theories	3.0 : 3 cr.
TRAN 355	Translation Technologies	3.0 : 3 cr.

2) MASTER IN TRANSLATION STUDIES / MASTER EN TRADUCTOLOGIE

FASS 300	Research Methodology	3.0 : 3 cr.
TRAN 301	Seminar in Terminology	3.0 : 3 cr.
TRAN 333	Stylistics and Translation	3.0 : 3 cr.
TRAN 345	Readings in Translation Studies	3.0 : 3 cr.
TRAN 346	Translation Theories	3.0 : 3 cr.
TRAN 355	Translation Technologies	3.0 : 3 cr.
TRAN 399	Master Thesis	6 cr.
Total		**30 credits**

3) TRANSLATOR DIPLOMA / DIPLÔME DE TRADUCTEUR:

TRAN 300	Translation Practicum	3.0 : 3 cr.
TRAN 305	Seminar in Economic Translation	3.0: 3 cr
TRAN 306	Seminar in Legal Translation	3.0: 3 cr
TRAN 322	Journalistic Translation	3.0: 3 cr.
Total		**24 credits**

MASTER IN TRANSLATION STUDIES / MASTER EN TRADUCTOLOGIE

FASS 300 RESEARCH METHODOLOGIES (E or F) **3.0: 3 cr. E/F**

Kindly refer to Faculty Service Courses.

TRAN 301 SEMINAR IN TERMINOLOGY **3.0: 3 cr. E/F**

This seminar enlightens on problems of terminology, particularly the general methodology of translation, coordination and standardization of scientific and technical terms.

TRAN 333 STYLISTICS AND TRANSLATION **3.0: 3 cr. E/F**

This seminar addresses the stylistic issue in translation theory and practice. It analyzes translation strategies in the light of the traditional opposition between sourcereers and targeteers and of more recent translation approaches such as the foreignizing approach. It explores stylistic choices and implications on identity and alterity in the rewriting process, mandatory and non-mandatory transformations in translation as well as stylistic norms and innovation.

TRAN 334 Translation Workshop I **3.0: 3 cr. E/F**

The main objective of this seminar is to train students to translate difficult texts and thereby increase their general knowledge base concerning current topics to better familiarize them with terminological research skills and develop their lexicon as translators. The texts will include current journalistic issues ranging from health, cosmetic and cosmetic surgeries, transportation, marketing, sociological issues including such important topics as child abuse, treatment of women, and human rights, to political topics including current international conflicts, defense policies and elections. By the end of this course, the students should have acquired information that will reinforce language skills, enhance vocabulary and terminology.

TRAN 335 Translation Workshop II **3.0: 3 cr. E/F**

The aim of this seminar is to acquaint students with the language of human sciences that range from history, philosophy, psychology, civilization studies to archeology and anthropology. Students will be required to translate texts from these disciplines in the manner and conventions of the discipline. They will be required to solve linguistic problems involved in transferring information from one language to another. The activities involved in this seminar will serve to enrich terminology and develop problem solving skills to tackle the idiosyncrasies of each language.

TRAN 345 READINGS IN TRANSLATION STUDIES **3.0: 3 cr. E/F**

In this seminar, students will read several texts in the field of translation studies, and will be invited to analyze them, and to search for critiques written about them. They will learn how to explore these selected readings, to analyze their major theoretical contribution and to integrate them in a research translation project.

TRAN 346 TRANSLATION THEORIES **3.0: 3 cr. E/F**

In this seminar, students will examine not only major research topics and trends in the field of translation studies like creativity and fidelity, cultural aspects in translation, limits of expression, translator's strategy etc., but also different theorists such as Lederer, Selescovitch, Nida, Schleiermacher, Berman and many others. They will explore their points of view in the field of translation and traductology, and will discover the new ideas they brought to the profession.

TRAN 355 Translation Technologies **3.0: 3 cr. E/F/A**

Computer technologies are currently used in order to optimize the translation quality. Translation memories and softwares help translator work faster and with greater efficiency.

This course will introduce students to Computer Assisted Translation (CAT) with a focus on the use of SDL Trados software leading to SDL international certification. It will also offer an overview of post-editing of files, localization and website translation.

TRAN 399 MASTER THESIS **6 cr. E/F**

TRANSLATOR DIPLOMA / DIPLÔME DE TRADUCTEUR

TRAN 300 TRANSLATION PRACTICUM **3.0: 3 cr. E/F/A**

In this course, translation students submit a written report about their translation experience after 1-month training in a professional environment.

TRAN 305 Seminar in Economic Translation **3.0: 3 cr. E/F/A**

This seminar improves students' skills in translating more specialized economic texts from French and English into Arabic. It deals with the translation of texts and documents ranging from banking operations to balance sheets and monetary reports. The training helps students develop a better understanding of economic translation by becoming familiar with key terms and concepts in various fields of economic activity. It also helps students enrich their economic lexicon, trains them to use appropriate tools such as documentation, glossaries… and carry out terminological research.

TRAN 306 Seminar in Legal Translation 3.0: 3 cr. E/F/A

This seminar trains students to translate legal and diplomatic texts from French and English into Arabic– including UN conferences, and familiarizes them with legal and diplomatic terminologies. Students use appropriate tools such as documentation, glossaries, and do terminological research.

TRAN 322 Seminar in Journalistic Translation **3.0: 3 cr. E/F/A**

This Seminar aims at developing students' knowledge and understanding of some of the most common rules and difficulties of journalistic writing and translating. A translation is a full and accurate reproduction of the original; it should capture the full sense, meaning and style of the original with all its nuances. The style, register and flavor of language in the translation should accurately reflect that of the original. This course will enable the participants to translate meaning, not words and be able to provide an accurate account of what is said in the source text, be consistent and use appropriate register. They will learn how to overcome certain problems in translation such as metaphors, headlines, idiomatic expressions. The texts will include different topics: politics, sociology, pollution, medicine, adds, human rights and different types of journalistic texts such as editorials, articles, news ...

TRAN 334 Translation Workshop I **3.0: 3 cr. E/F**

The main objective of this seminar is to train students to translate difficult texts and thereby increase their general knowledge base concerning current topics to better familiarize them with terminological research skills and develop their lexicon as translators. The texts will include current journalistic issues ranging from health, cosmetic and cosmetic surgeries, transportation, marketing, sociological issues including such important topics as child abuse, treatment of women, and human rights, to political topics including current international conflicts, defense policies and elections. By the end of this course, the students should have acquired information that will reinforce language skills, enhance vocabulary and terminology.

TRAN 335 Translation Workshop II **3.0: 3 cr. E/F**

The aim of this seminar is to acquaint students with the language of human sciences that range from history, philosophy, psychology, civilization studies to archeology and anthropology. Students will be required to translate texts from these disciplines in the manner and conventions of the discipline. They will be required to solve linguistic problems involved in transferring information from one language to another. The activities involved in this seminar will serve to enrich terminology and develop problem solving skills to tackle the idiosyncrasies of each language.

TRAN 346 TRANSLATION THEORIES **3.0: 3 cr. E/F**

In this seminar, students will examine not only major research topics and trends in the field of translation studies like creativity and fidelity, cultural aspects in translation, limits of expression, translator's strategy etc., but also different theorists such as Lederer, Selescovitch, Nida, Schleiermacher, Berman and many others. They will explore their points of view in the field of translation and traductology, and will discover the new ideas they brought to the profession.

TRAN 355 Translation Technologies **3.0: 3 cr. E/F/A**

Computer technologies are currently used in order to optimize the translation quality. Translation memories and softwares help translator work faster and with greater efficiency.

This course will introduce students to Computer Assisted Translation (CAT) with a focus on the use of SDL Trados software leading to SDL international certification. It will also offer an overview of post-editing of files, localization and website translation.

DEPARTMENT OF MASS MEDIA & COMMUNICATION

Chair of Division: Mohamad Rihan, Ph.D., mohamad.rihan@balamand.edu.lb
Language of instruction: Arabic, English

MASTER OF ARTS IN MASS COMMUNICATION

The Department of Mass Communication offers a Master's degree program that provides students with knowledge and skills needed for their career endeavors. With significant emphasis on professionalism and knowledge sharing, the MA program proposes two different emphases: Broadcast Journalism: Film Production and Performance, and Marketing Communication. The curriculum for all specialties is designed to match the growing demand for professionalism and practicality in the media industry in conjunction with the research aspect of graduate degree programs. The MA program produces graduates capable of working in fields such as advertising, public relations, radio/TV, marketing, broadcasting, media advocacy and research.

All MA students have to take a total of 30 credits in order to graduate.

Students register for the final project or thesis in the third and fourth semesters.

I. Major Courses

FASS 300: Research Methodology	3.0 : 3 cr. E
MCOM 304: Theories of Mass Communication	3.0 : 3 cr .E
MCOM 321: Advanced Topics in Mass Communication	3.0 : 3 cr. E
MCOM 380: Mass Communication and Society	3.0 : 3 cr .E

II. Emphasis Courses

4-5 out of 10 courses are required. Courses are offered as determined by the Department

MCOM 308 Film Development of Concept and Preproduction	3.0 : 3 cr. E
MCOM 310 Directing and Production of Feature Film	3.0 : 3 cr. E
MCOM 331 Fundamentals of Broadcasting Journalism	3.0 : 3 cr. E
MCOM 332 Advances in Audiovisual Performances	3.0 : 3 cr. E
MCOM 333 Production of Radio & TV Programs	3.0 : 3 cr. E
MCOM 341 Advances in Electronic Journalism	3.0: 3 cr. E
MCOM 351 Advanced Media Planning & Advertising Campaigns	3.0: 3 cr. E
MCOM 352 Public Relations Campaigns	3.0: 3 cr. E
MCOM 353 Marketing Strategies & Techniques	3.0: 3 cr. E
MCOM 354 Integrated Marketing Communication	3.0: 3 cr. E

III. Thesis/Training Project

MCOM 397: Project and Report	3 cr.
MCOM 399: Thesis	6 cr.

COURSE DESCRIPTION:

CORE COURSES:

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E**

This course intends to familiarize students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing a research paper. At the end of the course, student will submit a research proposal.

MCOM 304 THEORIES OF COMMUNICATION **3.0: 3 cr. F/A/E**

This course explores clusters of theories that govern communication processes. More speciafically, the course focuses on theories related to communication institutions, media power, the content of communication, audience participation in communication, and contexts in which communication processes occur. Wedded to the study of communication theories, the course reflects on methodologies considered necessary for communication research.

MCOM 308 FILM DEVELOPMENT OF CONCEPT AND PREPRODUCTION **3.0 : 3 cr. E**

The course is an in-depth advanced study of who film concepts are created, pitched, and then pre-produced and planned. From creation of concept and understanding audience and market niches and requirements to the detailed process of how to plan a complete preproduction for a feature film; students are required to study theory and then create their own concept and complete preproduction plan.

MCOM 310 DIRECTING AND PRODUCTION OF FEATURE FILM **3.0 : 3 cr. E**

The course examines directing styles and theories as well as the process of directing a feature film which includes production. Students will analyze in depth how to direct actors, plan shooting days, schedule entire film production all from a directors perspective and needs

MCOM 321 ADVANCED TOPICS IN MASS COMMUNICATION **3.0: 3 cr. E**

As the field of mass communication is interdisciplinary, this course will offer a range of topics for discussion such as media ethics and legal issues, discourse analysis, performance studies, media politics and audience/ reception studies. The course is designed to acquaint students acquainted with current developments in mass communication studies.

MCOM 331 FUNDAMENTALS OF BROADCAST JOURNALISM **3.0: 3 cr. E**

This course is designed to provide students with rules and techniques of radio and television news. The course examines rules that govern audiovisual writing, and basic news production techniques. More specifically, the course acquaints students with hierarchies of communication, genres of radio and television writing, approaches to radio and television news coverage, on-air interviewing news alerts and headline writing. The course focuses on textual and visual reports, photo commentary, and critical viewing. As sourcing is a major indicator of fair and balanced journalism, the course discusses how to use the Internet as a source of information, how to authenticate information, and how to treat sources of information. The practical component of this course trains students on different technical processes, such as voice exercises (including diction and breathing), sound recording, voice mixing, and creating a montage.

MCOM 332 ENHANCEMENT OF AUDIOVISUAL PERFORMANCE TECHNIQUES **3.0: 3 cr. E**

This course is designed to further knowledge and skills in aspects of performance for radio, TV and stage. The course aims to improve presenting, interviewing, and reporting skills for radio and television. Among the skills stressed in this course are techniques of radio and television interviews and reports, and their implementation, principles of narratives, the angle of subject construction, and sense of cutting of sequences.

MCOM 333 RADIO & TV PROGRAM PRODUCTION **3.0: 3 cr. E**

This course covers activities in a radio control room and a television studio. The course exposes students to the total operational processes for radio and television programs. It stresses on the real time responsibilities for various tasks in program production, such as music selection, and preparation of program logs. The course offers advanced audio training on sound editing, sound environment, voice practices, recording sound in live conditions, techniques of sound writing, and critical listening. Synchronized with audio training, the course increases students' understanding of the camera and camera shooting techniques, image composition, and critical viewing. Moreover, the course educates students on image post-production, and special effects in production and post-production. It reconsiders the use of equipment necessary for production, such as audio mixer, switcher, microphones and studio lighting.

MCOM 334 TOPICS AND ISSUES IN BROADCASTING **3.0: 3 cr. E**

This course is designed to look into the complex issues surrounding broadcasting. The course aims to stretch students' knowledge about 'hot-button' issues in broadcasting. Among the social issues covered are: television & radio and post-modernity, feminism and broadcasting, broadcasting and the public sphere. The course is designed to examine the social, economic and legal realities in the field of broadcasting, such as ownership of broadcasting organizations, laws and regulations of television and radio. Furthermore, the course may identify the areas of strengths and weaknesses in broadcasting systems in different countries. Professional guest speakers will be invited to provide students with knowledge and experience in relation to their fields of experience.

MCOM 341 TOPICS IN ELECTRONIC JOURNALISM **3.0: 3 cr. E**

This course is designed to advance students' knowledge of and skills in electronic journalism. Looking at Web journalism as a feature of digital culture, the course draws students' attention to differences between traditional and Web journalism, digital culture, and discusses major global trends and issues of information on the Internet. The course stresses the basic techniques of Web journalism, and specialized genres for Web writing. From a practical perspective, the course will explore how advantageous Web 2.0, wiki, and RSS feed software are for electronic journalism. The course explores the current and emerging modes electronic journalism, such as mob-blogs, and photo blogs while improving students' writing skills for electronic news, and it also covers web interviews.

MCOM 342 JOURNALISTIC FORMS AND NEWS WRITING **3.0: 3 cr. E**

The course looks at sources of information, roles of a journalist, treatment of information, general techniques of journalistic writing, and rules of writing a fine news story/article. The course examines characteristics of different types of journalistic forms, such as short news, news story, news report, profile, interview, editorial, the quality of news coverage, news worthiness, questions that make news, and how to write an objective news story. The course also helps students understand how to choose interviewees, how to research information for an interview, types of interview questions, how to take notes during an interview, and how to write an interview.

MCOM 343 NEWSPAPER AND MAGAZINE DESIGN **3.0: 3 cr. E**

This course explores design principles such as unity, contrast, balance, rhythm, proportion, dominance, and movement and techniques that make the design of newspaper and magazines more visual and therefore more creative. The course helps students to situate design issues within a critical context. The course reconsiders the basic techniques of a news story layout, layout and design of headlines, functions of colors, pictures layout and design, items of front newspaper page, layout and design of front newspaper page, magazine cover design, and magazine page design. The course will go beyond regular rules of newspaper and magazine layout and design to discover typographic effects, how to visualize type, and visual combination between type and image. The course relies on desktop publishing software programs and photo-editing programs, such as the Adobe InDesign, the Quark Xpress, and the Adobe Photoshop.

MCOM 344 SEMINAR IN JOURNALISTIC ISSUES **3.0: 3 cr. E**

The main objective of this seminar is to draw students' attention to the issues of current journalistic practices. More specifically, the seminar will tackle issues, such as the treatment of political information, the treatment of environmental issues, treatment of entertainment and sport content, and treatment of judiciary affairs. The seminar will bring in challenging issues related to ownership and control of information, such as news agencies' treatment of information, corporate ownership and journalism partisanship, and major issues of international relations. From a more practical perspective, the seminar examines the coverage of social and economic issues, and objectivity and bias in news coverage. Additionally, the seminar will explore issues related to press institutions in Lebanon.

MCOM 351 ADVANCED MEDIA PLANNING AND ADVERTISING CAMPAIGNS **3.0: 3 cr. E**

Through an inside look at theories and practices, students will be introduced to strategic media planning and the process used to place messages in the right medium which involves writing, editing, production, content creation and circulation in order to reach their specific public. Throughout this course, students will learn how to use audience ratings, media share, frequencies and gross rating points to plan and implement advertising campaigns successfully.

MCOM 352 PUBLIC RELATIONS CAMPAIGNS **3.0: 3 cr. E**

The course will emphasize public relations campaign strategies and will help students implement a PR program while exploring the PR process that includes research, management, programming and evaluation. Through the application of principles, techniques and strategies, the students will have to find solutions for selected real companies or organizations.

MCOM 353 MARKETING STRATEGIES AND TECHNIQUES **3.0: 3 cr. E**

This course takes an in-depth look at the strategies, objectives and tactics used to implement a beneficial marketing campaign. Students will be exposed to the most recent theories, analytical techniques, and the latest practices in the world of marketing. Topics covered will include direct marketing, B2B, creative branding, sales promotion and brand equity management, strategic issues in branding, service quality, customer loyalty. The main objective of this course is to help students focus on the interaction between the process of formulating and implementing marketing strategies and the different stages of the product life cycle.

MCOM 354 INTEGRATED MARKETING COMMUNICATIONS (IMC) **3.0: 3 cr. E**

This course is designed to introduce students to the ways in which the IMC is practiced to ensure high profit relationships with clients. Students will extensively examine how media, advertising, PR, sales promotion and branding come together to achieve marketing objectives. Topics will include the effectiveness of marketing communications, the different types of agencies, advantages and limitations of the IMC perspective, social media and the IMC, the B2B communications. Through discussions and applications, students will examine how the key elements within the marketing communications mix such as advertising, promotion, direct marketing, and public relations can be integrated to deliver the message and reach the objectives.

MCOM 380 MASS COMMUNICATION AND SOCIETY **3.0: 3 cr. E**

This course discusses the complex interplay between mass communication and different varieties of social phenomena such as media violence and politics. As the study of society is concerned with the social status and roles of groups, the course also examines how mass communication corresponds with hegemony in society.

MCOM 397 PROJECT AND REPORT **3 cr.**

A project of a practical or research nature is decided on during the coursework and finalized in consultation with a project supervisor. The project can be an extension or elaboration of an activity or concept that was covered in one of the courses or it can be an original idea generated from the coursework. In short, the project should be explicitly linked to the coursework and not conceived as an add-on component of the Graduate program in Mass Media and Communication.

MCOM 398 PROJECT AND REPORT **6 cr.**

MCOM 399 THESIS **6 cr.**

GRADUATE PROGRAM IN MATHEMATICS

Chair of Division: Joumana Dergham, Ph.D., Joumana.dargham@balamand.edu.lb

1.Mission of the Program

A Master's degree in Computational Mathematics opens new opportunities for students to have a degree that is unique and fills a need that has not been properly addressed by local and, to a large extent, regional universities. In addition, Computational Mathematics is now among the hottest areas of research at both industry and academic levels.

By design, the program has a multi-disciplinary aspect not only in the Faculty of Sciences (Computer Science and Mathematics), but also with the Faculty of Engineering. This is evident in the heavy emphasis on computational methods and numerical simulation as well as in the fact that some of the courses offered in the program are already taught at the graduate level in various Engineering disciplines.

2.Objectives of the Program:

The graduate Program in Mathematics aims to:

1. Develop an in-depth understanding of several Mathematical fields.
2. Enhance the ability to analyze and criticize scientific works.
3. Develop the skills of writing proposals and writing manuscripts for publication.
4. Promote independent thinking and autonomous research.
5. Prepare the student to pursue higher education studies (PhD) or direct integration into the workforce.

3.Learning Outcomes of the Program:

The program offers a rich theoretical content applied in state-of-the-art laboratories. The courses are designed to provide an in depth understanding of the material covered with application to practical problems. This combination of theory and practice makes the program extremely attractive, as graduates of the program are offered a valuable degree with a clear advantage in joining the professional workforce. Upon successful completion of the M.S. Program in Mathematics, degree recipients will be able to perform:

1. Multivariate Statistics and Data Analysis.
2. Numerical Simulation and Finite Elements Analysis.
3. Computational Geometry and Computer Graphics.
4. Digital Image Processing and related applications.
5. Chaotic Dynamical System.
6. Applied Mathematics and Engineering applications.
7. Forecasting using Time Series and Stochastic Models.
8. Evaluation of original research papers in Mathematics and make distinguishable oral presentations to clearly communicate scientific information and personal research results.
9. Handling specialized software, with a good degree of expertise, such as Mathematica, Matlab, SPSS, Eviews and Chaoscope.

4. Rationale for Initiating such Program:

The borderline between Mathematics and Computer Science is getting thinner and thinner as mathematicians depend more and more on computers to solve, simulate, and analyze problems. Since there is no university in Lebanon that offers a degree that bridges the gap between the two disciplines, the Department of Mathematics is proposing a Master's degree in Computational Mathematics. We believe that the program will be attractive to students pursuing a graduate degree in Mathematics and/or related fields due to the existing solid foundation (faculty members and computer labs) on which the program could be launched. This, coupled with the strong job opportunities provided by the program, will make it highly competitive.

5.Career Opportunities:

The program provides potential graduates a wide range of career opportunities in governmental and nongovernmental organizations, local authorities, as well as in financial, industrial and multimedia companies. Moreover, graduates of the program may pursue a PhD degree in Mathematics or related fields.

6.Actuarial Sciences Option:

Students may also choose to specialize in Actuarial Sciences by taking the following four courses:
Math 342 Advanced Inference Statistics
Math 343 Time Series and Forecasting
Math 344 Stochastic Processes with Applications
Math 345 Advanced Financial Mathematics

7.Curriculum:

This is a 4-semester graduate degree requiring a minimum of 30 credits, including a 6-credit Master thesis (or 3-credit Master project plus one 3-credit elective course). The program is suitable for BS holders in Mathematics, Computer Science, or related Engineering disciplines.

Semester 1

Course Code	Course Title	Credits
MATH 320	Chaotic Dynamical Systems	3
MATH 340	Multivariate Statistics	3
MATH 350	Graph Theory and Applications	3
		9

Semester 2

Course Code	Course Title	Credits
MATH 310	Computational Geometry II	3
MATH 311	Digital Image Processing and Applications	3
	Elective 1	3
		9

Semester 3

Course Code	Course Title	Credits
MATH 399/390	Master's Thesis/Master's Project	6/3
	Elective II	3
	Elective III (in case of MATH 390)	3
		9/12

Semester 4

Course Code	Course Title	Credits
MATH 399	Master's Thesis (continued)	-
	Elective IV	3
		3
Total credits		**30**

DEPARTMENT'S ELECTIVE COURSES:

Math 300	Computational Methodologies
Math 312	Biometrics
Math 313	Mathematics of Medical Imaging
Math 314	Advanced Image and Video Processing
Math 321	Fractals and Image Compression
Math 332	Finite Differences, Finite Elements and Applications
Math 341	Neural Networks and Applications
Math 342	Advanced Inference Statistics
Math 343	Time Series and Forecasting
Math 344	Stochastic Processes With Applications
Math 345	Advanced Financial Mathematics
Math347	Machine Learning With Python Applications
Math 355	Game Theory. Decision Analysis and Optimizations
Math 360	Riemannian Geometry

COURSE DESCRIPTIONS
CORE COURSES

MATH 300 COMPUTATIONAL METHODOLOGIES 3.0: 3 cr. E

In this course, students are introduced to key computational techniques used in modeling and simulation of real-world phenomena. The computer- based simulations and modeling are becoming increasingly accepted as viable, efficient, quick, and cost effective means to study real world problems. The emphasis here is not so much on programming technique, but rather on understanding basic concepts and principles. Employment of higher level programming and visualization tools, such as Mathematica or MATLAB, introduces a powerful tool set commonly used by the industries and academia. One of them, or both, will be used as programming platforms for this course. Elements of computer visualization and Monte Carlo simulation will be discussed.

MATH 310 COMPUTATIONAL GEOMETRY II 3.0: 3 cr. E

3D geometrical modeling of curves and surfaces; Bezier, B-Spline and NURBS modeling; hidden surface elimination algorithms (Painter algorithm, Robert algorithm, Z-buffer algorithm); color theory, illumination and shading models, rendering, texture; introduction to ray tracing; morphing; virtual reality.
Project in C++ or Java.

MATH 311(CSIS 350) DIGITAL IMAGE PROCESSING AND APPLICATIONS 3.0: 3 cr. E

Image acquisition and storage; imaging geometry: transformations and camera models; image transforms: Fourrier Transform and Fast Fourrier Transform; image enhancement in frequency domain and spatial domain; image restoration, compression and segmentation.
Project in C++ or Java.

MATH 312 BIOMETRICS 3.0: 3 cr. E

Biometrics deals with identification of individuals based on their biological or behavioral characteristics. This course lays out the basics of biometric concepts, techniques, tools, and applications to recognize or verify the identity of individuals from traits of the face, voice, fingerprints, retina, iris, signatures, and hand geometry, among other modalities. Multi-modal biometric systems that use two or more of these characteristics are discussed. Biometric system performance and issues related to the security and privacy aspects of these systems are also addressed.
Prerequisites: Graduate standing, or senior standing with the permission of the instructor or department. A background in probability and statistics, pattern recognition and image processing would be useful.

MATH 313 MATHEMATICS OF MEDICAL IMAGING 3.0: 3 cr. E

At the heart of every medical imaging technology is a sophisticated mathematical model of the measurement process and an algorithm to reconstruct an image from the measured data. This course provides a firm foundation in the mathematical and physical tools used to model the measurements and derive the reconstruction algorithms used in most imaging modalities like X-ray computed tomography, nuclear medicine (SPECT/PET), and magnetic resonance imaging (MRI). In the process, it also covers many important analytic concepts, and techniques used in Fourier analysis, integral equations, sampling theory, and noise analysis. Moreover, this course treats several numerical applications simulating the process of medical image reconstruction.

MATH 314 - ADVANCED IMAGE AND VIDEO PROCESSING 3.0: 3 cr. E

This is an advanced course that provides students with an insight to advanced digital image and video processing theory and techniques. Topics include: Image and video compression, spatial processing, image restoration, image segmentation, Geometric PDE's, image and video inpainting, sparse modeling and compressed sensing, and medical imaging.

MATH 320 CHAOTIC DYNAMICAL SYSTEMS 3.0: 3 cr. E

Hyperbolicity; symbolic dynamics, topological conjugacy, chaos,; Sarkovskii's theorem; bifurcation theory, maps of circle, the period-doubling route to chaos; kneading theory, horseshoe map; hyperbolic toral automorphism.
Applications with Mathematica software.

MATH 321 FRACTALS AND IMAGE COMPRESSION 3.0: 3 cr. E

Metric spaces, transformations on metric spaces; contraction mapping chaotic dynamics on fractals; fractal dimensions, fractal interpolation; Julia sets and Mandelbrot sets; measures on fractals; iterated function system.
Applications with Chaoscope software.
Prerequisite: MATH 320.

MATH 332 FINITE DIFFERENCES, FINITE ELEMENTS AND APPLICATIONS 3.0: 3 cr. E

The finite difference methods approximate a partial differential equation problem by an algebraic problem through the replacement of the derivatives by finite differences as given by Taylor series expansion. The finite element methods approximate the solution of a partial differential equation by a numerical solution that belongs to a finite dimensional vector space of known basis.

MATH 340 MULTIVARIATE STATISTICS 3.0: 3 cr. E

Multiple regression; factor analysis; principal components analysis; hierarchical cluster and k-means.
Applications with SPSS software.

MATH 341 (CSIS362) NEURAL NETWORKS AND APPLICATIONS 3.0: 3 cr. E

Neural dynamics: architecture and signals, activation model, unsurprised learning, surprised learning, architectures and equilibrium. The Hopfield model and recurrent networks. The self- organizing map. Adaptive resonance theory.
Project in C++ or Java.

MATH 342 ADVANCED INFERENCE STATISTICS 3.0: 3 cr. E

The course covers the following topics: Probability distribution: T (Student), X2(Pearson), and F(Fisher) distributions. The sampling theory, the central limit theorem. The estimation theory: confidence interval, estimation of the mean and variance from one sample, Estimation of the difference of means from two samples, Estimation of the ratio of variances from two samples, estimation of proportions, Bayesian estimation and Maximum likelihood estimation. Hypothesis test: The null and alternative hypothesis, level of significance, critical values, p-values, comparing the difference between 2 means, comparing several means, analysis of variance ANOVA .comparing the ratio of 2 variances. Nonparametric tests. Regressions and multiple regressions.
Applications with Excel and SPSS software.

MATH 343 TIME SERIES AND FORECASTING 3.0: 3 cr. E

Least squares smoothing and prediction; linear systems; Fourier analysis, and spectral estimation; impulse response and transfer function; detection of seasonality, autocorrelation function, Fisher method; exponential smoothing, Holt-Winters methods; AR, MA , ARMA processes.
Applications with Eviews software.
Prerequisite: MATH 340.

MATH 344 STOCHASTIC PROCESSES WITH APPLICATIONS 3.0: 3 cr. E

This course introduces students to stochastic process using: probability theory, both discrete and continuous time Markov chains, diffusion processes and stochastic differential equations, random walk, martingale, first passage time, and Brownian motion.

MATH 345 ADVANCED FINANCIAL MATHEMATICS 3.0: 3 cr. E

This course Introduces students to financial derivatives, applications of discrete and continuous time models in finance, pricing models, Martingales representation theorem, Black-Scholes using partial differential equations in comparison to Martingales.

MATH 346 RISK THEORY 3.0: 3 cr. E

Risk Theory course will be introduced by a short review on some probabilistic results. Then, we will develop individual and aggregate risk models. In addition, Discrete and continuous ruin models will be elaborated. Applications on computing insurance premiums, Value at risk and Markowitz financial approach close the course. This course will be a transition from the theory of arbitrary phenomena to its practical application, needed in different financial and insurance sectors

MATH 347 MACHINE LEARNING WITH PYTHON APPLICATIONS 3.0: 3 cr. E

Machine learning uses interdisciplinary techniques such as statistics, linear algebra, optimization, and computer science to create automated systems that can sift through large volumes of data to make predictions or decisions without human intervention.. This class will familiarize students with models and algorithms for machine learning Techniques: Data Preprocessing; Linear regression; Classification and clustering techniques; nearest neighbor methods; Probability and classification; Decision tree; Unsupervised learning: Clustering, k-means, hierarchical agglomeration; support vector machines (SVM) Time series; Markov models; autoregressive models; Introduction to Deep Learning; Data Science and application with Python.

MATH 350 GRAPH THEORY AND APPLICATIONS 3.0: 3 cr. E

This course focuses on the mathematical theory of graphs; Topics include trees, connectivity, Eulerian and Hamiltonian graphs, matchings, edge and vertex colorings, independent sets and cliques, planar graphs and directed graphs; graph coloring; algorithms and complexity; embedding graphs on surfaces; graph minors; probabilistic methods and random graphs. Applications with Mathematica software.

MATH 355 GAME THEORY. DECISION ANALYSIS AND OPTIMIZATIONS 3.0: 3 cr. E

Game Theory is the mathematical modeling of strategic interaction among rational (and irrational) agents. It includes the modeling of competition among firms, conflict among nations, political campaigns, and trading behavior in markets. This course covers the following topics: Uses of game theory, some applications and examples, strategies, pure strategy Nash equilibrium, dominated strategies, mixed-strategy Nash equilibria, theorem for zero-sum game, correlated equilibria, repeated games, Stochastic games and learning, Bayesian games.

MATH 360 RIEMANNIAN GEOMETRY **3.0: 3 cr. E**

Riemannian Geometry provide an important tool in modern mathematics impacting on diverse areas from the pure to the applied. The objects of this course are smooth manifolds equipped with extra structures that provide geometric information. In particular, we will study a manifold with a Riemannian metric that allows measurement of quantities such as distance and angle, and an affine connection. This course describes the notion of geodesics and curvature and analyzes manifolds with constant curvature, with a focus on the sphere and hyperbolic space.

MATH 390 MASTER'S PROJECT **3.0 cr. E**

Under exceptional circumstances, or in response to specific opportunities in the industry, students may be advised to complete a Master's Project instead of the Thesis. In such case, the student will complete the 3 credit balance with a course chosen from the list of department electives or the courses available in the Faculty. A Project should be completed within one academic semester, but may be extended over one additional semester.

MATH 399 MASTER'S THESIS **6.0 cr. E**

The research part of the MSc program is represented by the thesis which is undertaken with the supervision of a full-time Faculty member. A thesis must embody original research and is defended before a Jury, upon completion of the research work. The thesis must be completed within two regular semesters, but may be extended for two additional semesters.

DEPARTMENT OF PHILOSOPHY

Chair of Division: Mohamad Rihan, Ph.D., Mohamad.rihan@balamand.edu.lb

GRADUATE COURSES IN PHILOSOHPY

PHIL 316 SEMINAR ON GOD AND METAPHYSICS. 3.0: 3 cr. E/F
This seminar examines some major texts dealing with God and metaphysics.

PHIL 317 TOPICS IN CONTEMPORARY PHILOSOPHY I. 3.0: 3 cr. E/F
This course is dedicated to the study of Husserlian phenomenology. It shows through deep analysis of the main concepts of this stream how the phenomenological reduction determines a delimited area of research.

PHIL 318 EXISTENTIALISM FROM KIERKEGAARD TO SARTRE 3.0: 3 cr. E/F
The Danish philosopher Kierkegaard occupies a singular place in philosophy as the precursor of existentialism and an innovator in Protestant theology. His thought is in direct opposition to the Hegelian System. This course examines his thought. Particular attention will be given to the comparison of this Christian existentialism to the atheist one of Sartre.

PHIL 319 TOPICS IN CONTEMPORARY PHILOSOPHY II 3.0: 3 cr. E/F
This course examines the works of Heidegger and the question of being. The traditional problems of philosophy: God, Art, Truth, Liberty, Death are reviewed in the light of his major work, "Being and Time".

PHIL 320 SEMINAR ON PHILOSOPHY AND LITERATURE 3.0: 3 cr. E/F
This seminar studies philosophical concepts as presented through literary texts.

PHIL 321 SEMINAR ON PHILOSOPHY AND POST-MODERNISM 3.0: 3 cr. E/F
The objective of this course is to study the different critiques of Modernity through the works of Bataille, Derrida, Deleuze, Rorty, Habermas and others.

PHIL 322 SEMINAR IN CLASSICAL ISLAMIC PHILOSOPHY 3.0: 3 cr. E/F
A study of a topic or a theme or a philosopher or more, chosen from the classical Islamic philosophical tradition.

PHIL 323 SEMINAR IN MODERN ARAB AND ISLAMIC THOUGHT SÉMINAIRE 3.0: 3 cr. E/F
A study of a special topic i.e. the resurgence of salafism and the concept of revolution in the Modern Arab and Islamic thought will be the major point of this seminar.

PHIL 324 SPECIAL PHILOSOPHIC TOPICS 3.0: 3 cr. E/F
To be chosen in light of academic needs and opportunities.

DEPARTMENT OF PHYSICAL EDUCATION

Chair of Division: Maureen Nicolas, Ed.D., maureen.nicolas@balamand.edu.lb

Language of instruction: French/Arabic or English/Arabic

The Department offers three tracks in the MA graduate program:

***Physical Activity and Health** in Collaboration with Université Littoral du Côte d'Opale, France.

A- MASTER'S DEGREE IN PHYSICAL CONDITIONING

The Department of Physical Education offers a master's degree in physical conditioning. The objectives of the program are to develop skills and knowledge in physical training and coaching so that students can be in charge of the physical preparation of high-level athletes and or team sports at the national and the international levels.
The curriculum of the program consists of 30 credits:
•Research methodology: FASS 300 (3 credits)
•Specialty courses in physical conditioning: PHED 365, PHED 366, PHED 367, PHED 368, PHED 369, PHED 376, PHED 378 (21 credits)
•Master Thesis: PHED 399 (6 credits)

Note: Candidates for the program holding a BA in Physical Education are eligible for the program. Candidates for the program holding a BA in majors other than Physical Education are required to take certain prerequisite courses. The number of courses is fixed by the Admission Committee of the Department.

COURSE DESCRIPTION

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E/F**
This course offers an overview of the different concepts of the scientific research. Students analyze research reports, theses, articles and training programs in order to be familiar with the methods, the hypotheses, the techniques and the statistics used in applied research related to sports. At the end of this course, students should be able to create a personal research project using appropriate techniques.

PHED314 SPECIAL TOPICS IN PHYSICAL EDUCATION **1.0: 1 cr. E/F**
This course is designed to give students access to contemporary topics in Physical Education. Local and international research trends in the field will be explored.

PHED 365 SPORTS PHYSIOLOGY **3.0: 3 cr. E/F**
This course explains the major adaptations of the body to physical training. The students will learn the major adaptations of the main functions (cardiovascular, respiratory, endocrinal and muscular) in response to all types of exercises and physical training programs (strength, speed and endurance). Finally, this course will develop the effect of force-velocity training on the central nervous system.

PHED 366 ASSESSMENT AND DEVELOPMENT OF FORCE-VELOCITY QUALITIES 3.0: 3 cr. E/F
This course enables students to fully understand the different concepts of strength, power and velocity and the ways to evaluate these qualities for each sport on the field and in the laboratory. Moreover, this course develops all the different methods to increase force, velocity and power in athletes.

PHED 367 ASSESSMENT AND DEVELOPMENT OF ENDURANCE QUALITIES 3.0: 3 cr. E/F
This course enable students to fully understand the different types of endurance (fundamental endurance, repeated sprint ability, strength endurance) and the methods used to evaluate these qualities for each sport on the field and in the laboratory.

PHED 368 PHYSICAL TRAINING UNDER EXTREME CONDITIONS 3.0: 3 cr. E/F
This course explains the major adaptations of the body under extreme conditions and focuses on the training methods that use extreme conditions to increase the physical capacities of the athletes (under-water training, cold exposure, altitude training, camps and heat training-sessions).

PHED 369 PROGRAMMING OF TRAINING 3.0: 3 cr. E/F
In this course, students learn how to create a physical training program. Indeed, after studying the different methods of training and the recovery procedures, the students will learn the concept of programming (short term and long term). Finally, the students are informed about sport career management in different sports.

PHED 376 COACHING 3.0: 3 cr. E/F
This course aims at preparing the students to understand the importance of the psychological aspect on the physical performance. This course develops the concepts of mental preparation, coping, relaxation, etc. Moreover, the trainer-trainee relation is studied in order to improve the performances of the athletes during training and in competition. Finally, the students are taught team-management strategies.

PHED 377 PROGRAMMING THE RECOVERY OF ATHLETES 3.0: 3 cr. E/F
This course enables students to learn the different methods of recovery. This course includes practical and theoretical sessions and also explains the methods of programming of recovery during a week, a season and a year.

PHED 378 SPORTS NUTRITION 3.0: 3 cr. E/F
This course is a comprehensive exploration of sports nutrition. It enables students to understand the complex relations existing between nutrition and physical performance. Discussions are centered on valid and ethically-accepted findings of the scientific community. Students will learn about the pharmacological, chemical and nutritional factors that underly enhanced physical performance.

PHED 380 FIELD PROJECT 3.0: 3 cr. E/F
The field project is pursued in a sports institution where the students have to solve problems and apply their knowledge about physical conditioning for a period of 4 to 6 months. Students are required to propose programs for a group of athletes and then implement these programs; they are also expected to conduct a follow-up exercise to their programs. At the end of the intervention, the students have to present a report on the results obtained by the athletes participating in their programs.

OFFERING ORDER – MA COURSES

SEMESTER 1

PHED 365	Sports physiology
PHED 366	Assessment and development of force-velocity qualities
PHED 376	Coaching

SEMESTER 2

PHED 367	Assessment and development of endurance qualities
PHED 368	Physical training under extreme conditions
PHED 378	Sports Nutrition

SEMESTER 3

PHED 369	Programming of Training
FASS 300	Research Methodology
PHED399	MA Thesis

SEMESTER 4

PHED399	MA Thesis

B. MASTER PROGRAM OF PHYSICAL ACTIVITY AND HEALTH

The Department of Physical Education offers a new Master program entitled Physical Activity and Health. It prepares students to apply their knowledge in physical activity to improve and manage health. Students are expected to implement, develop and evaluate strategies aimed at maintaining and improving health in special populations. Their role will be to work in collaboration with a group or multidisciplinary network in order to maintain or improve the quality of life and the health of concerned people in need.

The curriculum of the Master program consists of 30 credits.
•Research Methodology: FASS 300 (3 credits)
•Specialty courses in Physical Activity, Health, and Physiology of Sports: PHED 340, 341, 342, 362, 364,365, and 378 (21 credits)
•Master Thesis: PHED 399 (6 credits)
Note: Candidates for the program holding a BA in physical education or in any other major from a university other than Balamand are required to take certain prerequisite courses. The number of courses is fixed by the Admission Committee of the Department.

COURSE DESCRIPTION

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E/F**
This course offers an overview of the methodology of scientific research. Students will analyze research reports, theses, articles and training programs in order to be familiar with the methods, the hypotheses, the techniques and the statistics used in applied research related to sports. By the end of the course, students should be equipped to create a personal research project using appropriate techniques.

PHED 340 HEALTH ASSESSMENT **3.0: 3 cr. E/F**
This course helps students to become familiar with health assessment methods. Students are expected to evaluate the physical and mental health of a sedentary person as well as the physical and psychological qualities of athletes.

PHED 341 HEALTH AND PHYSICAL ACTIVITY **3.0: 3 cr. E/F**
This course teaches students the role of physical activity in the management and maintenance of health. It is composed of two sections: the first is dedicated to the concepts of physiology and biomechanics as well as Pathophysiology; the second will review practical modalities.

PHED 342 SPORTS AND REHABILITATION **3.0: 3 cr. E/F**
This program takes an interdisciplinary approach to the study of sports and sports-related injury rehabilitation, and aims to enhance students' understanding of the scientific principles underpinning preparation for, participation in, and recovery from sport and exercise. It develops applicants' understanding of current theory, research and debate in sports therapy and rehabilitation, and gives them the opportunity to conduct an in-depth enquiry into their chosen areas of interest. There are practical components within most of the modules. In practice, students are expected to know how to accelerate the recovery process of an athlete or to restore normal functions as much as possible for a subject who has become handicapped due an accident.

PHED 344 EXERCISE, SEDENTARY BEHAVIOR, AND AGING **3.0:3 cr. E/F**
This course deals with the physiology of aging. It discusses the health complications of sedentary behavior, which is highly associated with obesity. The course also emphasizes the role of physical activity in prevention and management of diseases, especially those related to aging.

PHED 345 LIFESTYLE BEHAVIOR AND HEALTH **3.0: 3 cr. E/F**
This course is designed to provide students with the basic principles for developing health promotion programs for subjects with various pathological disorders (cardiovascular, metabolic, and psychological disorders). It emphasizes the importance of fitness therapy in the prevention and management of diseases.

PHED 362 ESTABLISHMENT OF SPORTS ENTERPRISE **3.0: 3 cr. E/F**
This course discusses the different stages involved in the establishment of an enterprise. Students are expected to create their individual projects.

PHED 364 STRATEGY OF SPORTS AND LEISURE PROJECTS **3.0: 3 cr. E/F**
The objective of this course is to study and understand the key strategic action models. To do so, the student should be able to evaluate issues of the corporate enterprises (especially sport enterprises) and apply the appropriate models. The purpose of this course is to train students to adopt a strategic culture. Case illustrations in the sports companies will strengthen the understanding of the different theories.

PHED 365 SPORTS PHYSIOLOGY **3.0: 3 cr. E/F**
This course explains the major adaptations of the body to physical training. The students will learn the major adaptations of the main functions (cardiovascular, respiratory, endocrinal and muscular) in response to all types of exercises and physical training programs (strength, speed and endurance). Finally, this course will develop the effect of force-velocity training on the central nervous system.

PHED 378 SPORTS NUTRITION **3.0: 3 cr. E/F**
This course is a comprehensive exploration of sports nutrition. It enables students to understand the complex relations existing between nutrition and physical performance. Discussions are centered on valid and ethically-accepted findings of the scientific community. Students will learn about the pharmacological, chemical and nutritional factors that underly enhanced physical performance.

PHED 399 MASTER THESIS **6 cr. E/F**
The thesis topic is selected on observations carried out by the student. It is subject to the approval of an appointed advisor and must accord with the research strategy of the department.

OFFERING ORDER

SEMESTER 1

PHED 340	Health Assessment
PHED 362	Establishment of Sports Enterprise
PHED 365	Sports Physiology

SEMESTER 2

PHED 341	Health and Physical Activity
PHED 364	Strategy of Sports and Leisure Projects
PHED 378	Sports Nutrition

SEMESTER 3

FASS 300	Research Methodology
PHED 342	Sports and Rehabilitation
PHED 399	Master Thesis

SEMESTER 4
PHED 399 Master Thesis (reactivation)

C. MASTER PROGRAM IN SPORTS MANAGEMENT

This Program offers students a firm understanding of basic business principles through introductory courses in finance, leadership, organizational behavior and economics. These courses will form the foundation for more specialized programs of study that may require students to take courses in topics like sport law, sport marketing, management of sport, and sports economics.

This program of study is designed to give students a well-balanced view of the sports industry from a business perspective, allowing them to apply general business principles to the sports industry. Graduates should emerge with the proper knowledge, skills and abilities to operate and manage sports businesses and organizations. A degree in Sports Management can lead to many different careers, such as business leader, product manager, brand manager, franchise director, advertising manager, marketing consultant and analyst.

The curriculum of the Master Program in Sports Management consists of 30 credits.

•Research Methodology: FASS 300 (3 credits)
•Core courses: PHED 341, 351, 353, 357, 358, 362, 363, 364, 380
Note: Candidates for the program holding a BA in physical education or in any other major from a university other than Balamand are required to take certain prerequisite courses. The number of courses is fixed by the Admission Committee of the Department.

COURSE DESCRIPTION

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E/F**
This course offers an overview of the methodology of scientific research. Students will analyze research reports, theses, articles and training programs in order to be familiar with the methods, the hypotheses, the techniques and the statistics used in applied research related to sports. By the end of the course, students should be equipped to create a personal research project using appropriate techniques.

PHED 341 HEALTH AND PHYSICAL ACTIVITY **3.0: 3 cr. E/F**
This course teaches students the role of physical activity in the management and maintenance of health. It is composed of two sections: the first is dedicated to the concepts of physiology and biomechanics as well as Pathophysiology; the second will review practical modalities.

PHED 351 SPORTS ECONOMICS **3.0: 3 cr. E/F**
This course helps students understand the economic aspects of sports in general (sports events, fan demand, and team output decisions). Students are expected to identify and analyze the positive and negative aspects of sports organizations.

PHED 353 SPORTS ORGANIZATIONS MANAGEMENT **3.0: 3 cr. E/F**
This course discusses how organizations interact with each other. It addresses issues and approaches that should be taken into account when deciding. The strategic direction of sports organizations, and how such strategic directions can be most effectively implemented. Students can also identify the strengths and weaknesses of these organizations.

PHED 357 SPORTS MARKETING **3.0: 3 cr. E/F**

This course helps students understand the relation between the consumer and the product as well as the effect of marketing on this relation. Students are expected to analyze markets through the use of different tools (4P, SWOT analysis….).

PHED 358 ACCOUNTING AND BUSINESS **3.0: 3 cr. E/F**

This course introduces the concepts of financial statement analysis and explains how to recognize the way expenditures and incomes are distributed. In addition, students are expected to analyze financial statements and locate weaknesses and provide solutions.

PHED 362 ESTABLISHMENT OF SPORTS ENTERPRISE **3.0: 3 cr. E/F**

This course discusses the different stages envolved in the establishment of an enterprise. Students are expected to create their individual projects.

PHED 363 SOCIOLOGY OF SPORTS ORGANIZATIONS **3.0: 3 cr. E/F**

This course introduces to students the way the public responds to sport. It examines current research into the evolution of physical education and sports, as well as the different sports interests of the public. The sociological dimension of human movement is also considered.

PHED 364 STRATEGY OF SPORTS AND LEISURE PROJECTS **3.0: 3cr. E/F**

The objective of this course is to study and understand the key strategic action models. To do so, the student should be able to evaluate issues of the corporate enterprises (especially sport enterprises) and apply the appropriate models. The purpose of this course is to train students to adopt a strategic culture. Case illustrations in the sports companies will strengthen the understanding of the different theories.

PHED 380 FIELD PROJECT **3.0: 3 cr. E/F**

This course allows students to tackle a specific problem in sports management. The student joins a sports organization for a period of 3 to 4 months. He/she selects and studies an aspect of the organization that needs improvement. Practical training is supervised by a training coordinator. At the end of the course, the student submits a report and delivers a presentation describing his/her experience and defending his/her conclusions and recommendations.

OFFERING ORDER

SEMESTER I

PHED 358	Accounting and Business
PHED 362	Establishment of Sports Enterprise
PHED 363	Sociology of Sports Organizations

SEMESTER II

PHED 341	Health and Physical Activity
PHED 357	Sports Marketing
PHED 364	Strategy of sports and leisure projects

SEMESTER III

FASS 300	Research methodology
PHED 353	Sports Organizations Management
PHED 380	Field Project: Practical training

SEMESTER IV

PHED 351	Sports Economics

PHED 380 (reactivation) Field Project: Practical training

DEPARTMENT OF POLITICAL SCIENCE AND INTERNATIONAL AFFAIRS (PSIA)

Chair of Division: Mohamad Rihan, Ph.D., mohamad.rihan@balamand.edu.lb

Language of Instruction: English.

The Department of Political Science and International Affairs offers the following degrees:

1. Bachelor of Arts Degree (BA) in Political Science and International Affairs.
2. Master of Arts Degree (MA) in Middle Eastern and Mediterranean Politics.
3. Minor in Political Science and International Affairs.

The general objectives of the department are:

- Enabling students to gain comprehensive and critical understanding of politics based on a solid methodological and theoretical background.
- Providing students with adequate skills to comprehend concepts, address issues, and use techniques that deal with various topics, including political analysis, negotiations and conflict resolution, national and local governments, public administration, citizenship, political participation, democracy, development, elections, Mediterranean politics, and international relations.
- Preparing students to work professionally in various positions at the private and public sectors, media, public relations, local and international NGOs and organizations, Foreign Service, research facilities, and advance in their graduate studies.

MASTER PROGRAM IN POLITICAL SCIENCE AND INTERNATIONAL AFFAIRS

Graduate students in the Middle Eastern and Mediterranean Politics program are required to take 24 credits in Middle Eastern and Mediterranean Politics courses numbered 300 and above. Three of these courses are mandatory: FASS 300, PSIA 301 and PSIA 302. Students should also complete a thesis equivalent to six credits. The total number of credits for graduation is 30 credits. Graduate courses are normally offered as seminars.

Applicants to the graduate program in Middle Eastern and Mediterranean Politics should hold a Bachelor degree in Political Science with a minimum average of 80. Students whose average falls slightly below eighty may be accepted on probation. Students from other disciplines may be accepted in the program on probation and could be required to take few undergraduate courses in the department.

MASTER DEGREE REQUIREMENTS

CORE COURSES:

The MA student is required to take FASS 300, PSIA 301, PSIA 302:

Course Code	Course Title	Credit
FASS 300	Methodology and Research Techniques	3
PSIA 301	Theories of Comparative Politics	3
PSIA 302	Theories of International Relations	3
Total Mandatory Credits		**9**

ELECTIVE COURSES:

The MA student is required to take five of the following courses:

Course Code	Course Title	Credit
PSIA 303	Identity Politics in the Middle East	3
PSIA 304	Political Economy of the Mediterranean Basin	3
PSIA 306	The European Union, the Arab League and the Mediterranean Partnership Project	3
PSIA 308	State and Development in the Mediterranean	3
PSIA 310	Democracy and Civil Society in the Mediterranean	3
PSIA 312	The Arab-Israeli Conflict	3
PSIA 314	Gender and Politics in the Mediterranean	3
PSIA 316	Emigration/Immigration in the Mediterranean	3
PSIA 318	Politics of Development in the Middle East	3
PSIA 320	Discrimination and Conflict in the Mediterranean	3
PSIA 322	Trends in Contemporary Arab Thought	3
PSIA 350	Topics in Middle Eastern and Mediterranean Affairs	3

Master Thesis

PSIA 399	Thesis	6

COURSE DESCRIPTION

CORE COURSES

FASS 300 METHODOLOGY AND RESEARCH TECHNIQUES 3.0: 3 cr. E

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course student will submit a research proposal.

PSIA 301 THEORIES OF COMPARATIVE POLITICS 3.0: 3 cr. E

The course provides a critical study of the major paradigms, theories, approaches and concepts in comparative politics.

PSIA 302 THEORIES OF INTERNATIONAL RELATIONS 3.0: 3 cr. E

The course critically appraises the major theories of international relations and devotes special attention to the 'Great Debates' that have helped in shaping this discipline.

ELECTIVE COURSES

PSIA 303 IDENTIT POLITICS IN THE MIDDLE EAST 3.0: 3 cr. E

The course addresses in a comparative manner the politics of identity associated with social divisions (such as ethnicity, sect, race, gender, and class) in the Middle East, looking for the causes, nature, functions and impact of these divisions over its respective societies.

PSIA 304 POLITICAL ECONOMY OF THE MEDITERRANEAN BASIN 3.0: 3 cr. E

The course examines the political economy of the Mediterranean at both the international and regional levels in light of the current and emerging trends of economic and political activities among its states.

PSIA 306 THE EUROPEAN UNION, THE ARAB LEAGUE AND THE MEDITERRANEAN PARTNERSHIP PROJECT 3.0: 3 cr. E

This course explores the possible nature and function of a Mediterranean structure in relation to two other regional settings, the European Union and the Arab League.

PSIA 308 STATE AND DEVELOPMENT IN THE MEDITERRANEAN 3.0: 3 cr. E

The course provides a comparative and comprehensive understanding of the social, political, and economic factors that lead to the development of Mediterranean states.

PSIA 310 DEMOCRACY AND CIVIL SOCIETY IN THE MEDITERRANEAN 3.0: 3 cr. E

The course addresses in a comparative manner the viability and role of civil society in the Mediterranean and analyzes their impact over the spread of democracy, taking few states as case studies.

PSIA 312 THE ARAB-ISRAELI CONFLICT 3.0 : 3 cr. E

The course examines the different problems and challenges that the Arab-Israeli conflict imposes on the future of the region and its development.

PSIA 314 GENDER AND POLITICS IN THE MEDITERRANEAN 3.0: 3 cr. E

The course addresses gender divisions in the Mediterranean. It provides a comparative analysis of the socioeconomic, political, and cultural dimensions of these divisions and examines the development of women's activism throughout the basin.

PSIA 316 EMIGRATION/IMMIGRATION IN THE MEDITERRANEAN 3.0: 3 cr. E

The course examines emigration and immigration within the Mediterranean and its impact over countries at each end of the process on political, social, and economic levels.

PSIA 318 POLITICS OF DEVELOPMENT IN THE MIDDLE EAST 3.0: 3 cr. E

The course addresses in a comparative manner the varying patterns of development among states of the Middle East and analyzes its successes and/or failures.

PSIA 320 DISCRIMINATION AND CONFLICT IN THE MEDITERRANEAN 3.0: 3 cr. E

The course examines the significant relationship between discrimination and conflict in its different forms throughout the Mediterranean, addressing it first at the theoretical level and applying that in a comparative manner to few cases in the basin

.

PSIA 322 TRENDS IN CONTEMPORARY ARAB THOUGHT 3.0: 3 cr. E

The course covers major contemporary cultural issues and intellectual trends in the Arab World. It addresses their sources, impact on their societies, and situates them within changing global trends.

PSIA 350 TOPICS IN MIDDLE EASTERN AND MEDITERRANEAN AFFAIRS 3.0: 3 cr. E

The course addresses a significant topic in political science and/or international affairs of the Middle East and the Mediterranean not covered in the listed class offerings.

DEPARTMENT OF PSYCHOLOGY

Chair of Division: Maureen Nicolas, Ed.D., maureen.nicolas@balamand.edu.lb

The objective of the Department of Psychology is to graduate students to become practitioners in psychology.

The program of study leads to Master of Arts in Clinical Psychology or Clinical, Developmental Psychology.

MISSION STATEMENT

The principal aim of the Master Program in Clinical Psychology is to train students to become competent "scientific" psychotherapists—highly skilled and ethical practitioners of clinical psychology—who contribute responsibly to their communities and science.

We adhere to the "scholar-practitioner" model of training, where the trainee develops not only clinical but also science skills, especially critical and methodical thinking. In effect, our course curriculum includes research thesis writing and research methodology, in addition to a well-developed and highly-competitive clinical training program.

The program embraces a multi-disciplinary vision with openness to sound perspectives from within and without the field of psychology. We train our students in different clinical and theoretical approaches to assessment and treatment of psychopathology, including psychodynamic, cognitive-behavioral, and evidence-based models. Furthermore, we seek to stimulate and develop reflectiveness and critical thinking abilities in our students by introducing them to comparative and integrative frameworks of psychological theory and practice.

In short, our program aims to graduate professionals who are highly qualified for the scientific, skillful, and ethical practice of clinical psychology, and who will contribute effectively to science and the welfare of their communities. Upon graduation our students will have completed a substantive research thesis and over 720 hours of supervised clinical training, making our program a very competitive program in terms of scholarly and clinical preparation.

PROGRAM LEARNING OUTCOMES (PLOS)

The Program's Learning Outcomes are tightly tied with our overarching goal to train highly professional and skillful practitioners of clinical psychology. Specifically, we seek to develop functional competencies (that attend to the application of clinical psychology) and foundational competencies (that address the more essential human aspects of the practice—such as empathy and ethical attitude) in our students. Target functional competencies include: Assessment; interventions; use of supervision; conceptualization and scientific evaluation; research skills; and proficient knowledge of psychopathology. Foundational competencies include: Professionalism and ethical conduct; reflectiveness and self-awareness; interpersonal wellness and effectiveness; optimal functioning in systems and across disciplines.

M.A. COURSES

MA -Clinical Psychology (40 credits)

Department requirements (compulsory) (19 credits)

PSYC 316	Interviewing	2.0: 2 cr
PSYC 317	Ethics of Psychological Practice	2.0: 2 cr
PSYC 320	Psychological Assessment	3.0: 3 cr
PSYC 340	Functional and Dysfunctional families	3.0: 3 cr
FASS 300	Research Methodology	3.0: 3 cr
PSYC 399	MA Thesis	6 cr

Emphasis requirements Compulsory (Clinical Psychology) (21 credits)

PSYC 314	Seminar in Clinical Psychology	2.0: 2 cr
PSYC 312	Psychopharmacology	2.0: 2 cr
PSYC 334	Object Relations	3.0: 3 cr
PSYC 335	Advanced Psychopathology	3.0: 3 cr
PSYC 333	Cognitive Behavioral Therapy	3.0: 3 cr
PSYC 328	Training in Clinical Psychology I	4.0: 4 cr
PSYC 329	Training in Clinical Psychology II	4.0: 4 cr

MA -in Clinical Developmental Psychology (40 credits)

Department requirements (compulsory) (19 credits)

PSYC 316	Interviewing	2.0: 2 cr
PSYC 317	Ethics of Psychological Practice	2.0: 2 cr
PSYC 320	Psychological Assessment	3.0: 3 cr
PSYC 340	Functional and Dysfunctional Families	3.0: 3 cr
FASS 300	Research Methodology	3.0: 3 cr
PSYC 399	MA Thesis	6 cr

Emphasis requirement compulsory (Developmental and Clinical, Developmental Psychology) (21 credits)

PSYC 313	Seminar in Child and Adolescent Development	2.0: 2 cr
PSYC 337	Developmental Psychopathology	3.0: 3 cr
PSYC 338	Training I Clinical Developmental Psychology	4.0: 4 cr
PSYC 339	Training II Clinical Developmental Psychology	4.0: 4 cr
PSYC 351	Psychomotor, Cognitive and Learning Disabilities	3.0: 3 cr
PSYC 352	Socio-affective Maladaptation	3.0: 3 cr
PSYC 353	Psychoeducational Intervention	2.0: 2 cr

COURSE DESCRIPTION

COMMON COURSES

PROGRAM STRUCTURE AND DEGREE REQUIREMENTS

The Master of Arts degree in Clinical Psychology may be conferred upon fulfillment of program requirements. Our two-year-study program is comprised of twelve courses (totaling 40 credits), including thesis work (PSYC 399, 6 credits) and a two-year-long training curriculum in psychological practice (PSYC 328 & PSYC 329, 8 credits). The remaining 26 credits pertain to courses in psychopharmacology (PSYC312), interviewing (PSYC316), ethics (PSYC319), assessment (PSYC320), cognitive-behavioral therapy (PSYC333), object relations (PSYC333), psychopathology (PSYC335), family (PSYC340), research methodology (FASS300), and a seminar in clinical psychology (PSYC310).

Upon completion of the aforementioned course work and clinical training curriculum, successful defense of a research thesis, a candidate in "good academic standing" becomes eligible for graduation. To be in good academic standing, the student must have a cumulative grade score of at least 80, although a minimum score of 70 is what is required to pass a course. The training curriculum is subject to the same grade regulations, and requires the completion of 600 training hours on the field in addition to 120 training hours at the university, all of which must be properly documented and supervised.

To sum it up, the requirements for program completion are:

•Successful completion of coursework and training curriculum

•Good academic standing—i.e., minimum cumulative score of 80

•Completion and successful defense of a substantive research thesis in clinical psychology.

A description of the MA program courses follows, with a thorough list of the ILOs (in parentheses) associated with each course. The description is for courses as they are intended to be taught in the NEW program.

CURRICULUM COURSE DESCRIPTION

PSYC 312 PSYCHOPHARMACOLOGY **2.0: 2 cr. E/F**

The course teaches basic principles of neuropsychological functions, physiological mechanisms, and biochemical processes pertinent to understanding pharmacological treatment and related issues, especially the role and limitations of psychotropic drugs in management and treatment of major clinical problems such as pain, anxiety, major affective disorders, schizophrenia, other psychoses, and alcohol/drug dependencies.

PSYC 314 SEMINAR IN CLINICAL PSYCHOLOGY **2.0: 2 cr. E/F**

This two-credit intensive seminar allows for the focused study of any current topic in clinical psychology including, but not limited to, subjects in comparative approaches to psychology. When this seminar is offered, its topic will have been determined by the department.

PSYC 316 INTERVIEWING **2.0: 2 cr. E/F**

This course deals with the framework and process of interviewing. It is a core course for clinical practice where students learn basic attending and communication skills essential to both the first interview and ongoing therapeutic encounters, including how to establish rapport with a patient, how to listen, observe and engage him/her effectively, how to identify central issues and obtain accurate history, how to document findings properly, how to develop and use self-awareness to make sense of the patient's discourse and presentation. Students conduct interviews and receive feedback on interviewing style and assessment reports based on videotaped interviews.

PSYC 317 ETHICS OF PSYCHOLOGICAL PRACTICE **2.0: 2 cr. E/F**

This course prepares students for the ethical and professional practice of psychology, be it in research or clinical settings, by (1) introducing them to a set of standards and laws that guide and/or regulate the profession and (2) teaching them how to think critically using a moral compass. It covers recognized ethical standards (i.e., APA's) and laws (both Lebanese and non-Lebanese) that delineate the scope of psychological practice, with special attention to their application in Lebanon and associated issues, complications, and ambiguities. The student learns to examine professional conduct in the context of the above references while gaining a critical understanding of professional ethics, norms, moral and legal bases of these guidelines and the limitations that govern their application.

PSYC 320 PSYCHOLOGICAL ASSESSMENT **3.0: 3 cr. E/F**

This applied course centers on the professional use of major assessment measures while attending to recent theory, research, principles of measurement and socio-cultural factors relevant to measurement. It provides instruction and supervision in pertinent testing competencies, including test selection (suitability of the elected instrument to the assessment of a specific issue /domain), administration and scoring, interpretation of findings in written reports, integration of various assessment measures, communication of assessment findings, and use of findings for relevant intervention.

PSYC 328 TRAINING I IN CLINICAL PSYCHOLOGY **4.0: 4 cr. E/F**

This two-semester-long course aims to facilitate student training in clinical psychology using a competency-development framework that capitalizes on both practical experience (on the field) and university-based (classroom) training, with the overarching goal to forge a strong foundation for competent and responsible clinical practice. The course has didactic, experiential, and supervisory components delivered in group following a didactic-consultative model, where the course instructor acts as educator, consultant, and evaluator of student performance and progress. Student evaluation will encompass foundational competencies (i.e., professionalism,

reflective practice, relationships, ethics) and functional competencies (i.e., assessment, intervention, scientific evaluation, supervision). Functional skills include: risk assessment, mental status examination, case formulation, motivational and clinical interviewing, diagnostic and evidence-based evaluation, basic treatment planning, and effective use of supervision. Foundational skills include: professional and ethical stance, interpersonal engagement and competence, and core mindfulness and reflectiveness skills. Upon successful completion of the course, the student will have accrued 300 practicum hours on the field.
Prerequisites: Departmental approval.

PSYC 329 TRAINING II IN CLINICAL PSYCHOLOGY **4.0: 4 cr. E/F**

The two-semester-long course centers on the delivery aspects of clinical intervention and extends an experiential component that allows continuous integration of course work with supervised experience. Clinical instruction is coordinated with practicum placements in a variety of settings throughout the country. Supervision provided on the field is supplemented with on-campus supervised learning and processing of professional experience, thus promoting a powerful integration of didactic knowledge and professional clinical practice. Functional skills include: Cognitive-behavioral and psychodynamic interventions; integral treatment planning. Foundational skills include: professional and ethical practice, interpersonal competence (e.g., attunement and empathy), and cognitive wellness (e.g., mindfulness and reflectiveness skills). Upon successful completion of the course, the student will have accrued 300 practicum hours (on the field) on top of the number of practicum hours earned in Training I.

PSYC 333 COGNITIVE BEHAVIORAL THERAPY **3.0: 3 cr. E/F**

In this course, informed by empirical research and the cognitive behavioral paradigm for understanding human experience and behavior, the student will learn key concepts, principles, and strategies shared by most CBT approaches, especially as they apply to psychotherapy. The student will learn to formulate (generate a cognitive-behavioral case conceptualization), conduct a multi-dimensional assessment, and use specific treatment protocols that have been shown to be effective with the target symptoms and problems (e.g., anxiety and depression). Case conceptualization, implementation of key cognitive-behavioral strategies and concepts (e.g., collaborative empiricism), and assessment of treatment outcome and process constitute three core competencies taught in this course.

Prerequisites: Interviewing PSYC316; knowledge of Cognitive-Behavioral Foundations

PSYC 334 OBJECT RELATIONS **3.0: 3 cr. E/F**

This course covers the underpinnings of the "Object Relations" school of thought, a major trend within psychoanalytic theory and practice that makes the therapist-patient relationship (or dyad) central to therapy. In the context of "Object Relations", the mother-infant dyad serves as primary matrix for all subsequent relationships, influencing the intrapsychic and interpersonal dynamics of a person at the conscious and unconscious levels. In practice, the therapist creates a holding environment that allows for unconscious material to emerge, thus permitting a working through of childhood problems. The course draws on readings from both the British school of thought (e.g., Klein; Winnicott) and American school of thought (e.g., Ogden) and covers central concepts and processes, such as the "holding environment", internal and transitional "objects", transference and countertransference, "projective identification", and therapeutic "matrix". Moreover, the student learns how to apply these concepts to the process of therapy, observing how therapeutic changes manifest themselves in the context of the therapist-patient relationship.

Prerequisites: Interviewing PSYC316; knowledge of Psychoanalytic Foundations .

PSYC 335 ADVANCED PSYCHOPATHOLOGY **3.0: 3 cr. E/F**

This advanced course covers the developmental span of psychopathology as science, from the traditional (but outdated) classification of disorders along a neurotic-psychotic continuum to current (updated) classification and diagnostic systems, primarily the DSM (currently in its 5th edition). Students will learn about descriptive and experiential psychopathology--its development, practice, key findings—with a special emphasis on diagnosis, etiology, and recommended treatments of mental health disorders, including (but not limited to) mood and anxiety, psychotic, personality, eating and substance-related disorders. Aspects of developmental psychopathology and cultural issues pertinent to assessment and diagnosis will also be addressed.

PSYC 340 FUNCTIONAL AND DYSFUNCTIONAL FAMILIES **3.0: 3 cr. E/F**

In this course, we examine the family from a systemic perspective—as a system influencing member development and adaptation—and explore different patterns of family functioning and their developmental and/or pathological implications. Students will learn to assess the strengths and weaknesses of family systems with regard to three functional dimensions: 1- historical-cultural context (including socio-economic and trans-generational dimensions); 2- relational functioning (including couples relations, attachment processes, family "climate", and parenting practices); 3- systemic and eco-systemic functioning (including work-family balance, family cohesion, "spousification", "parentification", and social support), with special attention to sub-systemic and systemic organization and boundaries.

PSYC399 MASTER THESIS **6 cr. E/F**

All students are required to complete a research thesis in line with departmental guidelines, under the direction of a faculty supervisor from the Department of Psychology. Following approval of the research topic, the student works on the project under the guidance of his or her supervisor to produce a defensible research proposal. To this end, the student may have to refine and/or rework the research question, do the necessary background research (i.e., literature review), identify or develop a suitable methodology (e.g., study design; subject selection and management), and offer a timeline for the execution of the proposed work. If the study involves human subjects, then ethical and institutional guidelines need to be rigorously observed. Students may collect and analyze data using a quantitative or qualitative approach, create and/or implement a therapy protocol, conduct a survey, write a substantive literature review on the basis of which he or she offers an original theoretical formulation, or produce a significant scholarly contribution to either the science or practice of psychology. Upon completion and approval by the faculty supervisor, the research proposal is submitted to a special committee appointed by the Dean to evaluate its merit. Upon acceptance of the research proposal, typically with some recommendations, the student proceeds with his or her supervised study until completion. This point of "completion" is determined primarily by the faculty supervisor, following which a thesis defense may be scheduled.

Students are encouraged to begin thinking about their Master's thesis as soon as they begin the program and, definitely, no later than their second semester—concurrently with or upon completion of the research methodology class. A successful oral defense is required to approve the completed thesis.

Prerequisites: Research Methodology FASS 300; topic approval signed by a faculty supervisor

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E/F**

(See description in faculty catalog)

MASTER PROGRAM IN DEVELOPMENTAL AND CLINICAL, DEVELOPMENTAL PSYCHOLOGY

MISSION STATEMENT

The principal aim of the Master Program in Clinical, Developmental Psychology is to train students to become competent "scientific" psychologists—highly skilled and ethical practitioners of school and educational psychology—who contribute responsibly to their communities and science.

We adhere to the "scholar-practitioner" model of training, where the trainee develops not only intervention but also science skills, especially critical and methodical thinking. In effect, our course curriculum includes research thesis writing and research methodology, in addition to a well-developed and highly-competitive intervention training program.

The program embraces a multi-disciplinary vision with openness to sound perspectives from within and without the field of psychology. Courses and training are anchored in theories related to developmental psychology and psychopathology, ecological psychology and educational psychology. We train our students in different theoretical approaches to assessment and intervention relevant to practice that targets education, development and adaptation and guidance in general and that applies to the practice of Clinical, Developmental Psychology in particular, including developmental and psychoeducational approach to intervention and to prevention, and evidence-based models. Furthermore, we seek to stimulate and develop reflectiveness and critical thinking abilities in our students by introducing them to comparative and integrative frameworks of psychological theory and practice.

In short, our program aims to graduate professionals who are highly qualified for the scientific, skillful, and ethical practice of school and developmental psychology, and who will contribute effectively to science and the welfare of their communities. Upon graduation our students will have completed a substantive research thesis and over 720 hours of supervised Clinical, Developmental Psychology training, making our program a very competitive program in terms of scholarly and intervention preparation.

PROGRAM LEARNING OUTCOMES (PLOS)

The Program's Learning Outcomes are tightly tied with our overarching goal to train highly professional and skillful practitioners of Clinical, Developmental Psychology. Specifically, we seek to develop functional competencies (that attend to the application of Clinical, Developmental Psychology) and foundational competencies (that address the more essential human aspects of the practice—such as empathy and ethical attitude) in our students. Target functional competencies include: Assessment; interventions; use of supervision; conceptualization and scientific evaluation; research skills; and proficient knowledge of developmental psychopathology. Foundational competencies include: Professionalism and ethical conduct; reflectiveness and self-awareness; interpersonal wellness and effectiveness; optimal functioning in systems and across disciplines. Students graduating from the program will have developed several competencies in the following domain areas:

CURRICULUM COURSE DESCRIPTION

PSYC 313 SEMINAR IN CHILD AND ADOLESCENT DEVELOPMENT **2.0: 2 cr. E/F**
This two-credit intensive seminar allows for the focused study of any current topic in cognitive or socio-affective development including, but not limited to, language, memory, learning (reading, writing, etc…), prosocial behavior, bonds, etc… that is relevant to school practice.

PSYC 316 INTERVIEWING **2.0: 2 cr. E/F**
This course deals with the framework and process of interviewing. It is a core course for clinical practice where students learn basic attending and communication skills essential to both the first interview and ongoing therapeutic encounters, including how to establish rapport with a patient, how to listen, observe and engage him/her effectively, how to identify central issues and obtain accurate history, how to document findings properly, how to develop and use self-awareness to make sense of the patient's discourse and presentation. Students conduct interviews and receive feedback on interviewing style and assessment reports based on videotaped interviews.

PSYC 317 ETHICS OF PSYCHOLOGICAL PRACTICE **2.0: 2 cr. E/F**
This course prepares students for the ethical and professional practice of psychology, be it in research or clinical settings, by (1) introducing them to a set of standards and laws that guide and/or regulate the profession and (2) teaching them how to think critically using a moral compass. It covers recognized ethical standards (i.e., APA's) and laws (both Lebanese and non-Lebanese) that delineate the scope of psychological practice, with special attention to their application in Lebanon and associated issues, complications, and ambiguities. The student learns to examine professional conduct in the context of the above references while gaining a critical understanding of professional ethics, norms, moral and legal bases of these guidelines and the limitations that govern their application.

PSYC 320 PSYCHOLOGICAL ASSESSMENT **3.0: 3 cr. E/F**
This applied course centers on the professional use of major assessment measures while attending to recent theory, research, principles of measurement and socio-cultural factors relevant to measurement. It provides instruction and supervision in pertinent testing competencies, including test selection (suitability of the elected instrument to the assessment of a specific issue /domain), administration and scoring, interpretation of findings in written reports, integration of various assessment measures, communication of assessment findings, and use of findings for relevant intervention.

PSYC 337 DEVELOPMENTAL PSYCHOPATHOLOGY **3.0: 3 cr. E/F**
This advanced course studies the origins and course of individual patterns of behavioral maladaptation. It aims at creating an understanding of the changing manifestations of patterns of adaptation (or maladaptation) over time and the links between patterns of adaptation across time. It explores the origins and time course of a given disorder its varying manifestation with development, its precursors and sequelae, and its relation to non-disordered patterns of behavior. It draws on a developmental understanding of psychopathology anchored in the principles of holism, directedness, differentiation of modes, and mobility of behavioral functions and tackles the problematic of continuity and change in relationship to adaptation and maladaptation. Aspects of cultural issues pertinent to assessment and diagnosis will also be addressed.

PSYC 338 TRAINING I IN Clinical, Developmental Psychology **4.0: 4 cr. E/F**
This two-semester-long course aims to facilitate student training in Clinical, Developmental Psychology using a competency-development framework that capitalizes on both practical experience (on the field) and university-based (classroom) training, with the overarching goal to forge a strong foundation for competent and responsible clinical practice. The course has didactic, experiential, and supervisory components delivered

in group following a didactic-consultative model, where the course instructor acts as educator, consultant, and evaluator of student performance and progress. Student evaluation will encompass foundational competencies (i.e., professionalism, reflective practice, relationships, ethics) and functional competencies (i.e., assessment, intervention, scientific evaluation, supervision). Functional skills include: risk assessment, mental status examination, case formulation, motivational and clinical interviewing, diagnostic and evidence-based evaluation, basic treatment planning, and effective use of supervision. Foundational skills include: professional and ethical stance, interpersonal engagement and competence, and core mindfulness and reflectiveness skills. Upon successful completion of the course, the student will have accrued 300 practicum hours on the field.
Prerequisites: Departmental approval

PSYC 339 TRAINING II IN Clinical, Developmental Psychology 4.0: 4 cr. E/F
The two-semester-long course centers on the delivery aspects of school intervention and extends an experiential component that allows continuous integration of course work with supervised experience. Clinical instruction is coordinated with practicum placements in a variety of settings throughout the country. Supervision provided on the field is supplemented with on-campus supervised learning and processing of professional experience, thus promoting a powerful integration of didactic knowledge and professional clinical practice. Functional skills include: Cognitive-behavioral and psychodeducational interventions; integral treatment planning. Foundational skills include: professional and ethical practice, interpersonal competence (e.g., attunement and empathy), and cognitive wellness (e.g., mindfulness and reflectiveness skills). Upon successful completion of the course, the student will have accrued 300 practicum hours (on the field) on top of the number of practicum hours earned in Training I.
Prerequisites: Training I PSYC 328

PSYC 340 FUNCTIONAL AND DYSFUNCTIONAL FAMILIES 3.0: 3 cr. E/F
In this course, we examine the family from a systemic perspective—as a system influencing member development and adaptation—and explore different patterns of family functioning and their developmental and/or pathological implications. Students will learn to assess the strengths and weaknesses of family systems with regard to three functional dimensions: 1- historical-cultural context (including socio-economic and trans-generational dimensions); 2- relational functioning (including couples relations, attachment processes, family "climate", and parenting practices); 3- systemic and eco-systemic functioning (including work-family balance, family cohesion, "spousification", "parentification", and social support), with special attention to sub-systemic and systemic organization and boundaries.

PSYC 351 PSYCHOMOTOR, COGNITIVE AND LEARNING DISABILITIES 3.0: 3 cr. E/F
This course tackles the manifestations of the psychomotor cognitive and learning disabilities. It covers the etiology of these disorders and their impact on the holistic development and adaptation of children. The course is inspired by a socio- constructivist and socio-cognitive approach to cognition and learning. Students will learn to assess these disorders and to communicate the results of their assessments. "Evidence based" Intervention and preventive strategies relevant to these disorders will also be tackled.

PSYC 352 SOCIO-AFFECTIVE MALADAPTATION 3.0: 3 cr. E/F
This course tackles the manifestations of socio-affective maladaptation. It covers the etiology of the disorders related to the socio-affective maladjustment and its manifestation through emotional and/or behavioral disorders. It also studies the impact of socio-affective disorders on the holistic development and adaptation of children. This course is inspired by the theory of attachment, the ecosystemic approach to development and socio-cognitive approach to socialization. Students will learn to assess these disorders and to communicate the results of their assessments. "Evidence based" Intervention and preventive strategies relevant to these disorders will also be tackled.

PSYC 353 PSYCHOEDUCATIONAL INTERVENTION **2.0: 2 cr. E/F**

This course explores the concept of "shared living" and the principles of the assessment and intervention from an ecosystemic perspective. It covers the professional skills related to the psychoeducational intervention (observation, diagnostic assessment, planning, organization, animating, investing, program assessment and communication). It explores the relational skills that are an inherent part of the psychoeducational intervention and that are basic components of the training. The course uses an evaluative comparative approach allowing the student to be prepared to choose, adapt and structure a preventive or curative intervention targeting individuals or groups and aiming at reducing disorders occurrences in schools and socio-educational milieu.
Prerequisites: Interviewing PSYC316

PSYC 399 MASTER THESIS **6 cr. E/F**

All students are required to complete a research thesis in line with departmental guidelines, under the direction of a faculty supervisor from the Department of Psychology. Following approval of the research topic, the student works on the project under the guidance of his or her supervisor to produce a defensible research proposal. To this end, the student may have to refine and/or rework the research question, do the necessary background research (i.e., literature review), identify or develop a suitable methodology (e.g., study design; subject selection and management), and offer a timeline for the execution of the proposed work. If the study involves human subjects, then ethical and institutional guidelines need to be rigorously observed. Students may collect and analyze data using a quantitative or qualitative approach, create and/or implement a therapy protocol, conduct a survey, write a substantive literature review on the basis of which he or she offers an original theoretical formulation, or produce a significant scholarly contribution to either the science or practice of psychology. Upon completion and approval by the faculty supervisor, the research proposal is submitted to a special committee appointed by the Dean to evaluate its merit. Upon acceptance of the research proposal, typically with some recommendations, the student proceeds with his or her supervised study until completion. This point of "completion" is determined primarily by the faculty supervisor, following which a thesis defense may be scheduled.
Students are encouraged to begin thinking about their Master's thesis as soon as they begin the program and, definitely, no later than their second semester—concurrently with or upon completion of the research methodology class. A successful oral defense is required to approve the completed thesis.
Prerequisites: Research Methodology FASS 300; topic approval signed by a faculty supervisor

FASS 300 RESEARCH METHODOLOGY **3.0: 3 cr. E/F**

This course intends to familiarize the students with all the components of research. Students will be asked to analyze papers, articles and theses in order to acquire a critical approach to the different steps in writing up a research. At the end of the course student will submit a research proposal.