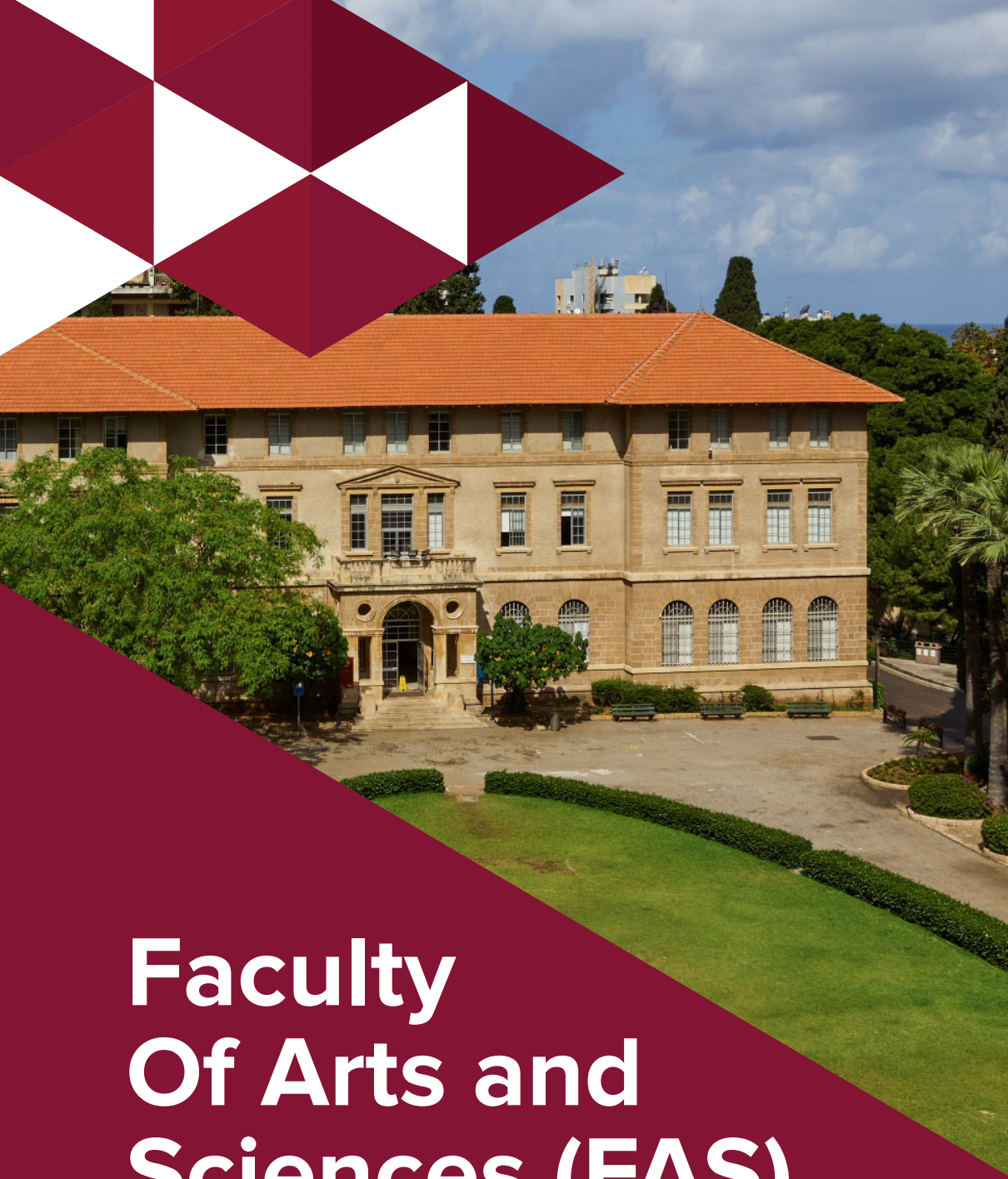

Faculty Of Arts and Sciences (FAS)

Undergraduate Program

Officers of the Faculty

Fadlo R. Khuri	President of the University
Zaher Dawy	Provost
Farès Dahdah	Dean
Saouma BouJaoude	Special Advisor to the Dean for Faculty Affairs
Pierre Karam	Associate Dean
Izzat El Hajj	Director of Freshman Program
Bradley Jon Tucker	Registrar
Antoine Sabbagh	Director of Admissions
Lokman Meho	University Librarian

Faculty Administrative Support

Bassel Baker	IT Service Desk Manager
Patrick Daou	GIS Technologist / Specialist
Yara El-Hoss	Student Services Administrative Officer
Zeina Halabieh	Director of Student Services and FAS Space Management
Razan Harb	Senior IT Service Delivery Manager
Ghida Itani	Graduate Studies and Career Services Officer
Dima Jamil Ahmad Dit Hakim	Administrative Assistant
Zeina Katergi	Executive Officer for Administrative Affairs
Dina Khattab	Academic Affairs Officer
Abeer Khoury	Financial Operations Manager
Hadi Knaiber	Data Analyst
Stephanie Mesrobian	Undergraduate Student Officer
Nadine Rizk	Faculty and Staff Affairs Manager
Razan Sabbidine	Student Records Administrative Officer
Armine Seferian	Communication Officer

Mohamad Ali Sheikh	Building Operator
Heghnar Tachouhie Yeghiayan	Faculty Affairs and Research Support Officer

Historical Background

The Faculty of Arts and Sciences was established in 1866, the same year in which the Syrian Protestant College, now the American University of Beirut, was established. On December 13, 1866, the first class was held, attended by sixteen students, and in 1870 the first five students graduated. Arabic, which was the language of instruction since the inception of the college, was replaced by English in 1882. The university in general, and the Faculty of Arts and Sciences in particular, have survived many crises since 1866, including two world wars, regional and local wars, student strikes, and economic crises. In spite of all these hardships, the faculty has continued to develop and to maintain its high academic standards.

Mission

The Faculty of Arts and Sciences embodies AUB's core commitment to the liberal arts and sciences. It offers undergraduate and graduate programs in the arts, humanities, social, natural, and mathematical sciences, and is dedicated to advanced research in all these domains. Through its freshmen and general education programs, it is the University's principal gateway to higher studies and professional education. The faculty, through its teaching and research, promotes free inquiry, critical thinking, academic integrity, and respect for diversity and equality.

Vision

Building upon its rich tradition, the Faculty of Arts and Sciences is determined to position itself at the heart of free inquiry in the Middle East. Free and critical thinking is central to the faculty's teaching, its research, its engagements with the wider community, and its commitment to the thoughtful transformation of all of its activities and structures. The faculty's enhanced undergraduate programs will graduate innovators with a breadth of vision who can be agents of positive change wherever they live and work. The faculty will strategically expand its graduate offerings, especially in areas where it can make a distinctive contribution, and will educate graduate students who are themselves producers of knowledge. The faculty will be recognized internationally for the quality of its research and creative activities in the humanities, social sciences, natural sciences, mathematical sciences, and interdisciplinary areas, whether undertaken in response to regional and global needs or to human curiosity and imagination. The faculty will provide a vital forum for open discussion and engage contemporary issues in ways that resonate far beyond our campus walls.

Undergraduate Programs

Students entering the Faculty of Arts and Sciences as freshmen, except those admitted as special students or auditors, select one of the following programs:

- Preparation for majors offered in Arts and Sciences
- Preparation for Business Administration, Health Sciences, Engineering and Architecture, or Agricultural and Food Sciences

Students entering the Faculty of Arts and Sciences as sophomores select one of the following two programs; for each program a period of three years of study is normally required:

- Bachelor of Arts
- Bachelor of Science

There are four major divisions in the Faculty of Arts and Sciences. Their distribution according to degree-offering departments is as follows:

- Humanities: Arabic, English, Fine Arts and Art History, History and Archaeology, and Philosophy
- Social Sciences: Economics, Education, Political Studies and Public Administration, Psychology and Sociology, Anthropology and Media Studies
- Natural Sciences: Biology, Chemistry, Geology, and Physics
- Quantitative Thought: Computer Science and Mathematics

Admission

For complete and detailed information regarding admission to the university, including certificates recognized, see the Admission section of this catalogue. The specific requirements for admission to the freshman or sophomore class are found under Applications for the Freshman Year and Applications to the Sophomore Year and All Other Undergraduate Programs under Admissions Office section.

Classification of Students

An undergraduate student shall be considered to have completed a class when s/he has taken and passed 30 or more credits beyond the requirements for the previous class.

A student will not be granted a certificate stating that s/he has completed a class until s/he has completed the specified courses in the regular program for that class and has acquired the requisite number of credits. The credit requirements are as follows:

Major and Faculty	**Freshman Standing**		**Sophomore Standing**	
For the completion of the freshman class	30 credits	-	-	-
For the completion of the sophomore class	60 credits	Cumulative	30 credits	-
For the completion of the junior class	90 credits	Cumulative	60 credits	Cumulative

Full-time Students and Maximum Credit Loads

To be considered full-time, a student must carry a minimum load of 12 credits per term. A full-time student who, for compelling reasons, is forced to reduce her/his load to fewer than 12 credits must first petition the Undergraduate Student Academic Affairs Committee for permission to do so. This should be done no later than 12 weeks after the start of the term (five weeks in the case of summer school). Students in their first term at AUB may be allowed to reduce their load to fewer than 12 credits by requesting permission from the Undergraduate Student Academic Affairs Committee. Requests are handled on a case-by-case basis.

Students can normally register for up to 17 credits per term and 9 credits during the summer term. English course requirements must be taken as of the first term at the university. Students who wish to register for more than 17 credits must petition the Undergraduate Student Academic Affairs Committee for permission to do so. Requests are handled on a case-by-case basis. Students in the following categories will normally be granted permission by the Undergraduate Student Academic Affairs Committee to register for more than 17 credits:

- Freshman students intending to go into engineering or medicine, and who have an average of at least 3.3 for the first term, may take an additional course in the second term.
- Graduating senior students in their last term who are not on academic probation and who have completed their English communication skills requirements at the level required by their major departments may register for a maximum of 18 credits.

Requirements for Premedical Study

For information on Premedical Requirements, refer to General University Academic Information.

Academic Rules and Regulations

For information on Academic Advisors, Categories of Students, Correct Use of Language, Grading System, and Graduation with Distinction and High Distinction, refer to General University Academic Information of this catalogue.

Graduation Requirements

Degrees of Bachelor of Arts and Bachelor of Science

The following are the graduation requirements for the degrees of BA and BS:

Residency and Total Credit Requirements

- A maximum of eight calendar years is allowed for graduation of students who begin with the freshman class, six calendar years for sophomores, four calendar years for juniors, and two calendar years for seniors. A student who fails to complete her/his degree program within these specified times must petition the Undergraduate Student Academic Affairs Committee for an extension of time.
- A minimum of eight terms of residence is required beginning with the freshman class, or six terms beginning with the sophomore class. For purposes of this requirement, two summer sessions shall be considered equivalent to one term for one time only.
- Transfer students from other recognized institutions of higher learning must complete at least 45 credits at AUB, out of which a minimum of 21 credits should be in the major. For the purposes of this requirement, two summer sessions shall be considered equivalent to one term.
- A minimum of 120 credits for students who enter as freshmen (90 of which should be courses numbered 200 or above) and 90 credits (in courses numbered 200 or above) for students who enter as sophomores.

Departmental Requirements

The requirements are a minimum of 36 credits in the major department, in courses numbered 200 or above, of which a minimum of 30 credits must be numbered 210 or above. Also, a cumulative average of 2.3 or C+ in the major plus any additional requirements set by the department. For the distribution of the requirements according to discipline, consult the matrices of the departments in each department entry.

A student must be admitted into her/his departmental major for at least the last term prior to graduation.

Repeating Courses

For information on Repeating Courses, refer to General University Academic Information.

Faculty Requirements

General Education Requirements

Refer to the General Education Program section.

Other Requirements

A student must complete elective credits outside his/her major department as per the program requirements, exclusive of the university course requirements stated above and beyond those of the normal freshman program. Grades of C+ or above in at least 50 credits of courses numbered 200 or above for students entering at the sophomore level are required. Students entering at the freshman level must obtain grades of C+ or above in at least 12 additional credits of courses numbered 100 or above.

Study Abroad

Regular FAS students (non-transfer students) in good standing who have completed 24 credits at the sophomore level at AUB and wish to study abroad in an approved program of study, may spend up to one year and earn up to thirty (30) credits at another university. Students must spend their final term in residence at AUB. Transfer of credits will be considered on a course-by course basis and is contingent upon achieving a grade equivalent to the AUB grade of C+. For more information on study abroad and credit transfer, refer to Study Abroad for Undergraduate Students and Credit transfer sections under General University Academic Information.

Transfers

Students may transfer to majors within the Faculty of Arts and Sciences from outside the university, from another faculty within the university, or from one department to another within the Faculty of Arts and Sciences.

Applicants from outside AUB wishing to transfer to a major in FAS with junior standing should note the following conditions and requirements:

- The applicant must have completed the equivalent of 24 sophomore credits at the university from which the applicant is transferring.
- The applicant must submit an application to the university Admissions Office along with all the course syllabi taken at the applicant's previous university or universities.

- Transfer admission is competitive and limited by the number of spaces available. Normally, successful applicants will have earned a minimum GPA of 3.0 or its equivalent.
- Courses successfully completed at a previous university or universities are transferred provided the student earned a grade equivalent to the AUB grade of C+ in each of the courses for which transfer credit is requested.
- For placement in (or exemption from) the Communication Skills Program, a student may petition for course equivalence by presenting relevant documents to the Department of English. If a student has not taken any courses equivalent to those offered within the Communication Skills Program, the student should be placed in the appropriate course based on the student's test scores (EEE, TOEFL, or SAT Writing), according to the same guidelines normally followed for newly admitted non-transfer students.
- Students who have transferred must complete at least 45 credits at AUB out of which a minimum of 21 credits should be in their major department for fulfillment of graduation requirements.

AUB students from other faculties wishing to transfer to a major in FAS should note the following conditions and requirements:

- The applicant must have completed at least two full terms (minimum 24 credits) of coursework at AUB.
- The applicant must have attained a minimum cumulative average of 2.3 or C+.
- The applicant must have attained a minimum average of 2.3 or C+ in all courses taken in FAS (must be at least 15 credits).
- The applicant must have met the requirements for the applicant's prospective major (see Table 1 below).

AUB students wishing to transfer from one major to another in FAS should note the following conditions and requirements:

- The applicant must have completed two full terms (minimum 24 credits) of work in the applicant's current major.
- The applicant must have met the requirements for the applicant's prospective major (see Table 1 below).

AUB Non-Degree Students (NDS) wishing to apply for regular status should note the following conditions and requirements:

- The applicant must submit an application to the Office of Admissions.
- The applicant must have completed the equivalent of the sophomore year at the college or university from which the applicant is transferring (24 credits or the equivalent).
- Grade requirements for transferred courses offered by other faculties at AUB follow the guidelines set by the relevant faculty. All final admissions decisions will depend on the availability of places in the major to which the student applies.
- Courses successfully completed at AUB by a non-degree student may be considered for admissions purposes. Once the student is admitted, the credits for those completed courses may be transferable towards the student's regular degree (required courses with a minimum grade of C+ and elective courses with a minimum grade of D.
- Courses successfully completed at a previous university or universities are transferred provided the student earned a grade equivalent to the AUB grade of C+ in each of the courses for which transfer credit is requested.

Double Major

Refer to Double Major/Concentration section under General University Academic Information.
Double major applicants must meet the transfer requirements for their prospective majors specified in Table 1.

Dual Degree

Refer to Dual Degree section under General University Academic Information.
Dual degree applicants must meet the transfer requirements for their prospective majors specified in Table 1.

Second Degrees

Refer to Second Degree section under General University Academic Information.
Normally, successful second degree applicants who obtained their first degree from outside AUB will have earned a minimum GPA of 3.0 or its equivalent in their first degree.

Majorless Status

Refer to Majorless Status section under General University Academic Information.
A student who wishes to join a new major must also submit a Change of Major petition to the Office of the Dean, provided the student meets the requirements for admission to the new major.

Table 1: Requirements for Interdepartmental Transfer within FAS

Major	Requirements
Applied Mathematics	a minimum cumulative average of 2.3 or C+ in MATH 201 and other math courses if taken
Arabic language and Literature	a minimum grade of C+ in ARAB 201 or any other upper level ARAB course
Archaeology	a minimum grade of C+ in any two Cultures and Histories courses, excluding Understanding Communication requirements in Arabic and English
Art History	a minimum grade of C+ in any two Cultures and Histories courses
Biology	a grade of B or above in each of BIOL 201 and BIOL 202, and a cumulative BIOL average of 3.0 if additional courses are taken (excluding FR courses); a grade of C+ or above in CHEM 201; and a minimum overall average of 3.0. The aforementioned requirements should be completed in 3 consecutive terms. Transfer to Biology from other departments within the Faculty of Arts and Sciences is competitive and requires departmental approval
Chemistry	a minimum grade of C+ in CHEM 201; a cumulative average of 2.3 or C+ or more in any one of the following three combinations: MATH 201 and MATH 202, or MATH 201 and PHYS 211, or MATH 201 and CHEM 21

Computer Science	completion of CMPS 211 (or MATH 211), a minimum grade of C+ in each of CMPS 201 and CMPS 202, and a cumulative average of 2.3 or C+ in all Computer Science courses taken
Economics	an overall average of 3.0 or more; a minimum grade of B in each of ECON 211 and ECON 212; a minimum average of 2.3 or C+ in ENGL 203 and ENGL 204 (if ENGL 204 is taken); and a minimum cumulative average of 2.3 or C+ in MATH 201 and MATH 202
Education	a minimum cumulative average of 2.3 or C+ in ENGL 203 and/or ENGL 204; a minimum cumulative average of 2.3 or C+ in EDUC course(s) if taken
English Language	a minimum grade of C+ in ENGL 203, 204, and 227
English Literature	a minimum grade of C+ in ENGL 203, 204, and one of ENGL 205, 207, and 209 (formerly 201)
Geology	a minimum grade of C+ in GEOL 201 and 203; an average of 2.3 or C+ is required in math and science courses - such courses cannot be taken more than twice; a minimum overall average of 2.3 or C+; completion of MATH 102 or its equivalent; and completion of 10 credits of freshman science courses including CHEM 101 and CHEM 101L, or their equivalents
History	a minimum grade of C+ in any two Cultures and Histories courses, excluding Understanding Communication requirements in Arabic and English
Mathematics	a minimum cumulative average of 2.3 or C+ in MATH 201 and other math courses if taken
Media and Communication	a minimum cumulative average of 3.0 in MCOM 201 and one List A Elective (of the student's choice), a minimum cumulative average of 2.3 in all MCOM courses taken, a minimum grade of B in ENGL 203, and a minimum cumulative average of 3.0 in ENGL 203 and ENGL 204 if taken.
Petroleum Geosciences	a minimum grade of C+ in GEOL 201 and 203; an average of 2.3 or C+ is required in math and science courses - such courses cannot be taken more than twice; a minimum overall average of 2.3 or C+; completion of MATH 102 or its equivalent; and completion of 11 credits of freshman science courses including CHEM 102 and CHEM 102L, or their equivalents.
Philosophy	a minimum grade of C+ in any two Cultures and Histories courses, excluding Understanding communication skills requirements in Arabic and English
Physics	a minimum cumulative average of 2.3 or C+ in PHYS 212, PHYS 214, and other physics courses if taken, and a minimum cumulative average of 2.3 or C+ in MATH 201 and MATH 202
Political Studies	a minimum grade of C+ in each of PSPA 201 and PSPA 202; and a minimum combined grade average of 2.3 or C+ in ENGL 203 and ENGL 204

Psychology	a minimum grade of B in PSYC 101 or PSYC 2011 and ENGL 204 and an overall average above 3.0 (PSYC 101 or PSYC 201 cannot be repeated more than twice)
Public Administration	a minimum grade of C+ in each of PSPA 201 and PSPA 202; and a minimum combined grade average of 2.3 or C+ in ENGL 203 and ENGL 204
Sociology-Anthropology	minimum grade of C+ in ENGL 203 and ENGL 204, and a grade of C+ or more in one of the following: SOAN 101, SOAN 103, SOAN 201, or SOAN 203. If admission to SOAN is based on SOAN 101 or SOAN 103, any additional SOAN or any social science course is required.
Statistics	a minimum cumulative average of 2.3 or C+ in MATH 201 and other math courses if taken
Studio Arts	a minimum grade of C+ in any two Cultures and Histories courses

For further details concerning individual departmental requirements, refer to the relevant sections of this catalogue.

Minors

For the university's general requirements for a minor field of study, refer to the Minor section under General University Academic Information. The Faculty of Arts and Sciences offers disciplinary and interdisciplinary minors, which require the completion of a number of courses before graduation as specified below:

American Studies requires 15 credits: AMST 215 and one other 3 credit AMST course (220, 230, 240, 265/266, 275/276), plus three elective courses with American Studies content or relevance from other departments (ARCH 023, ENGL 209, 215, 216, 219, 222, 224, 225, 226, 241, HIST 200, 271, 272, 273, 274, 278/279, MCOM 201, 204, 219, 222, 290E, MEST 315M, PHIL 263A, PSPA 220, 237, 251, 293D, SOAN 215). Students can petition to apply a new or special topics course with American Studies content from a different department, and this must be approved first by the CASAR director, then by the FAS Curriculum Committee.

Anthropology requires 15 credits: one core course (SOAN 203 or SOAN 212) and 4 electives from the following: SOAN 203, SOAN 212, SOAN 215-218, SOAN 220–227, SOAN 236, SOAN 237, SOAN 250-252, and SOAN 290 (if selected topic is in Anthropology).

Applied Mathematics requires 18 credits: MATH 201, MATH 210, either MATH 218 or MATH 219, and 9 more credits in mathematics courses numbered MATH 202, MATH 211 or above, and statistics courses numbered 230 or above. Note: A student can opt for a minor in mathematics or a minor in applied mathematics, but not both.

Arabic and Near Eastern Languages requires 15 credits: ARAB 211 or ARAB 212 (or an equivalent language course), at least one course in classical Arabic literature (ARAB 224, 229, 230, 231, 232, 233, 234, 235, 236, 241, 243, 244, 247, 249, 257, 290), at least one course in modern Arabic literature (ARAB 223, 225, 226, 237, 238, 239, 240, 245, 246, 253, 254, 258), plus two other courses in the department.

Archaeology requires 15 credits: Five courses numbered 200 and above, including one of the following: AROL 211, AROL 212, AROL 233, AROL 234, AROL 291, or AROL 292.

Art History requires 15 credits: 6 credits chosen from AHIS 203, AHIS 207, AHIS 208, AHIS 209, AHIS 210 or equivalents; 6 credits from AHIS 221, AHIS 224, AHIS 225, AHIS 226, AHIS 227, AHIS 249, AHIS 263, AHIS 281; and 3 credits from AHIS 250, AHIS 251, AHIS 252, AHIS 284, or approved alternate.

Biology requires 15 credits: BIOL 201 (4 credits), BIOL 202 (4 credits), plus at least two courses (provided the prerequisites of these courses are satisfied) to complete the 15 credits required for the minor, except BIOL 200, BIOL 209, BIOL 210, and BIOL 293.

Chemistry requires 16-17 credits: CHEM 201, one lab course from the following list (CHEM 201L, CHEM 203, CHEM 209 or CHEM 210) and a minimum of 12 credits from courses selected from at least three of the below four chemistry divisions:

- Analytical: CHEM 215, CHEM 219, CHEM 234
- Inorganic: CHEM 228, CHEM 229
- Organic: CHEM 207, CHEM 208, CHEM 211, CHEM 212
- Physical: CHEM 217, CHEM 218, PHYS 212, [CHEM 204 and MECH 310]

Typical choice of minors for different majors:

- Biology: 201, 201L/210, 211, 212, 215, 228 (16/17 credits)
- Physics: 201, 201L/209/210, PHYS 212, 215/217, 208/211/212/228 (16/17 credits)
- Geology: 201, 201L/209, 208, 215, 228, 229 (16/17 credits)
- Chemical Engineering: 201, 201L/209, 207, 219, (204 and MECH 310) (16/17 credits)

Civil Society, Citizenship, and the Nonprofit Sector requires 15 credits. The requirements are PSPA 222 and PSPA 272 and three electives from the following list of courses: PSPA 202, PSPA 203, PSPA 233, PSPA 235, PSPA 254, PSPA 257, PSPA 260, PSPA 263, PSPA 289G, PSPA 299, ECON 232, ECON 237, MCOM 217, MCOM 252, SOAN 225, SOAN 226, SOAN 240, and SOAN 245. No more than 12 credits can be taken from the same department. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Cognitive Science (Suspended as of Fall 2020-21) requires 18 credits: PSYC 237 is required. PSYC 237 cannot be counted as a psychology course for the purpose of this requirement. The remaining 15 credits must be chosen from the following courses: BIOL 240, 243, 244, CMPS 201, 211, 261, 262, EDUC 215, 221, ENGL 227, 228, 232, 284, 294, PHIL 211, 220, 221, 222, 223, 257 or 258 (but not both), PSYC 210, 222, 224, 226, 229, 280, on condition that the 15 credits chosen span at least three disciplines. A student may choose a special topics course not listed above (e.g., 290 course codes), provided the topic is within the purview of cognitive science, upon approval of the course coordinator. For single major students, only 3 credits of the 15 credits taken for the minor may count toward the major.

For double major students, 6 credits taken for the minor may count toward the majors, with no more than 3 credits per major. Students are encouraged to take PSYC 237 early in the minor.

Computational Sciences an interdisciplinary minor, requires 18 credits (excluding prerequisite courses): 12 required credits: (CMPS 201 or CMPS 203, CMPS 202, MATH/CMPS 251, MATH 281 or CMPS 254), plus 6 credits from the following: MATH 211 (or CMPS 211), DCSN 200, PHYS 222, or a tutorial course in either PHYS 231 or PHYS 232, a course in bioinformatics, or a chemistry course which has computational contents. New computational courses will be introduced by various departments as future electives for this minor.

Computer Science requires 18 credits: CMPS 201, CMPS 202, CMPS 211 (or MATH 211), CMPS 214, and 3 additional credits from the following: CMPS 215, CMPS 221, CMPS 231, CMPS 240, CMPS 241, and CMPS 271, and 3 additional credits from CMPS courses numbered 214 and above (except CMPS 297T). [Note: This minor is not open to students from the ECE Department]

Creative Writing requires 15 credits. Three courses chosen from ENGL 239, ENGL 249, ENGL 250, ENGL 251, ENGL 252, ENGL 253, 254, and ENGL 264. Two 200-level courses chosen from the offerings in Literature, including ENGL 236 (Creative Writing) or any course in creative writing offered by the Department of Arabic and Near Eastern Languages.

Critical Humanities requires 15 credits: CHLA 204 or CHLA 206, CHLA 209, and three courses chosen from CHLA 210-214.

Data Science for non-CMPS majors and non-ECE majors requires 18 credits: CMPS 201 or CMPS 203, CMPS 244, CMPS 261, CMPS 262, one of the following (STAT 201, STAT 210, STAT 230, STAT 233, BUSS 200, EDUC 227, ECON 213, or NURS 203), and MATH 218 or MATH 219.

Educational Psychology requires 15 credits: EDUC 215, EDUC 221, EDUC 223, EDUC 217, and either EDUC 280 or EDUC 232.

Educational Administration and Policy requires 15 credits: EDUC 211, EDUC 212, EDUC 213, either EDUC 215 or EDUC 225, and EDUC 230.

Economics requires 15 credits: ECON 211, ECON 212, one of ECON 214 or ECON 239 or ECON 243, at least one of ECON 217 or ECON 227, and at least one elective other than ECON 213 chosen from the available offerings, provided their prerequisite (or equivalent) has been satisfied.

English Language requires 15 credits: ENGL 227 and four other courses chosen from the department's Language offerings.

English Literature requires 15 credits: Two core courses from ENGL 205, ENGL 207, ENGL 209 (formerly ENGL 201), plus three other courses: one comparative literature course (ENGL 240 243), and any two courses from the different categories of the literature curriculum.

Environmental and Aquatic Sciences requires in addition to BIOL 202 or BIOL 200, a total of 15 credits: one course from BIOL 252, BIOL 250, BIOL 256; one course from BIOL 266, BIOL 246, BIOL 267, BIOL 255; the remaining credits are completed by choosing from the following: CHEM 202, PHIL 209, PSPA 288F, BIOL 240, BIOL 241, BIOL 245, BIOL 246, BIOL 250, BIOL 252, BIOL 254, BIOL 255, BIOL 256, BIOL 258, BIOL 259, BIOL 266, BIOL 267, BIOL 281, BIOL 286, AGSC 215, LDEM 230, AGSC 284, AGSC 295, LDEM 211, LDEM 215, LDEM 203, ENHL 220, CIVE 350, CIVE 450.

A minimum of three courses should be taken outside the student's major field of study and should be chosen from two different disciplines.

Film and Visual Culture requires 15 credits: two of the following core courses (ENGL 219 , MCOM 206, MCOM 222); two electives from the following: ENGL 241A, ENGL257 (A....Z), MCOM219, MCOM220, MCOM221, MCOM 223, MCOM 225, MCOM 230, SOAN 236, SOAN 250, or other classes/special topics courses approved by the coordinator of the minor program; and one elective from the following: ENGL 239, ENGL 254A, MCOM 245, MCOM 246 or special topics courses approved by the coordinator of the minor program.

Gaming for CMPS majors, Engineering, or other Sciences requires 18 credits: CMPS 202, CMPS 285, CMPS 288, two courses from ENGL 264, ENGL 297, MCOM 291P, and one of ENGL 245G or EDUC 275.

Gaming for students majoring in Social Sciences or Humanities: 18 credits are required as follows: CMPS 201, CMPS 204, GRDS 141, two courses from ENGL 264, ENGL 297, MCOM 291P, and one of ENGL 245G or EDUC 275.

Geology requires 15 credits: Core course GEOL 201, and any four courses of the following: GEOL 209, GEOL 211, GEOL 213, GEOL 222, and GEOL 227.

History requires 15 credits: five courses numbered 200 and above. All students, especially those considering graduate work in history, are encouraged to take HIST 287 as one of the five courses.

Human Rights and Transitional Justice, an interdisciplinary minor requires 15 credits: SOAN 245, SOAN 240 or PSPA 235, and three electives from the following: SOAN 221, MCOM 216, MCOM 217, SOAN 232, SOAN 242, PSYC 212, PHIL 216, PHIL 252, PSPA 222, PSPA 232 any special topics course in SOAN, PSYC, PHIL, PSPA, which will fit with the minor topic, upon the approval of the respective department chair and the coordinator of the minor program. Students majoring in sociology-anthropology should take at least three courses other than SOAN courses.

International Law for non-PSPA majors requires 15 credits: PSPA 213 and PSPA 225; plus three upper-level courses from the following list: PSPA 223, PSPA 226, PSPA 228, PSPA 232, PSPA 233, PSPA 235, PSPA 239, PSPA 288 (if related to the minor's emphasis and approved by the PSPA Department), PSPA 293B, 293C, 293F, PSPA 299 (if approved by the PSPA Department) and SOAN 245.

International Law for Political Studies majors requires 15 credits: PSPA 225, and four upper-level courses from the following list: PSPA 223, PSPA 226, PSPA 228, PSPA 232, PSPA 233, PSPA 235, PSPA 239, PSPA 288 (if related to the minor's emphasis and approved by the PSPA Department), PSPA 293B, 293C, 293F, PSPA 299 (if approved by the PSPA Department) and SOAN 245. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Marine Sciences and Culture requires 15 credits: MSCU 201, MSCU 202, and MSCU 203, plus any two electives from the following: MSCU 204, MSCU 211, AROL 211, 213, 214, 215, 216, 217, 218, 221, 222, 223, 224, 225, 226, BIOL 246, 255, GEOL 201, 210, 214, and 222.

Mathematics requires 18 credits: MATH 201, MATH 210, either MATH 218 or MATH 219; and 9 more credits in mathematics courses numbered 202, 211, or above; and statistics courses numbered 230 or above. Note: A student can opt for a minor in mathematics or a minor in applied mathematics, but not both.

Media and Communication requires 15 credits: two requirements from the following: MCOM 201, MCOM 202, MCOM 203 or MCOM 204; two List A electives from: MCOM 205, MCOM 206, MCOM 215 to MCOM 239, MCOM 290 - MCOM 292; one List B elective from MCOM 240 to MCOM 259, MCOM 293.

Music requires 15 credits: 6 credits from: MUSC 220, 221, 230, 235, 239, 250. 6 credits from: MUSC 200, 205, 231. 3 credits from: MUSC 262, 263, 265, 266, 269.

Philosophy requires 15 credits from courses numbered 200 and above, including at least two of the following courses: PHIL 211, PHIL 213, PHIL 214, and PHIL 225.

Physics requires 18 credits: PHYS 212, 221L and one of the following three courses (PHYS 210, PHYS 211 or PHYS 214), plus 9 credits selected from PHYS 217, PHYS 220, PHYS 226, PHYS 235, PHYS 236 or a special topic course.

Political Studies for non-PSPA majors requires 15 credits: PSPA 201; one of the following three: PSPA 210, PSPA 211, or PSPA 213; and any three upper level courses from the following list: PSPA 214, PSPA 215, PSPA 216, PSPA 217, PSPA 218, PSPA 219, PSPA 221, PSPA 222, PSPA 223, PSPA 225, PSPA 228, PSPA 229, PSPA 231, PSPA 232, PSPA 233, PSPA 234, PSPA 235, PSPA 236, PSPA 237, PSPA 238, PSPA 239, PSPA 250, PSPA 251, PSPA 252, PSPA 253, PSPA 254, PSPA 255, PSPA 256, PSPA 286, PSPA 288, PSPA 290, PSPA 291, PSPA 292, and PSPA 299. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Political Studies for Public Administration majors requires 15 credits: one of the following courses: PSPA 210, PSPA 211 or PSPA 213; and any four upper level courses from the following list: PSPA 214, PSPA 215, PSPA 216, PSPA 217, PSPA 218, PSPA 219, PSPA 221, PSPA 222, PSPA 223, PSPA 225, PSPA 228, PSPA 229, PSPA 231, PSPA 232, PSPA 233, PSPA 234, PSPA 235, PSPA 236, PSPA 237, PSPA 238, PSPA 239, PSPA 250, PSPA 251, PSPA 252, PSPA 253, PSPA 254, PSPA 255, PSPA 256 or PSPA 288. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Psychology requires 15 credits: PSYC 201, PSYC 280; plus three electives from PSYC 210–236. A minimum cumulative average of 2.7 is required.

Public Administration for non-PSPA majors requires 15 credits: PSPA 202, PSPA 212, plus three upper-level courses from the following list: PSPA 222, PSPA 257, PSPA 258, PSPA 259, PSPA 272, PSPA 273, PSPA 275, PSPA 277, PSPA 278, PSPA 288, PSPA 297, or PSPA 298. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Public Administration for Political Studies majors requires 15 credits: PSPA 212; plus four upper-level courses from the following list: PSPA 222, PSPA 257, PSPA 258, PSPA 259, PSPA 272, PSPA 273, PSPA 275, PSPA 277, PSPA 278, PSPA 289, or PSPA 297. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Public Policy requires 15 credits: PSPA 202, PSPA 260 and PSPA 276; plus two upper-level courses from the following list: PSPA 223, PSPA 225, PSPA 238, PSPA 250, PSPA 251, PSPA 252, PSPA 259, PSPA 261, PSPA 262, PSPA 263, PSPA 277, PSPA 278, PSPA 297, or PSPA 298. No more than 9 credits may be used to satisfy a requirement for another major or minor. Political Studies majors choosing to minor in Public Policy are required to take a minimum of 15 credits as follows: PSPA 260 and PSPA 276; plus three upper-level courses from the following list: PSPA 223, PSPA 225, PSPA 238, PSPA 250, PSPA 251, PSPA 252, PSPA 259, PSPA 261, PSPA 262, PSPA 263, PSPA 277, PSPA 278, PSPA 297, or PSPA 298. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Reporting in the Digital Age requires 15 credits: Three core courses: MCOM 226, MCOM 240 and MCOM 246, and two additional electives from the following: MCOM 215, MCOM 225, MCOM 241, MCOM 244 (a to z), MCOM 245, MCOM 247, MCOM 250, MCOM 251 and any new or related special topics courses as approved by the Program.

Semitic Studies requires 15 credits: ARAB 213/214 or Syriac 215/216; a second Semitic language other than Arabic (ARAB 213 or 215); ARAB 222; and one of the following: ARAB 211 or 212, ARAB 216, ARAB 227 or ARAB 228, AROL 293/294, AROL 217, AROL 218, AROL 219/220, AROL 226, AROL 227, AROL 228, AROL 231.

Social and Political Thought requires 15 credits: PSPA 210 or PHIL 216, one senior seminar, and three courses from: ENGL 222, ENGL 235, ENGL 240, ENGL 243, ENGL 247, PHIL 210, PHIL 225, PHIL 251, PHIL 252, PSPA 214, PSPA 215, PSPA 216, PSPA 217, PSPA 218, PSPA 219, PSPA 221, PSPA 290A, PSPA 290B, PSPA 290C, SOAN 213, SOAN 221, SOAN 223, SOAN 290 (after securing the approval of the SPT Committee), ARCH 021, ARCH 022, ARCH 037, ARCH 039 and GRDS 020. No more than 9 credits can be taken from the same department; no more than 3 credits can be counted toward the student's major; no more than 6 credits can be taken from the student's home department.

Sociology requires 15 credits: SOAN 201, SOAN 213, SOAN 237, plus two electives from the following: SOAN 210, SOAN 220, SOAN 222, SOAN 223, SOAN 224, SOAN 225, SOAN 232, SOAN 240–242, SOAN 245 and SOAN 290 (if selected topic in Sociology). If a student has taken SOAN 101 and, therefore, cannot take SOAN 201, they should take SOAN 213, SOAN 237, and three of the electives listed above.

Software Development and Design This minor can be attained by any AUB student except Computer Science, Computer and Communications Engineering (CCE), and Computer Science and Engineering (CSE) students. It requires 18 credits and has no prerequisite courses to get started: CMPS 201, CMPS 202, CMPS 244, CMPS 271 and two of CMPS 270, CMPS 278, CMPS 279 and CMPS 288.

Statistics can be pursued via one of two options:

- Option 1: MATH 201, MATH 218 or MATH 219, STAT 231, STAT 233, STAT 234 and STAT 235.
- Option 2: MATH 201, MATH 218 or MATH 219, STAT 230, STAT 234, STAT 235 and one additional advanced course in statistical sciences to be selected with the approval of the department chair.

STEAM Education requires 15 credits: EDUC 230, EDUC 220, EDUC 273, either EDUC 218 or EDUC 231, and either EDUC 271 or EDUC 272.

Studio Arts requires 15 credits: Twelve credits taken from the following courses according to sequence and following prerequisites: SART 200, SART 201, SART 202, SART 203, SART 204, SART 206, SART 207, SART 208. Three credits in art history taken from AHIS 203, AHIS 204, AHIS 207, AHIS 208, AHIS 209, AHIS 221, AHIS 222, AHIS 224, AHIS 225, AHIS 226, AHIS 227, AHIS 249, or approved alternative.

Theater requires 15 credits: One of the following options, representing 6 credits, is required: THTR 259 or THTR 250 and THTR 258. Remaining credits may be taken from among the following courses: ARAB 240, CHLA 263, ENGL 212, ENGL 216, ENGL 251, ENGL 297, or any course that significantly addresses theater, performance, or dramatic literature, with approval of the chair.

Translation requires 15 credits: two core courses: ARAB 225 and ENGL 233. Three courses from the following list: ARAB 211, ARAB 212, ARAB 226, ARAB 227, ARAB 228, ENGL 221, ENGL 231, ENGL 240-243, ENGL 247, ENGL 255 - any letter, ENGL 262– any letter, or any course offered by the Department of English with a significant translation studies component, with approval of the Chair of the department.

Women and Gender Studies, an interdisciplinary minor, requires 15 credits: ENGL 234 (Gender and Language), ENGL 258 (any letter) (Gender and Sexuality), EPHD 334 (Reproductive Health), HIST 262 (Gender in Classical Islamic Society), HPCH 202 (Sexuality and Public Health), SOAN 225 (Gender and Culture) Or Special Topics, seminars, and/or course sections with emphases on Gender, Sexuality, and/or Women's Studies – with approval by the Chair of the Department of English.

Students who opt for a minor (one or more) must do so while working toward their undergraduate degree at AUB.

To graduate with a minor, a student must meet the requirements specified in the Minor section under the General University Academic Information.

Students who have completed the requirements for a minor in any department should fill the Completion of minor petition and submit it through the Online Petitions and Forms System (OPFS) after the grades are out and within the deadline set by the Registrar's office. The transcript of the student shall indicate the minor(s) chosen.

FAS Diplomas

Diplomas and Teaching Diplomas: Refer to Department of Education in this catalogue.

Diploma in Development Studies: Refer to Department of Sociology, Anthropology, and Media Studies in this catalogue.

Directed Study

A student with an average of at least 3.7 in her/his major at the beginning of the senior year may elect to pursue a course of directed study. Students with averages below 3.7 may be admitted to directed study at the discretion of the department.

Students who elect a course of directed study choose their subject of directed study in consultation with a faculty member selected by the student with the department's approval. The directed study may consist of independent research, original creative compositions, or directed reading, and it includes the presentation of a report or thesis.

Tutorials

Students can register for a single tutorial of up to 3 credits during their final year at AUB after securing the permission of their department. Grades for tutorials are either P (Pass) or NP (No Pass).

Dean's Honor List

To be placed on the dean's honor list at the end of the term, a student must:

- be carrying at least 12 credits,
- have passed all courses and attained a term average of 3.7, or be ranked in the top 10 percent of the class and have an overall average of 3.3,
- not have been subjected to any disciplinary action within the university during the term,
- and be deemed worthy by the dean to be on the honor list.

Attendance and Withdrawal from Courses

For information on Attendance and Withdrawal from Courses refer to the General University Academic Information in this catalogue.

Examinations and Quizzes

Students who miss an announced examination or quiz must present an excuse considered valid by the instructor of the course. Unless stated otherwise in the course syllabus, the course instructor should then require the student to take a makeup examination. Makeups for quizzes and midterms as well as class assignments must be completed before the final grade of the course is issued at the end of the term. Only medical reports and/or qualified professional opinions issued by an AUB employee, AUB Medical Center (AUBMC) doctor, or by the University Health Services will be accepted. If there is a question about the validity of any excuse presented by the student, the matter will be referred to the Undergraduate Student Academic Affairs Committee. Instructors should make sure that there is no time conflict between an exam and a regularly scheduled course.

Grading Policies, Incomplete Grades and Makeup Examinations

For information on the Grading System, refer to General University Academic Information.

All faculty members in FAS are to submit their final course grades electronically no later than 72 hours after the final examination.

The work for a course in FAS must be completed by the date on which the term ends. Students who have completed all the course work but missed the final exam or failed to submit papers or projects in lieu of the final exam (depending on course requirements) may be given an incomplete grade upon submission of a valid excuse to the course instructor. The procedures related to such cases are as follows.

Incomplete course work is reported with an "I" followed by a letter grade that reflects the evaluation of the student by the end of the term. This evaluation should be based on a grade of zero for all missed work. Typically, an incomplete grade ranges from IF to IC+. The "W" option is not available to faculty members; all course withdrawals should be entered by the Office of the Registrar. The grades "X", "blank" or "I" without a letter grade should not be reported. Only the Undergraduate Student Academic Affairs Committee can grant permission to make up for missed final exams, papers or projects in lieu of the final exam. To obtain permission to complete the work in a course, a student must submit a petition via the Online Petition and Forms System (OPFS). Whenever possible, medical excuses should be issued by the University Health Services (UHS) or the AUB Medical Center (AUBMC). If the reason for the incomplete work is considered valid by the course instructor, the student's incomplete request is forwarded through the petition workflow for approval. Incomplete requests must be submitted via the OPFS within two weeks of the scheduled date of the missed final exam/paper of the course in question. Late requests will not be entertained without a valid justification.

Once the petition is approved by the Undergraduate Student Academic Affairs Committee (USAAC), the student will be permitted to complete work for the course no later than four weeks of the start of the next regular term (excluding summer, since summer is not considered a regular term). After consulting with the student involved, the course instructor sets the time and date of the makeup/due date of the final course work within this specified period. It is the responsibility of the student to find out from her/his instructor the specific dates by which the work should be completed. If the student's incomplete request is not approved by USAAC, the course instructor is not entitled to give the student any makeup exams or assignments.

After the course work is completed and evaluated by the instructor, the latter should report the grade in a timely manner via OPFS. Once the change of grade is approved by USAAC, it will be forwarded to the Office of the Registrar and the new grade will be reflected on the student's transcript. If the reporting of the grade is late, then it will be considered by USAAC and either approved or declined. Failure to complete incomplete work within the period of four weeks will result in dropping the "I" on the reported course grade and the available letter grade (or numeric grade) becoming the final grade in the course. If the incomplete request petition is not submitted in due time (two weeks after the scheduled date of the final exam) or if the request is turned down by the Undergraduate Student Academic Affairs Committee, the "I" on the reported course grade will be dropped. The available letter (or numeric) grade becomes the final grade in the course.

The procedure to be followed in requesting to change a grade that was erroneously reported on the AUB SIS is as follows. The "change of grade" request found on OPFS should be

submitted by the course instructor immediately when the error is found. The request will then be forwarded to the Chair of the department offering the course and afterwards to the Undergraduate Student Academic Affairs Committee. The course instructor should specify the nature of the error made on the form and attach a copy of the original class list with all grades given and the detailed course grading scheme. The Undergraduate Student Academic Affairs Committee will take note of this change of grade, which will be immediately reported to the Office of the Registrar. Requests for change of grade will not be considered after a period of four weeks from the beginning of the next regular term.

Academic Probation

Departmental Probation and Dismissal from a Department

Students will be placed on departmental probation if their average in major courses drops below 2.3 or C+ in their first two terms in the major. Departments will drop students from their major in case they have an average below 2.3 or C+ in the major courses at the end of their third regular term in the major.

Placement on Academic Probation

Refer to Probation section under General University Academic Information.

Removal of Probation

Refer to Probation section under General University Academic Information.

Credit Load for Students on Academic Probation: The load of a student who is in her/his first term on probation shall not be fewer than 12 or more than 17 credit hours. The load of a student who continues on probation beyond one term shall neither be fewer than 12 nor more than 13 credit hours. During a summer session, all students on probation shall carry loads of no more than 7 credits.

Dismissal from the Faculty

Refer to Dismissal and Readmission section under General University Academic Information.

Application for Readmission

Refer to Dismissal and Readmission section under General University Academic Information. When, in accordance with university regulations, a student is dropped, the implication is that s/ he is not qualified to continue her/his education at AUB. Consideration for readmission is given only if, after spending at least one year, 24 credits, at another recognized institution of higher education, the student is able to present a satisfactory record with no failure. The student must have achieved a grade equivalent to the AUB grade of C+ in each of the courses for which transfer credit is requested. Transfer credit is considered after departmental evaluation of a student's coursework. The foregoing regulations on readmission also apply to students dropped from other AUB faculties who apply for admission to the Faculty of Arts and Sciences.

Failure

If a student fails a course, no re-examination is permitted. If a course is required for graduation, a student failing the course must repeat it.

A student may not register for a course more than three times, including withdrawals. For the third registration, permission from the student's academic advisor and the academic unit concerned is required.

The Arts and Sciences Undergraduate Student Academic Affairs Committee may consider a fourth registration under special circumstances.

A student who at the end of her/his senior year fails to attain a cumulative average of 2.3 in her/ his major field is required to take additional courses in that field or to repeat courses in which the student has scored low grades, provided s/he is permitted to continue at the university.

Summer Session

Maximum Load

The maximum academic load during a regular summer session is 9 credits (7 credits for students on probation).

Degree Courses

The degree courses offered during the summer session are identical in standard and content to those offered during the fall and spring terms. For information on Non-Degree Courses and Summer Orientation Programs, refer to the sections on Department of Education and AUB Extension Programs in this catalogue.

Courses

FAS Numbers Preceding Course Titles

- Freshman Courses: They are numbered from 101 to 199; are ordinarily taken during the freshman year and may be counted toward graduation but only as part of the freshman program.
- Introductory Courses: They are from 200 to 209 and may be counted toward graduation whenever taken but cannot be considered as part of the 30 credits above 210 required in the major field.
- Advanced Undergraduate Courses: They are from 210 to 299 and may be counted as credits in the major field.
- Graduate Courses: They are from 300 to 499 (available to senior undergraduates in good standing and upon securing the consent of the department). Odd-numbered courses are normally offered during the fall term whereas even-numbered courses are normally offered during the spring term.

Numbers Following Titles of Courses

The first number following the title of a course indicates the number of class hours given each week.

The second number indicates the laboratory or practice hours required each week. The third number indicates the number of credit hours applied toward graduation. The credit assigned to each course is stated for the term. Each hour of laboratory is considered a 1/3 to 1/2 credit hour. Courses marked annually are offered at least once during each academic year. Other courses marked alternate years and each term are given accordingly. When frequency of offering is not indicated, the course is offered at the discretion of the department.

Course Descriptions

For those requiring additional information, more detailed course descriptions are available in the individual department sections of this catalogue.

Courses Offered by Other Faculties

Students in the Faculty of Arts and Sciences may also take, for credit, elective courses offered in other faculties. However, FAS students cannot be given academic credit for the following courses: NFSC 220, AVSC 279, and AVSC 280. With regard to courses taken in other Faculties, all prerequisites must be satisfied. Some courses may require prior approval from the faculty concerned.

Freshman Program

Director:	El Hajj, Izzat

The freshman program requires the completion of 30 credits, regardless of the student's target major. Out of these 30 credits, the Ministry of Education and Higher Education requires that:

- For arts majors:
  - At least 9 credits must be in the humanities and social sciences (with at least 3 credits in each of these two areas)
  - At least 3 credits must be in the natural sciences
  - At least 3 credits must be in mathematics
  - 15 credits may be in elective courses
- For science majors:
  - At least 9 credits must be in the humanities and social sciences (with at least 3 credits in each of these two areas)
  - At least 12 credits must be in the natural sciences and mathematics (with at least 3 credits in mathematics and 6 credits in natural sciences)
  - 9 credits may be in elective courses

In addition, the university requires that 3 credits are taken as ENGL 203. If a student is placed in ENGL 102, it may be considered an elective. These students are still required to take ENGL 203 after ENGL 102 to complete their freshman year requirements. Students who take ENGL 203 in their freshman year should take any 3-credit course at the 200-level in place of ENGL 203 to meet the degree requirements for their target major.

Finally, specific departments may have additional transfer requirements depending on the student's target major of study. These requirements are listed in Table 1 for majors at FAS and in Table 2 for majors in other faculties. A checklist for each major is provided on the website of the freshman program to assist students in meeting the ministry requirements, university requirements, and departmental transfer requirements.

Freshman students must complete 30 freshman credits before they can enroll in courses that count towards their sophomore class. Exceptionally, students who have completed at least 26 freshman credits and have at most 4 freshman credits remaining may enroll in courses that count towards their sophomore class for a single semester only. However, they may not enroll in a second semester and take courses that count towards their sophomore class until they have completed the 30 freshman credits entirely. Students must also satisfy the require-

ments listed under the Admission section of this catalogue and the Undergraduate General University Academic Information section of the catalogue in order for their freshman year to be granted the equivalency of the Lebanese Baccalaureate Part II.

Advisors

Each freshman student is assigned an advisor who mentors the student in course selection. Students will work with their advisors until they have completed their freshman requirements and submitted their freshman equivalence regardless of whether they have been admitted to a major. Students who do not join a major in three terms are considered majorless and are re-assigned an advisor for majorless students.

Transfer to a Major

Any student in the freshman year who is not on probation at the time of application may join a major upon completing at least 26 credits and meeting the major's transfer requirements.

Any freshman student who wishes to join a major within the Faculty of Arts and Sciences must meet the departmental requirements shown in Table 1. To join a major, the student must submit a "Change of Major" petition to the FAS Undergraduate Admission Committee, provided that the student meets the requirements for admission to the major. At FAS, late freshman students are considered freshman students for the purpose of transfer up to their third regular semester or up to their fourth regular semester if they have only completed at most 45 credits.

Any freshman student who wishes to transfer to a major in another faculty must meet the faculty requirements shown in Table 2.

Freshman Courses

Freshman students must take all their non-elective credits as 100-level courses. Some of these courses are listed below, arranged according to the areas of study.

Humanities: AHIS 150, ARAB 101, ARAB 102, AROL 101, CHLA 110, CHLA 111, CHLA 112, ENGL 101, ENGL 103, ENGL 104, ENGL 105, ENGL 106, ENGL 107, ENGL 108, HIST 101, HIST 102, HIST 103, HIST 104, MUSC 150, PHIL 101, PHIL 102, SART 150, SOAN 103, THTR 100.

Social Sciences: ECON 101, ECON 102, PSPA 101, SOAN 101, PSYC 101.

Mathematics: MATH 100, MATH 101, MATH 101I, MATH 102.

Natural Sciences: BIOL 101, BIOL 102, BIOL 104, BIOL 105, BIOL 106, CHEM 101, CHEM 101L, CHEM 102, CHEM 102L, GEOL 101, GEOL 102, GEOL 103, GEOL 104, PHYS 101, PHYS 101L, PHYS 103, PHYS 103L, and ENHL 105 from the Faculty of Health Sciences.

Electives: Any of the courses listed above may be counted as elective courses. In addition, some additional freshman courses that do not fall into any of the above categories and that may be counted as elective courses include: BUSS 101, CMPS 101, ENGL 102.

Courses Numbered 200 and Above

Some courses numbered 200 and above are suitable for freshman students and may be counted among the elective credits only. Note, however, that these courses are also open to sophomores, juniors, and seniors and therefore may be more competitive than courses offered at the 100 level.

Math Placement

By default, freshman students are placed in the appropriate math course based on their Math SAT score as follows:

- Students with a Math SAT score of at least 700 will be placed in Math 101.
- Students with a Math SAT score between 570 and 690 will be placed in MATH 101 Intensive.
- Students with a Math SAT score of at most 560, or without a Math SAT score, will be placed in MATH 100.

The Math Placement Test (MPT) is an optional test for students who wish to improve their initial placement. If students opt to take the MPT, they will be placed according to their result in the test as follows:

- Students with a score of at least 70% will be placed in MATH 101.
- Students with a score between 60% and 70% will be placed in MATH 101 Intensive.
- Students with a score below 60% will be placed in MATH 100.

Students placed in MATH 101 still have the option to take Math 100 or Math 101 Intensive if they choose to do so. Some target majors may only require MATH 100.

Table 1: Requirements to Join a Major in FAS from the Freshman Class

Department	Requirements	Some Useful Electives
Applied Mathematics	a minimum cumulative average of 2.3 or C+ in MATH 101 and 102, and a minimum grade of C+ 2.3 in MATH 102	MATH 201
Arabic	a minimum cumulative average of 2.3 or C+ in ARAB 101 (and 102 if taken)	
Archaeology	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	AROL 101 and 201
Art History	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	AHIS 150 and SART150
Biology	a minimum grade of B in each of the following: BIOL 101 and BIOL 102, CHEM 101, CHEM 101L, PHYS101 or PHYS 103, and completion of MATH 101; and a minimum overall average of 2.3 or C+ in the freshman year	STAT 210 and CMPS 209
Chemistry	a minimum cumulative average of 2.3 or C+ in CHEM 101, CHEM 101L, CHEM 102, and CHEM 102L; and a minimum cumulative average of 2.3 or C+ in MATH 101 and 102; and the completion of PHYS 101 and PHYS 101L	

Computer Science	a minimum cumulative average of 2.3 or C+ in MATH 101 and 102 and a minimum cumulative average of 2.3 in all courses taken	CMPS 201 and MATH 211
Economics	a minimum cumulative average of 2.3 or C+ in MATH 101 and MATH 102, and a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	ECON 101, 102, 103, 211, 212 and CMPS 209
Education	a minimum cumulative average of 2.3 or C+ in the freshman year	
English Language	a minimum cumulative average of 2.3 or C+ in English Language courses taken in the freshman year	ENG107, ENG 108
English Literature	a minimum cumulative average of 2.3 or C+ in English Literature courses taken in freshman year	ENGL 101, 103, 104, 105, and 106
Geology	completion of MATH 101, 102, CHEM 101, CHEM 101L, GEOL 101, a third science course, and a minimum cumulative average of 2.3 or C+ in the freshman year	GEOL 101, 102, 201, and 203
History	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	HIST 101, 102, 103 and 104
Mathematics	a minimum cumulative average of 2.3 or C+ in MATH 101 and 102, and a minimum grade of C+ in MATH 102	MATH 201
Media and Communication	a minimum cumulative average of 2.3 or C+ in the freshman year, a minimum cumulative average 2.3 or C+ in English courses taken in the freshman year	MCOM 203
Petroleum Geosciences	completion of MATH 101, 102, CHEM 101, 101L, 102, 102L, GEOL 101, and a minimum cumulative average of 2.3 or C+ in the freshman year	GEOL 101, 102, 201, 203, ECON 101, 102, 103, 203 and SOAN 201
Philosophy	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	PHIL 101 and 102
Physics	a minimum cumulative average of 2.3 or C+ in PHYS 101 and 101L, and a minimum cumulative average of 2.3 or C+ in MATH 101 and 102	CMPS 201

Political Studies	a minimum cumulative average of 2.3 or C+ in the freshman year, and a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	PSPA 101, ECON 103, and PSYC 101
Psychology	a minimum grade of B in PSYC 101 or 201, a minimum grade of B in ENGL 203, a minimum grade of B in ENGL 204 (if taken) and an overall average of 3.0	PSPA 101, 201, 202, PHIL 201, CMPS 206, ECON 203, and one of STAT 201 or EDUC 227
Public Administration	a minimum cumulative average of 2.3 or C+ in the freshman year, and a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	PSPA 101 and PSYC 101
Sociology-Anthropology	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	SOAN 101, 103, PSPA 101, HIST 101-104, ARAB 101, 102, ENGL 101-109 and PHIL 101,102
Statistics	a minimum cumulative average of 2.3 or C+ in MATH 101 and 102, and a minimum grade of C+ in MATH 102	MATH 201
Studio Arts	a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	AHIS 150 and SART 150

Table 2: Requirements to Join a Major in another Faculty from the Freshman Class

Major/Faculty	Requirements	Some Useful Electives
Agribusiness	completion of MATH 101, any combination of natural science courses totaling 9 credits, and a cumulative GPA of at least 2.3 in the freshman year	CHEM 200 and courses in the humanities
Agriculture	completion of MATH 101, CHEM 101, CHEM 101L, and BIOL 101, and a cumulative GPA of at least 2.3 in the freshman year	CHEM 200 and courses in the humanities
Architecture	completion of MATH 101 and 102, any combination of science courses totaling 9 credits, and overall average of at least 3.3 in the freshman year	an elective in the humanities or social sciences
Business	a minimum cumulative average of 3.0 or B in at least 24 credits during the freshman year, and a minimum grade of B in any one	ECON 101, 102 and ECON 211 or 212

	of the following courses: MATH 100, MATH 101, MATH 102 (Refer to Mathematics Department for course requirements)	
Chemical Engineering	completion of MATH 101 and 102, CHEM 101, 101L and 102, 102L, PHYS 101 and 101L, and a cumulative average of at least 3.3 in the freshman year	an elective in the social sciences
Engineering	completion of MATH 101 and 102, CHEM 101, 101L, PHYS 101, and PHYS 101 L, and a cumulative average of at least 3.3 in the freshman year	an elective in the humanities or social sciences
Environmental Health	completion of MATH 101, CHEM 101 and CHEM 101L	ENHL 105, PHYS 101/103 and BIOL 101
Food Science and Management	completion of MATH 101, CHEM 101, 101L, and BIOL 101, and a cumulative average of at least 2.7 in the freshman year	CHEM 200, and courses in the humanities
Graphic Design	completion of the freshman program and a cumulative average of at least 3.3 in the freshman year	CVSP 229, 233, ECON 203, EDUC 211, ENGL 213, PHIL 211, SOAN 201, and PSYC 202
Health Communication	a minimum cumulative average of 2.3 or C+ in the freshman year, a minimum cumulative average of 2.3 or C+ in English courses taken in the freshman year	
Landscape Architecture	any combination of natural science courses totaling 9 credits, and a cumulative GPA of at least 2.3 in the freshman year	an elective in each of geology, chemistry, and biology
Medical Audiology Sciences Frozen as of Fall 2021-22	completion of PHYS 103 and 103L, MATH 101, MATH 102 and BIOL 101	CHEM 101 and CHEM 101L
Medical Imaging Sciences	completion of PHYS 103 and 103L, MATH 101, MATH 102 and BIOL 101	CHEM 101 and CHEM 101L
Medical Laboratory Sciences	completion of MATH 101 and 102, CHEM 101, CHEM 101L, CHEM 102, CHEM 102L and BIOL 101	PHYS 103 or PHYS 101
Nursing	completion of BIOL 101, CHEM 101, CHEM 101L, MATH 100, and MATH 101, and a minimum cumulative average of 2.7	courses open to freshman students, except SOAN 101/201 and PSYC 101/201

Nutrition and Dietetics	completion of CHEM 101,101L, and BIOL 101, and a cumulative average of at least 3.0 in the freshman year. Admission is by selection of the most promising eligible applicants.	CHEM 200, SOAN 201, and courses in the humanities

General Education Program

Director:	Bashour, Bana
Executive Officer:	Najiya, Dalia

AUB is committed to offering its students a broad undergraduate liberal arts education. The aim of the General Education Program is to help us understand ourselves, the world and our role in it. To do so, the program enables students to acquire the analytical skills and habits of lifelong learning that will allow them not only to become effective in whatever area or career they choose, but also to become active citizens of the world. Students will be exposed to a range of intellectual experiences during their time at AUB, including those allowing them to reflect on their own values and responsibilities. We want to give our students the opportunity to make choices and question and test what they believe are their career goals, intellectual interests, and roles in the world.

While being exposed to various fields of knowledge, we also want our students to have the opportunity to experience different modes of learning (lectures, seminars, labs and independent research projects, experiential learning). Different modes of analysis are designed to enhance students' verbal and interactive skills (seminars), writing and analytic skills (research projects), and hands-on experimental skills (laboratories).

In addition to courses in their academic majors and possible minor concentrations in specific fields, all AUB students must satisfy the General Education requirements by taking a minimum of 36-39 credits distributed as follows:

Ways of Understanding

- 3 credits in Understanding Communication (Arabic)
- 6 credits in Understanding Communication (English) through ENGL 204 (ENGL 206 in MSFEA)
- Quantitative Reasoning (3-6 credits)
- Writing in the Discipline (3 credits from within the major)

Understanding Ourselves

- Cultures and Histories (9 credits)
- Societies and Individuals (6 credits)

Understanding the World

- Understanding the World (3-6 credits)

Students are required to take a total of 9 credits from Understanding the World and Quantitative Reasoning with at least 3 credits from each.

Understanding Our Role in the World

- Human Values (3 credits)
- Community-Engaged Learning (3 credits)

Thematic Requirements

- Social Inequalities (3 credits from any designation)
- History of Ideas (3 credits from CHLA)

All undergraduate students are required to take one Arabic course during their undergraduate degree to fulfill the Understanding Communication (Arabic) requirement. Students who completed the Lebanese Baccalaureate may register in any Understanding Communication (Arabic) course, except for Arabic as a Foreign Language courses. Students who did not do the Lebanese Baccalaureate are required to take an Arabic Placement Test. These students will be placed in an Understanding Communication (Arabic) course that is appropriate for their Arabic skills, which may include Arabic as a Foreign Language courses.

All new undergraduate students at AUB are required to take Understanding Communication (English) Courses. New undergraduate students are placed in one of the English Communication Skills Courses on the basis of their scores on the TOEFL, the AUB-EN, the SAT Writing or any equivalent standardized test. The Department of English offers a sequence of two core courses, ENGL 203 and ENGL 204, to all AUB undergraduates, and two specialized courses, ENGL 206 to MSFEA students and ENGL 208 to OSB students. A new undergraduate student is placed in one of the core courses in the sequence upon matriculation and has to complete the sequence in successive terms.

All students are required to take 9 credits of Cultures and Histories courses and 3 credits of Human Values. All students who wish to register in these courses should have demonstrated English language skills, which placed them in ENGL 203 or above. A minimum of 3 credits must be taken in History of Ideas: CHLA. For details, refer to the Critical Humanities and Liberal Arts section. One elective for all majors should cover the theme of Social Inequalities.

In addition, all undergraduate students are required to take a 3-credit Writing in the Discipline course, which is normally offered in the major.

These distribution requirements may be met by either required or elective courses.

A comprehensive list of approved General Education courses can be found on the General Education Program website. Active General Education courses in any term may be searched by subject through the AUBSIS homepage (Search for General Education Courses). Students are expected to refer to their major degree requirements available in this catalogue before registering their GE courses.

Students who transfer from other universities or take study-abroad courses should submit the Course Equivalence petition to their faculties for courses that could count towards fulfilling their GE requirements.

Double Major, Dual Degree and Second Degree

Students enrolled for dual degrees must satisfy the General Education requirements of both majors. Students enrolled for a double major or a second degree should satisfy the General Education requirements of one major. For more information on Double Major, Dual Degree and Second Degree, please refer to the General University Academic Information.
Website: https://www.aub.edu.lb/generaleducation/Pages/default.aspx

Department of Arabic and Near Eastern Languages

Chairperson:	Khansa, Enass
Professors:	Baalbaki, Ramzi M. (Margaret Weyerhaeuser Jewett Professor of Arabic); Jarrar, Maher Z.; Orfali, Bilal W. (Sheikh Zayed Chair for Arabic & Islamic Studies)
Assistant Professors:	AbdelMegeed, Maha; Khansa, Enass
Senior Lecturers:	Bazzi, Tarif; Fakhreddine, Jawdat
Lecturers:	Atiyyah, Najah; Bou Fadel, Najem; Ghaddar; Hussein; El Daif, Rachid; Moukaled, Sina; Sultany Kanawaty, Rima; Zein, Raghida
Instructors:	El Mallah, Jihad; Malti, Samir; Semaan, Rima

In addition to the BA degree in Arabic language and Literature, the Department of Arabic and Near Eastern Languages provides service courses for all students at AUB. ARAB 101 and ARAB 102 must be taken in the freshman year in addition to one more Arabic course (i.e., ARAB 201, ARAB 202, or any other course numbered ARAB 211 or above [ARAB 213, ARAB 214, ARAB 215, ARAB 216, ARAB 217, ARAB 219, and ARAB 220-222 excluded]).

BA in Arabic language and Literature

Mission Statement

The Department of Arabic and Near Eastern Languages has always possessed a leading role in its own field of learning in the Arab World, while being the only one maintaining a liberal tradition of education and research. The impressive number of diverse prominent scholars, writers and intellectuals who passed through the department testifies to this remarkable historical achievement. The department has always sought to train students in the basic tools of the discipline, namely language and research skills, while exposing them to the essentials of the field, and subjecting everything to the curiosity of the inquiring mind.

Degree Requirements

Major Requirements

Requirements for the BA degree in BA in Arabic language and Literature are as follows: ARAB 211, ARAB 212, ARAB 224, ARAB 231, ARAB 232, ARAB 233, ARAB 237, ARAB 239, ARAB 241, ARAB 243, and ARAB 245 (total 33 credits). In addition, the student must select one course from within the other courses in the department (36 total credit hours).

Students choosing a minor in Arabic are required to take 15 credits of Arabic courses. These courses should include ARAB 211 or ARAB 212 (or an equivalent language course), one course in classical Arabic literature, one course in modern Arabic literature, and any two courses in the department.

The minor in Semitic Studies requires 15 credits: ARAB 213/214 or Syriac 215/216, a second Semitic language other than Arabic (ARAB 213 or 215), ARAB 222, and one of the following: ARAB 211 or 212, ARAB 216, ARAB 227 or ARAB 228, AROL 293/294, AROL 217, AROL 218, AROL 219/220, AROL 226, AROL 227, AROL 228, AROL 231.

When a required course is not available, it may be replaced by another course within the department provided the student's advisor gives consent.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Course Descriptions

ARAB 101 Readings in Arabic Heritage I 3.0; 3 cr.
Introduces students to key language and analytical skills. It takes the students on a journey through a number of disciplines that are central to a liberal arts education such as: anthropology, psychology, sociology, history, and literature. During the course, students explore examples from pivotal contributions to these fields by intellectuals writing in Arabic while also sketching the history of these fields in the Arabic speaking world. In the process, students hone their ability to write, communicate, and analyze in Arabic. Annually.

ARAB 102 Readings in Arabic Heritage II 3.0; 3 cr.
Arab 102 is a thematic introduction to pre-modern critical thought in Arabic. Possible themes include: Visions of Utopia, Conceptions of the Intellect, and notions of Justice. In exploring these themes, the course is equally anchored in the present, excavating the continued resonance of these debates for contemporary thought. In the process, students develop their reading and analytical skills through engaging with these texts while also sharpening their writing and research skills. Annually.

ARAB 200 Special Arabic 3.0; 3 cr.
A course designed for native speakers of Arabic who have limited pre-college formal study of the Arabic language in Lebanon or abroad. Open to students who are exempted from Arabic. Every term.

ARAB 201 Issues in Contemporary Arab Culture 3.0; 3 cr.
This course aims to explore a number of themes related to contemporary Arab culture(s) and further develop students' communication skills and academic writing in Arabic. Themes which will be examined include: Arab culture(s) and change in a globalized world, tradition and modernity, the self and the other, dynamics of religion and society, women and gender in a changing world, Arab youth and artistic expression. Every term.

ARAB 202 Arabic Technical Writing 3.0; 3 cr.
The course provides guidance in the production of non-literary texts in modern written Arabic, with attention to structure, stylistics, and diction of letters, memos, emails, resumes, reports, proposals, descriptions, instructions, and various types of documentation. Emphasis is on the analysis and production of appropriate rhetorical styles in the various genres of technical communication used in the workplace. Every term.

ARAB 203/204 Beginners' Arabic as a Foreign Language I and II 5.0; 3 cr. (each)
This sequence of courses introduces students who have no previous knowledge of Arabic to the Arabic language and culture within its Lebanese setting. The course utilizes an integrated approach to Arabic and emphasizes communicative tasks and contexts. By the end of the course, students will be able to speak and write simple connected sentences about themselves, their families and their immediate environment, and read and listen to short authentic texts. By the end of the course sequence, students reach Intermediate-Low to Intermediate-Mid proficiency in Arabic on the ACTFL scale. Prerequisite for ARAB 204 is ARAB 203 or placement by a placement exam. Every term.

ARAB 205/206 Intermediate Arabic as a Foreign Language III and IV 5.0; 3 cr. (each)
This course sequence aims to further enhance students' proficiency in the various skills by expanding their vocabulary, control of pronunciation and grammatical structures, and cultural knowledge. The course utilizes an integrated approach to Arabic that is based on communicative tasks and contexts. Students' activities at this level involve giving oral presentations and doing writing projects. By the end of this course sequence, students reach Intermediate-Mid to Intermediate-High proficiency in Arabic following the ACTFL scale. Prerequisites: ARAB 203 and ARAB 204, or placement by a placement examination. Every term.

ARAB 207/208 Advanced Arabic as a Foreign Language I and II 3.0; 3 cr. (each)
This course sequence aims to enable students to reach advanced proficiency in Arabic in all skills. Students are required to do extensive readings on a variety of topics and genres, such as literature, language and the social sciences. They are also expected to engage in debates, give oral presentations and write short research papers. The course utilizes an integrated approach to Arabic and is based on communicative tasks and contexts. By the end of this course sequence, students reach Advanced-Low to Advanced-Mid proficiency in Arabic following the ACTFL scale. Prerequisites: ARAB 205 and ARAB 206, or placement by a placement examination. Every term.

ARAB 209 Advanced Arabic as a Foreign Language III 3.0; 3 cr.
This course aims to enable students to reach the Advanced-High level in the various skills in Arabic. Readings at this level are extensive and span a variety of genres. Listening skills are sharpened through extensive work with news broadcasts, documentaries, and television shows in both Standard and Lebanese Arabic. The course also features extended oral presentations in class and extensive writing activities. Special emphasis is placed on understanding the nuances of the language and the use of idiomatic expressions and rhetorical devices in all language skills. Prerequisites: ARAB 207/208 or placement by a placement examination. Every term.

ARAB 210A Writing Prose 3.0; 3 cr.
A course designed for students who wish to identify and pursue their own creative interests in writing fiction and creative non-fiction. Through discussions, assigned readings, writing exercises and critiques of student writing in a workshop mode, students will critically examine the elements of literary creation. Every term.

ARAB 210B Writing Poetry 3.0; 3 cr.
A course designed for students who wish to identify and pursue their own creative interests in writing poetry. Through discussions, assigned readings, writing exercises and critiques of student writing in a workshop mode, students will critically examine the elements of poetic genres. Annually.

ARAB 211/212 Survey of Arabic Grammar 3.0; 3 cr. (each)
A year-long course on Arabic morphology and grammar. It is comprised of readings from a classical grammatical text and training in sentence structure through i`raab. Annually.

ARAB 213/214 Introductory Biblical Hebrew 3.0; 3 cr. (each)
A class that teaches Biblical Hebrew allowing students who have no background in the subject to read the Bible and discover one of the founding books of our society and a major source of inspiration to many authors throughout history. Prerequisite for ARAB 214 is ARAB 213 or permission of instructor. Annually.

ARAB 215 Introductory Syriac 3.0; 3 cr.
The course provides students with working knowledge of Syriac language and grammar. With the help of a lexicon, students will be expected to read and translate simple Syriac texts. Annually.

ARAB 216 Intermediate Syriac 3.0; 3 cr.
This course complements ARAB 215/MEST 330 'Introduction to Syriac Language', focusing on the reading, translation, and analysis of Syriac texts from various authors, genres, and time periods. In addition, the course provides a review of Syriac grammar. It is intended for those students who have taken the introductory course ARAB 215/MEST 330 or who already have a basic knowledge of Syriac and wish to continue studying the Syriac language for a second term. Prerequisite: ARAB 215 or permission of instructor. Annually.

ARAB 217 Introduction to Syriac Literature 3.0; 3 cr.
The aim of this introductory course is to provide the student with an overview of Syriac literature from its origins to the present day. Students who receive credit for ARAB 217 cannot receive credit for MEST331. Annually.

ARAB 219 Turkish 3.0, 3 cr.
A beginner to mid-level course in modern Turkish with initial emphasis on spoken Turkish and a gradual introduction to reading.

ARAB 220 Introductory Persian I 3.0; 3 cr.
An elementary-level course designed to help students start learning Persian by introducing the Persian alphabet and building communicative skills. The emphasis is on speaking and using the language for communication but all four language skills (listening, speaking, reading, and writing) as well as pronunciation and vocabulary will be emphasized. Every term.

ARAB 221 Introductory Persian II 3.0; 3 cr.
An elementary-level course that helps students continue to expand upon what they have learned in Introductory Persian I. Like its prerequisite, this course also focuses on using the language for communication while teaching all four language skills (listening, speaking, reading, and writing). Annually.

ARAB 222 Introduction to Semitic Studies 3.0; 3 cr.
This class places the Semitic languages of the Levant (Arabic, Hebrew, Phoenician, and Syriac) in their historical perspective by introducing the discipline of Semitic studies, especially in its comparative orientation. Especial emphasis is placed on Arabic dialectology, an often-overlooked aspect of Semitic studies. Annually.

ARAB 223 Arabic for the Media 3.0; 3 cr.
This writing-intensive course seeks to familiarize students with Arabic journalism writing styles over a comprehensive range of story styles and regional news outlet house styles. Special attention is paid to the specialized vocabulary of news reporting. Every term.

ARAB 224 Arabic Stylistics and Metrics 3.0; 3 cr.
A detailed study of stylistics balagha and metrics ‘arud. This course surveys the contribution of the Arabs to stylistic studies and introduces their theory of versification. Annually

ARAB 225/226 Translation 3.0; 3 cr. (each)
A year-long course divided into a brief introduction and an extended segment in applied translation. In the introduction, theoretical problems and issues of translation are discussed. The course is then transformed into an extended workshop where students will be preoccupied with their own translation exercises from and into both Arabic and English. Every term.

ARAB 227/228 Arabic Linguistics 3.0; 3 cr. (each)
These two courses deal with various topics of Arabic linguistic sciences, mainly phonetics, semantics, and lexicology. Annually

ARAB 229 Background to the Study of Classical Arabic Literature 3.0; 3 cr.
A course dealing with the impact of Greek culture on classical Arabic literature and thought, and the rise and development of Arab intellectualism. Annually.

ARAB 230 Themes and Genres of Arabic Literature 3.0; 3 cr.
A broad overview of Arabic literature throughout the ages. This course primarily emphasizes the literary production embodied in the works that give Arabic literature its unique character in different periods, while concentrating on the major themes and genres around which this literature revolves. Annually.

ARAB 231 Arabic Poetry: The Heroic Age 3.0; 3 cr.
A course highlighting characteristic elements of Arabian life in its heroic age prior to Islam, while considering its individual, tribal, and mythical codes. Main problems, sources, and strains of the poetry of this age are surveyed. The substantial component of the course is comprised of critical analysis of representative poems. Annually.

ARAB 232 Arabic Poetry: The Age of Conquest, Love, and Nostalgia 3.0; 3 cr.
A survey of new genres of poetry that blossomed when desert Arabs were deployed outside their peninsula following the conquests. This is examined through a compact probe of the economic, social, and political factors that affected Arabian life, from the advent of Islam to the end of the Arabian (Umayyad) era. The substantial component of the course is comprised of critical analysis of representative poems. Annually.

ARAB 233/234 Abbasid Poetry 3.0; 3 cr. (each)
A survey of Arabic poetry during the Abbasid period that considers the historical, political, and social background. The first part of the course deals with the major poets of the early Abbasid era, which ends during the reign of al-Mu’tasim while the second part surveys the poetry of the latter Abbasid age up to the fall of Baghdad. Annually.

ARAB 235 Andalusian Literature 3.0; 3 cr.
An introduction to Arabic literature in Islamic Spain. Students read and analyze Andalusian poetry and prose, with special emphasis on the new literary forms that appeared in al-Andalus. Annually.

ARAB 236 Qur’anic Studies 3.0; 3 cr.
An introduction to major Qur’anic issues such as the collection of the Qur’an, Qur’anic imagery, and the various trends in Qur’anic exegesis. Annually.

ARAB 237/238 Modern Arabic Poetry 3.0; 3 cr. (each)
A year-long course studying the factors that shaped modern Arabic poetry, tracing the phases of its development, and analyzing in detail its various characteristics. Annually.

ARAB 239 Modern Arabic Novel 3.0; 3 cr.
Tackles landmark novels and examples of short fiction. Proceeding largely in chronological order, the sequence of readings addresses genres such as historical novels and autobiographies, as well as themes including war, exile, and gender. Annually.

ARAB 240 Modern Arabic Drama 3.0; 3 cr.
A survey of the rise and development of the dramatic literary genre in modern Arabic, with a focus on the main factors that led to the rise of drama. Students will thoroughly analyze a number of selected works by prominent Arab playwrights. Annually.

ARAB 241 Literary Theory and Criticism 3.0; 3 cr.
A course on the development of Arab literary theory and criticism from the classical period to the present. This course is structured according to the main themes that concerned Arab critics throughout the ages, as well as the major critical trends and their prominent representatives. Annually.

ARAB 243 Classical Arabic Prose 3.0; 3 cr.
A course in which students read and analyze extracts from the works of major prose writers representing the main trends in classical Arabic prose, beginning with pre- Islamic times up to the age of al-Ma`arri. Annually.

ARAB 244 Muslim Schools of Theology 3.0; 3 cr.
A survey of the main doctrines, terms, and modes of expression that are peculiar to the major Muslim sects (firaq) in the medieval age, and the impact they had on literature. Mu`tazila, Ash`ariyya, and Imamiyya constitute the focal point of the course, which includes readings in selected representative texts. Annually.

ARAB 245/246 Background to the Study of Modern Arabic Literature 3.0; 3 cr. (each)
A two-semester course dealing with the Arab cultural renaissance of 1800–1940. Special emphasis is placed on the impact of the West on the making of the modern Arab literary culture. Annually.

ARAB 247 Arabic Classical Folk Literature 3.0; 3 cr.
A course covering the following topics: Folktales, the novella in The Arabian Nights, and the hero sagas such as Sirat Bani Hilal. This course aims at studying the textual history of this special genre, its language, motives, and structures. Students are also exposed to various methodological approaches to folk literature. Annually.

ARAB 248 Christian-Muslim Encounters 3.0; 3 cr.
A collaborative investigation of select topics in Arab and Middle Eastern History viewed from multiple perspectives. Periodic progress reports and the incorporation of findings in an interpretive term paper are required. Senior status and permission of instructor are required. Students who receive credit for ARAB 248 cannot receive credit for ISLM 341. Annually.

ARAB 249 Sufi Literature 3.0; 3 cr.
A course aiming to acquaint students with Sufi literature as one of the major aspects in Arabic literature. Annually.

ARAB 251/252 Special Topics in Arabic Language and Literature 3.0; 3 cr. (each)
A course that varies in content and focuses on selected topics in language and literature. May be repeated for credit. Annually.

ARAB 253 Contemporary Literature in Times of Change 3.0; 3 cr.
A course on 21st century prose and poetry. As it retraces the manifestation of canonical tropes in contemporary literature, the course focuses on the topics, writers, and genres that emerge in times of change and upheavals. Annually.

ARAB 254 The City in Arabic Literature 3.0; 3 cr.
A course on how modern and/or classical writers imagined cities in poetry and prose. Special attention will be given to the concepts of loss, exile, and collective memory in the representation of urban spaces in prose and poetry. Annually.

ARAB 256 Judeo-Arabic and the Arabic Writings of Maimonides (Ibn Maymum) 3.0: 3 cr.
An introduction to Judeo-Arabic (Middle Arabic) focusing on Ibn Maymun and his writings. The class emphasizes the influence of Arabic on medieval Hebrew. Through the reading of his texts, students will discover the Andalusian physician and philosopher from his childhood in Cordova to his position as the personal doctor of Salaheddine and the head of the Jewish community in Cairo. Alternate years.

ARAB 257 The Maqamat 3.0; 3 cr.
The course is devoted to the two major representatives of the maqamat genre, its precursor al-Hamadhani (d. 1008) and his more famous emulator al-Hariri (d. 1122). The course will include both close reading of selected passages and discussion of the entire texts of the maqamat. The readings are supplemented by additional texts from other genres in Arabic literature which share sources, literary features, or common discourse with the maqamat, such as faraj ba'd al-shidda stories, anecdotes, popular tales, letters, treatises, and ornate prose. Alternate years.

ARAB 258 Arabic Language & Identity 3.0: 3 cr.
A course that examines the interplay between language and identity in the contemporary Arb world. The course explores the definitions of "identity" and the various factors that shape it within individuals and communities. Special focus is placed on analyzing language and identity debates in Lebanon, the Maghreb, Iraq, and the Gulf region and framing them within their relevant historical, ethnic, and socio-economic contexts. Annually.

ARAB 290 Undergraduate Seminar on al-Mutanabbi 3.0; 3 cr.
A seminar on the times, life, and poetry of this major Arab poet. It combines the historical and the literary analytical-critical methodologies. Its substantial component comprises close textual analysis of poetry from the different phases of the poet's intertwined private and public life. Alternate years.

33 + 3 Credits in Arabic

Modes of Analysis	English and Arabic (9)	Cultures and Histories Values (12+33+3+9)	Societies and Individuals (6)	Understanding the World Quantitative Reasoning (9: 3/6 + 3/6)	Community-Engaged Learning (3)

Lecture Courses (9+12+33+ 3+9+6+3)	Required Arabic Course (3) Required English Courses: ENGL 203 (3), 204 (3)	Required credits in the Cultures and Histories: 9 credits in History of Ideas and 3 credits Human Values Required Arabic courses (33): ARAB 211(3), 212(3), 224(3), 231(3), 232(3), 233(3), 237(3), 239(3), 241(3), 243(3), 245(3) One elective course from the following or a seminar course (3): ARAB 213(3), 214(3), 218(3), 221(3), 225(3), 226(3), 227(3), 228(3), 229(3), 230(3), 234(3), 235(3), 236(3), 238(3), 240(3), 244(3), 246(3), 247(3), 249(3) Electives: 9 credits in other Cultures and Histories	Electives (6)	electives (9): (Recommended: a course in computer literacy	required (3)
Seminar (0–6)		Elective Arabic courses: ARAB 251(3), 252(3)			
Laboratory (3)				Computer Lab (3)	
Research project (63)		ARAB 227–241, 243–247, 249			

Department of Biology

Chairperson:	Kambris, Zakaria S.
Professors:	Bariche, Michel J.; Baydoun, Elias H.; Gali-Muhtasib, Hala U.; Knio, Khouzama M.; Kreydiyyeh, Sawsan I.; Osta, Mike A.; Saoud, Imad P.; Smith, Colin A.; Talhouk, Rabih S.
Associate Professors:	Ghanem, Noel D.; Jaalouk, Diana E.; Kambris, Zakaria S.
Assistant Professors:	Sadek, Riyad A.
Lecturers:	Rizkallah, Hind D.; Sinno-Saoud, Nada
Instructors:	Hajjar, Layane A.M.; Al-Zein, Mohammad S.
Adjunct Faculty:	Dohna, Heinrich; Parker, Bruce; Skinner, Margaret

BS in Biology

Mission Statement

The BS program in Biology prepares students for advanced study and careers in research, education, and service in Biology-related disciplines. Students will acquire descriptive, experimental, quantitative, and conceptual abilities spanning molecular, cellular, organismal, and ecological levels. Lecture and laboratory courses will emphasize model systems, the role of evolution, diversity of living systems, hypothesis-based reasoning, and communication skills. Science, social science, and humanities coursework will foster creativity, free thought, interdisciplinary skills, and commitment to ethical scholarship.

Degree Requirements

All students admitted as sophomores are eligible to continue in the program provided they obtain, by the end of their third regular term at AUB, a minimum average of 2.3 C+ in their biology courses. Students seeking to be readmitted to the program after being dropped must meet transfer requirements. Students will be considered for transfer to Biology provided they obtain a minimum grade of B in BIOL 201 and B in BIOL 202 and a C+ or above in CHEM 201 and a 3.0 or above overall average. Meeting the minimum requirements for joining the biology department does not guarantee acceptance. Transfer to Biology from other departments within the university is competitive and requires departmental approval.
The requirements for a BS degree in Biology are 90 credits for students entering the department at the sophomore level. The distribution of these courses is as follows:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree require-

ments (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Major Requirements

Students majoring in biology are required to complete 37 credits of Biology: BIOL 201, 202, 220, 223, two of the following four courses: BIOL 224, 252, 260, 270 (students are not allowed to register for two of those four courses during the same term unless they have an F or a W on their transcript for one of these courses from a previous term and students cannot register for two semi-required courses during the same semester; however, justified exceptions need chair's approval), BIOL 293, and a minimum of 13 credits in biology elective courses, including at least one lab course. Additionally, BIOL 296 (a 0-credit exit survey) must be taken in the last term of study.

Students are also required to complete 15 credits of Understanding the World, CHEM 201, 210, 211, 212 and PHYS 204 with PHYS 204L, or PHYS 205 with PHYS 205L.

To earn a minor in Biology, students must pass 15 credits of biology. The courses are BIOL 201 (4 credits), BIOL 202 (4 credits), plus at least two courses (provided the prerequisites of these courses are satisfied) to complete the 15 credits required for the minor.

Unless otherwise stated, only senior undergraduate biology majors with an average of 3.3 or above can register in biology graduate courses with consent of the instructor.

Students from any field can minor in aquatic and environmental sciences by completing, in addition to BIOL 202 or BIOL 200, a total of 15 credits chosen from the following three lists:

- List 1: BIOL 252, BIOL 250, BIOL 256
- List 2: BIOL 266, BIOL 246, BIOL 267, BIOL 255
- List 3: CHEM 202, PHIL 209, PSPA 288F, BIOL 240, BIOL 241, BIOL 245, BIOL 246, BIOL 250, BIOL 252, BIOL 254, BIOL 255, BIOL 256, BIOL 258, BIOL 259, BIOL 266, BIOL 267, BIOL 281

Land and Water Resources: AGSC 215, LDEM 230
Plant Sciences: AGSC 284, AGSC 295
Landscape: LDEM 211, LDEM 215
Ecosystem Management: LDEM 203
Environmental Health: ENHL 220
Civil Engineering: CIVE 350, CIVE 450

One course from each of lists 1 and 2 is required. All students should take at least three of the total required courses in a field outside their major field of study, and these courses should be from at least two different disciplines. Only one of the courses taken from lists 1 and 2 by biology majors minoring in environmental and aquatic studies is counted toward the major.

Course Descriptions

BIOL 101 Basic Concepts in Biology 3.0; 3 cr.
A course that deals with the basic concepts in biology, and prepares students for BIOL 201 and BIOL 202. This course introduces the student to the forms and functions of plants and animals, and to the principles of genetics, evolution, and ecology. Every term.

BIOL 102 Basic Concepts in Biology II 3.0; 3 cr.
This course is only intended for freshman students who have taken BIOL 101 and plan to continue their education in the field of biological sciences as it prepares students for BIOL 201 and 202. The course introduces students to the forms and functions of animals. It covers basic anatomy and physiology of animal systems and emphasizes the evolutionary relationships between the different groups of animals. It also introduces students to basic concepts in ecology. Prerequisite: BIOL 101.

BIOL 104 Introduction to Organismal Biology 3.0; 3 cr.
The course introduces basic principles of organismal biology through study of representative groups of unicellular organisms, plants and animals. Topics include the origins of life, major events in the history of life, adaptations of organisms to particular environments, patterns of reproduction in plants and animals, form and function, physiology, and locomotion in animals and ecology. The course is for students who will not continue their education in the sciences. Every term.

BIOL 105 Introductory Biology 3.3; 4 cr.
An introduction to the fundamental principles of biology. This course covers the basis of life, the structure and function of cells and systems, the general classification and diversity of plants and animals, as well as genetics and ecology. Occasionally.

BIOL 106 Contemporary Issues in Biology 3.0; 3 cr.
course designed to provide freshman students with the scientific background to some of the current topics in biology today. The course introduces students to the general concepts of biology, including origins of life, evolution and organic building blocks. Moreover, the course will cover socially important contemporary topics such as human evolution, fresh water issues, ecology, environmental conservation, cloning, stem cell research, GMOs, diseases and nutrition. Topics will be added and removed as new discoveries are made and news changes. Every term.

BIOL 200 Diversity of Life 3.3; 4 cr.
A course that deals with the basic aspects of cell structure and function, heredity, diversity, classification, evolution and interrelationships of living things, and briefly covers organs and systems in animals and plants. Laboratory activity reflects the contents of the course. Not open to biology majors and minors. Sophomore standing is required. Every term.

BIOL 201 General Biology I 3.3; 4 cr.
An integrated approach to the biology of organisms covering the organization of life, energy transfer through living systems, perpetuation of life, and diversity of life. Every term.

BIOL 202 General Biology II 3.3; 4 cr.
A study of the anatomy and physiology of plants and animals covering their structure, growth, nutrition, transport, reproduction, development, and control systems. This course focuses also on the relationships between structure and function, and stresses the evolutionary adaptation and changes in the different systems of the major plant and animal groups. Prerequisite: BIOL 201. Every term.

BIOL 209 Concepts and Connections 3.0; 3 cr.
A course that covers the basic aspects of cell structure and function. An overview of heredity, diversity and evolution. Interrelationships of living things and a brief coverage of organs and systems in animals. Not open to biology majors and minors. Sophomore standing is required. Every term.

BIOL 210 Human Biology 3.0; 3 cr.
A course that covers the fundamental principles of cell biology, genetics, and human biology, with emphasis on the morphology, physiology, and disorder of body systems. Not open to biology majors and minors. Students cannot receive credit for all three of the following: BIOL 201, BIOL 202, BIOL 210. Every term.

BIOL 220 Introductory Biochemistry 3.0; 3 cr.
An introduction to the structure-function relationships of biomolecules, cells, enzymes, and the metabolic reactions of living cells. Prerequisites: BIOL 202 and CHEM 211. Every term.

BIOL 223 Genetics 3.3; 4 cr.
A course that deals with the basic principles of classical and modern genetics with emphasis on the analysis of genetic material and genetic processes at the molecular level. Prerequisite: BIOL 202. Every term.

BIOL 224 Microbiology 3.3; 4 cr.
A course that deals with micro-organisms, especially bacteria, and in particular those of pathogenic and industrial importance. This course includes basic knowledge on isolation, classification, and the various metabolic processes. Prerequisite: BIOL 223. Every term.

BIOL 225 Molecular Biology 3.0; 3 cr.
A course that introduces the different techniques of molecular biology and recombinant DNA technology, and discusses the most recent advances in the field. Prerequisite: BIOL 223. Occasionally.

BIOL 234 Vascular Plants 2.3; 3 cr.
A course that deals with the structure, life history, and classification of vascular plants, including psilophytes, club mosses, horsetails, ferns, conifers, and flowering plants, emphasizing their evolutionary relationships. Prerequisite: BIOL 202. Occasionally.

BIOL 236 Plant Systematics 2.3; 3 cr.
A course that deals with the relationships between and among vascular plants based on evolutionary principles as expressed by systematics. The course provides underlying principles of systematics, including modern molecular technological approaches. Students deal with plant identification, and classification of the major families of local vascular plants. Prerequisite: BIOL 202. Occasionally.

BIOL 240 Animal Behavior 3.0; 3 cr.
A course that covers the basic concepts of animal behavior including physiological, genetic, ecological, and evolutionary aspects, as well as exploration of the controversial ideas of sociobiology. Annually.

BIOL 241 Biology of Invertebrates 3.3; 4 cr.
A study of invertebrates, excluding insects, emphasizing their morphological and functional diversity, phylogenetic relationships, classification, development, and adaptation. Prerequisite: BIOL 202. Annually.

BIOL 243 Behavioral Neuroscience 3.0; 3 cr.
An introduction to the neural basis of behavior. The course surveys the structure and organization of the human brain and how complex behavior arises from it. Prerequisite: PSYC 101 or PSYC 201. Annually.

BIOL 244 Introduction to Neurobiology 3.0; 3 cr.
A comprehensive introduction to neural signaling, brain development and adult brain regeneration. The course covers molecular to higher organizational level of neural functions. It emphasizes the fundamental principles and mechanisms associated with brain development and physiology including nerve communication, neurogenesis, patterning and regionalization as well as neural stem cells function. Prerequisite: BIOL 202. Annually.

BIOL 244L Neurobiology Lab 0.3; 1 cr.
The course will introduce the students to basic concepts of neurobiology including brain and cranial nerve anatomy, brain development, adult brain derivatives, spinal cord reflex, receptor and action potentials, nerve degeneration and special senses. The students will learn to perform a combination of manipulations ranging from live brain dissections to histological staining and analyses and will use plastic models and computer simulation. Animal models studied include sheep, chicken, frog and mouse. Pre- or corequisite: BIOL 244. Annually.

BIOL 245 Environmental Physiology of Aquatic Organisms 3.0; 3 cr.
A course that describes the strategies used by aquatic animals to deal with environmental variations. The course covers various animal physiological systems with an emphasis on aquatic adaptations. Some topics such as air bladder control, electrical generation and reception, and gill excretion which are specific to aquatic organisms are introduced herein. Prerequisite: BIOL 200 or BIOL 202. Annually.

BIOL 246 Marine Biology 3.3; 4 cr.
A course that introduces the biology of life in the marine environment (microbial world, seaweeds and plants, marine animals) as well as the structure and function of the marine ecosystem (e.g., coral reefs, ocean depths, estuaries). The course also covers the impact of humans on the marine environment. Prerequisite: BIOL 202. Every term.

BIOL 247 Animal Physiology 3.0; 3 cr.
A study of the fundamental principles and mechanisms that govern body functions in animals, with an emphasis on the molecular aspects. Prerequisite: BIOL 202. Annually.

BIOL 249 Parasitology 3.3; 4 cr.
A general overview of the classification, morphology, development, and physiology of human and animal parasites. Prerequisite: BIOL 202. Annually.

BIOL 250 Biosphere 3.0; 3 cr.
A course that focuses on defining global environmental problems such as global warming, acid rain, deforestation, and loss of biodiversity, and introduces methods that can help eliminate or reduce these problems. Annually.

BIOL 251 Introduction to Bioinformatics 3.0; 3cr.
An introduction to the foundations of modern bioinformatics. The course covers databases, data formats, algorithms, and statistical concepts for analyzing biological data with special emphasis on sequence and gene expression data. Annually.

BIOL 251L Bioinformatics Lab 0.3; 1 cr.
A bioinformatics computer lab. The lab section introduces the programming language R, the de-facto standard in biological data analysis. Students learn how to use R packages, write scripts, and write functions to analyze sequence, genomics, and gene expression data. No prior programming experience is required. Annually

BIOL 252 Ecology 3.3; 4 cr.
A study of organisms in relation to their biotic and abiotic environment. This course deals with population growth and regulation, species diversity, age structure, succession, food chains, energy flow, and recycling of nutrients. Prerequisite: BIOL 202 or LDEM 209. Every term.

BIOL 253 Phylogenetics 3.0; 3 cr.
A course that introduces the concept of phylogenetic trees, presents different techniques to estimate them, and shows how phylogenetic trees form the basis for understanding a wide range of phenomena in Biology, such as ecological adaptation, disease spread or tumor evolution. Prerequisite: BIOL 202. Annually.

BIOL 254 Evolution 3.0; 3 cr.
A study of the processes that bring about evolutionary changes in organisms, evolutionary trends, patterns of adaptations, and principal factors that influence the patterns of speciation. Prerequisite: BIOL 201. Annually.

BIOL 255 Marine Ecology 3.0; 3 cr.
An introduction to the ecology of marine and brackish water ecosystems, structures and processes, with special attention to the eastern Mediterranean Sea. Interrelationships among animals, plants, and chemical and physical aspects of the environment are studied, as well as the unique adaptations for survival in these habitats. Prerequisite: BIOL 200 or BIOL 202. Occasionally.

BIOL 256 Conservation Biology 3.0; 3 cr.
A course that deals with various environmental issues in the world today; introduces the science of conservation; and describes typical methods of conservation. Students are trained in reading scientific literature and scientific writing, and are required to research a conservation topic. Prerequisite: BIOL 200 or BIOL 202. Annually.

BIOL 257 Ecology and Evolution 3.0; 3 cr.
An introduction to the basic principles, concepts and processes in ecology and evolution with a brief history of life on Earth and the relationships of these principles and concepts to current environmental issues such as pollution, climate change and biodiversity and its conservation. Animal behavior will be approached from the ecological and evolutionary perspectives. Students who have taken BIOL 252 or BIOL 254 cannot get credit for BIOL 257. Occasionally.

BIOL 258 Introduction to Aquaculture 3.0; 3 cr.
An introduction to the general concepts of aquaculture. The course discusses topics such as culture species, culture methods, water quality, filtration, feeding, and harvesting. It also introduces uses of aquaculture for food production, biomedical research, ornamentals, or restocking programs. Pre- or corequisite: BIOL 200 or BIOL 202. Occasionally.

BIOL 258L Aquaculture Laboratory 0.3; 1 cr.
This is an intensive writing course that introduces students to the practical side of aquaculture. Students will get their hands wet. They will set up fish maintenance systems, evaluate progressive changes in water chemistry, evaluate effects of water chemistry on fish health, and most importantly learn techniques used to maintain fish in healthy and sustainable environments. Students will be expected to keep a detailed log of their activities and perform a full-fledged research project that is expected to be written as a scientific publication. Pre- or corequisite: BIOL 258. Annually.

BIOL 259 Microbes and the Environment 3.0; 3 cr.
A course that explores the various habitats of micro-organisms in nature and the interactions within. The course discusses microbial metabolic activities and their impact on the environment. It explores the role of microbes as pathogens, particularly environmentally transmitted ones. The course also discusses the beneficial role of microbes in the biodegradation of pollutants, in addition to public health topics in microbiology. The course includes a substantial component of reading and analysis of primary research papers in environmental microbiology, in addition to presenting a poster session. Prerequisite: BIOL 202. Occasionally.

BIOL 260 Cell Biology 3.3; 4 cr.
A course that provides an understanding of the structure and function of cellular organelles and components, and the functional interaction of the cell with its microenvironment. Prerequisite: BIOL 223. Every term.

BIOL 261 Biology of Cancer 3.0; 3 cr.
This course compares the basic biology of normal versus the malignant neoplastic state and provides a comprehensive overview of the basic biology of cancer. Prerequisite: BIOL 223. Annually.

BIOL 262 Virology 3.0; 3 cr.
A general overview on the classification, biophysical, and biochemical characteristics of DNA- and RNA- containing bacterial, plant, and animal viruses. Prerequisite: BIOL 202. Occasionally.

BIOL 263 Immunology 3.0; 3 cr.
An introduction to basic immunology, types of immune responses, and basic aspects of the specific and non-specific body defense mechanisms, as well as primary immunological diseases and disorders. Prerequisite: BIOL 202. Annually.

BIOL 266 Oceanography 3.0; 3 cr.
An introduction to the basic concepts of oceanography and marine science. The course focuses on the chemical, physical, and geological processes that affect life in the oceans and on planet earth in general. The course discusses additional topics such as environmental science, conservation, world fisheries, marine resources, and effects of coastal development on life in the oceans. Annually.

BIOL 266L Oceanography Lab 0.3; 1 cr.
This is an intensive writing course that introduces students to the basic concepts of marine science applications. It introduces methods to study chemical, physical, biological and geological processes that affect life in the oceans and on planet earth in general. Methods of research used by oceanographers past and present are introduced and demonstrated. Students will be expected to keep a detailed log of their activities and perform a full-fledged research project that is expected to be written as a scientific publication. Annually.

BIOL 268 Introduction to Biotechnology 3.0; 3 cr.
An introduction of both the principles and the applications of molecular biology methods with an emphasis on the application of recombinant DNA technology to animals, plants, and microbial organisms. This course describes the use of genetically engineered products to solve environmental problems and cure human diseases. Annually.

BIOL 270 Plant Physiology 3.3; 4 cr.
A study of the vital processes that occur in flowering plants, including biophysical and metabolic processes, with emphasis on photosynthesis, growth, and development. This course also deals with plant responses to the physical environment. Prerequisite: BIOL 220. Every term.

BIOL 273 Economic Plants 3.0; 3 cr.
The course consists of the study of the relationship between people and plants. It encompasses the fields of botany, systematic, evolution, anatomy and anthropology. It explores the countless ways humans employ plants for food, medicine, textiles, shelter and more. Prerequisite: BIOL 202. Every term.

BIOL 280 Endocrinology 3.0; 3 cr.
A study of the role of chemical messengers in the control of physiological and metabolic processes. This course deals with the biosynthesis, chemistry, and secretion of hormones, as well as their mechanism of action. Prerequisite: BIOL 202. Occasionally.

BIOL 281 Ichthyology 3.0; 3 cr.
A study of the different types of fish, their natural history, and environmental and ecological adaptations. It also deals with methods of conserving and culturing fish of economic value, as well as the effect of pollution on fish fauna. Prerequisite: BIOL 202. Annually.

BIOL 283 Reproductive Physiology 3.0; 3 cr.
An examination of the mechanisms of all major aspects of male and female mammalian reproductive physiology. Emphasis is also given to species variation with regard to reproductive function and to a detailed examination of key reproductive events in both sexes. Prerequisite: BIOL 202. Occasionally.

BIOL 284 Developmental Biology 3.3; 4 cr.
A study of basic mechanisms and molecular basis that controls embryonic development in both vertebrates and invertebrates with special emphasis on early development and axis formation. Animal models covered include chicken, frog, mouse, drosophila, sea urchin, C. elegans and zebrafish. Prerequisite: BIOL 202. Annually.

BIOL 286 Entomology 3.3; 4 cr.
An introduction to the study of insects, their diversity, classification, morphology, biology, and behavior as well as their medical, ecological, and agricultural importance. Prerequisite: BIOL 202. Annually.

BIOL 290 Special Topics in Biology 1.0-4.0; 1-4 cr.
The course covers topics in biology that warrant an extensive coverage in a separate course not typically offered by the department. May be repeated for credit. Every term.

BIOL 291 Undergraduate Tutorial 2 cr.
Prerequisites: Senior standing, a minimum average of 3.2 (or 80) in the major, and consent of instructor. Graded Pass/ No Pass (or Fail). Every term.

BIOL 292 Undergraduate Tutorial 3 cr.
Prerequisites: Senior standing, a minimum average of 3.2 (or 80) in the major, and consent of instructor. Graded Pass/ No Pass (or Fail). Every term.

BIOL 293 Undergraduate Seminar 1.0; 1 cr.
Prerequisite: Senior standing. Every term.

BIOL 295 Summer Undergraduate Research 3.3; 4 cr.
A course intended to train and recruit well-prepared students for graduate work in biology at AUB. Students will conduct a research project during the summer term, and then present and defend their findings. Prerequisites: Completion of 80/120 credits, a minimum average of 2.7 (or 75) in the major, consent of instructor and approval of the department. Every summer.

BIOL 296 Exit Survey 0 cr.
A computer-based exit exam taken in the last term in the BS in Biology program. Prerequisite: Completion of graduation requirements for BS in Biology by the end of term. Graded Pass/ No Pass (or Fail). Every Spring.

37 Credits in Biology[1]

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (6)**	**Understanding the World (37 + 15), Quantitative Reasoning (3)**	**Community-Engaged Learning**
Lecture Courses (9+12+6+ 30+12+3)	Required Arabic course (3) Required English courses: ENGL 203 (3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required (6)	Required biology (23): BIOL 201(4), 202(4), 223(4), 220(3), and two from the following four courses: 224(4), 260(4), 270(4), 252(4) Elective biology (12+1 lab): a total of 13 credits, including a minimum of one 4-credit course Required chemistry (9): CHEM 201(3), 211(3), 212(3) Required physics (3): PHYS 204 or PHYS 205 Required: STAT 210 (3) or STAT 231 (3)	required (3)
Seminar (1)				Required: BIOL 293(1)	
Laboratory (5+1+2+1)				Required biology[2] (5): BIOL 201(4), 202(4), 223(4), and two from the following four courses: BIOL 224(4), 252(4), 260(4), 270(4)	

				Elective biology[3] (1) 1: minimum of one 4-credit course Required chemistry (2): CHEM 210(2) Required physics (1): PHYS 204L(1) or 205L (1)	
Research Project (0, 2, or 3)				Elective biology courses (2–3): BIOL 291(2 or 3)	
Exit Survey (0)				Required: BIOL 296 (0)	

1) Plus 8 free elective credits (MATH 203 and MATH 204 cannot be taken for credit by biology majors).
2) At least 37 credits in Biology and 15 credits in the sciences
3) These courses include a 1-credit laboratory component and have been listed under both lecture and laboratory courses.

Department of Chemistry

Chairperson:	El Rassy, Houssam T.
Professors:	Al-Ghoul, Mazen H.; Bouhadir, Kamal H.; El Rassy, Houssam T.; Ghaddar, Tarek H.; Ghauch, Antoine R.; Halaoui, Lara I.; Hasanayn, Faraj A.; Kaafarani, Bilal R.; Patra, Digambara J.; Sultan, Rabih F.
Associate Professors:	Hmadeh, Mohamad A.; Karam, Pierre M.
Instructors:	Abi Rafii, Randa A.; Deeb, Hana H.; Sadek, Samar A.

BS in Chemistry

Mission Statement

The Chemistry Department provides liberal arts and professional education in chemistry. The undergraduate program at the department is dedicated to teaching, scholarship, research and creative endeavors. Through this program, the department delivers a strong theoretical course of study and practical training in the chemical sciences to assure the success of its students in graduate schools, professional schools and employment. Undergraduate students are able to explain the essential facts, principles and theories across the four major areas of chemistry, i.e. analytical, organic, inorganic and physical. In addition, they are strongly encouraged to be engaged in research in these aforementioned areas. The program also plays a central role in the education of students of other majors, including students of Medicine, Health Sciences, Engineering, and Agriculture. Students accepted as chemistry majors must maintain an average of 2.3 or above in their first three terms in major courses in order to remain in the program. Students must complete the following minimum requirements: CHEM 201, CHEM 201L, CHEM 211, CHEM 212, CHEM 215, CHEM 216, CHEM 217, CHEM 218, CHEM 220, CHEM 225, CHEM 228, CHEM 229, and CHEM 230, at least two elective courses of the following five courses: CHEM 231, CHEM 232, CHEM 233, CHEM 234 and BIOL 220, in addition to MATH 201, MATH 202, and CMPS 201 or CMPS 203 or CMPS 209, PHYS 211 and PHYS 211L, 6 credits in the Societies and Individuals, and 12 credits in the Cultures and Histories. It is highly recommended that chemistry majors complete MATH 201 and MATH 202 before taking CHEM 217 and CHEM 218.

The 90-credit requirement for a BS degree in Chemistry is distributed as follows:

Degree Requirements

- Major courses: 40 credits in Chemistry courses (33 credits as required courses, 6 credits as elective courses, and 1 credit as a required seminar course)
- Courses from outside the department: 6 credits of Math and 1 credit of Physics
- Understanding the World courses: 3 credits of Physics
- Quantitative Reasoning courses: 3 credits of CMPS
- University General Education requirements that include 6 credits in Understanding Communication - English, 3 credits in Understanding Communication - Arabic, 9 credits in Cultures and Histories, 3 credits in

Community-engaged Learning, 3 credits in Human Values, and 6 credits in Societies and Individuals. At least one of the courses from Cultures and Histories or Human Values should be from the History of ideas: CHLA.
- Elective courses: 7 credits in free electives
- At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Freshman students who intend to major in chemistry should complete the following minimum requirements: CHEM 101, CHEM 101L, CHEM 102, CHEM 102L, MATH 101 and MATH 102, PHYS 101 and PHYS 101L.

Students who intend to minor in chemistry should complete the following requirements:

- CHEM 201, one lab course from the following list (CHEM 201L, CHEM 203, CHEM 209 or CHEM 210) and a minimum of 12 credits from courses selected from at least three of the below four chemistry divisions:
  - Analytical: CHEM 215, CHEM 219, CHEM 234
  - Inorganic: CHEM 228, CHEM 229
  - Organic: CHEM 207, CHEM 208, CHEM 211, CHEM 212
  - Physical: CHEM 217, CHEM 218, PHYS 212, [CHEM 204 and MECH 310]
- Typical choice of minors for different majors:
  - Biology: CHEM 201, CHEM 201L/210, CHEM 211, CHEM 212, CHEM 215, CHEM 228 (16/17 credits)
  - Physics: CHEM 201, CHEM 201L/209/210, PHYS 212, CHEM 215/217, CHEM 208/211/212/228 (16/17 credits)
  - Geology: CHEM 201, CHEM 201L/209, CHEM 208, CHEM 215, CHEM 228, CHEM 229 (16/17 credits)
  - Chemical Engineering: CHEM 201, CHEM 201L/209, CHEM 207, CHEM 219, (CHEM 204 and MECH 310) (16/17 credits)
- For a premedical chemistry student, the core premedical chemistry courses are: CHEM 101 + CHEM 101L (or equivalent), CHEM 201, CHEM 211, CHEM 212, and CHEM 225. The biology premedical courses are BIOL 101 (or equivalent) and BIOL 200 or BIOL 201. The physics requirements for a premedical chemistry student are PHYS 211 and PHYS 211L.
- The premedical chemistry core courses for non-chemistry major premedical students are: CHEM 101 + CHEM 101L (or equivalent), CHEM 201, CHEM 210, CHEM 211, and CHEM 212.

Course Descriptions

CHEM 101 General Chemistry I 3.0; 3 cr.

An introductory course that covers atomic structure, chemical reactions, stoichiometry, gas laws, thermochemistry, periodic relationships among the elements, chemical bonding, and other basic concepts. Every term.

CHEM 101L General Chemistry Laboratory I 1.3; 1 cr.

A laboratory course to accompany CHEM 101. The experiments explore some of the fundamental concepts which deal with measurements, percent composition, chemical reactions, stoichiometry, volumetric analysis, gas laws, and calorimetry. Pre- or corequisite CHEM 101. Every term.

CHEM 102 General Chemistry II 3.0; 3 cr.

A course that covers solutions, chemical equilibrium, kinetics, acid-base and solubility equilibria, introductory thermodynamics and electrochemistry; surveys common groups in the periodic table; provides an introduction to organic chemistry and nuclear chemistry. Prerequisite: CHEM 101. Every term.

CHEM 102L General Chemistry Laboratory II 1.3; 1 cr.

A laboratory course to accompany CHEM 102. The experiments explore some of the fundamental concepts which deal with physical properties of solutions, chemical equilibrium, acids and bases, solubility equilibria, kinetics and electrochemistry. Prerequisite: CHEM 101L. Pre- or corequisite: CHEM 102. Every term.

CHEM 200 Basic Chemistry and Applications 3.0; 3 cr.

Introduces basic chemical principles and concepts and uses them to discuss selected contemporary applications and problems from the areas of materials, environmental, medicinal or biological chemistry. Introductory topics include the electronic structure of the atom, bonding and molecular geometry, stoichiometry, and reaction energies. Selection of modern applications in Chemistry. Students cannot receive credit for both CHEM 200 and CHEM 201. Every term.

CHEM 201 Chemical Principles 3.0; 3 cr.

A theoretical introduction to chemical principles, stressing atomic structure, bonding, stoichiometry, gases, solutions, acids and bases, solution equilibria. Students cannot receive credit for both CHEM 200 and CHEM 201. Prerequisite: CHEM 101 and CHEM 101L or its equivalent. Every term.

CHEM 201L Introduction to Chemical Analysis Laboratory 1.3; 1 cr.

Introduces students to chemical analysis in a series of preparatory laboratory experiments. Students acquire knowledge in handling basic tools and equipment, conduct wet chemistry experiments and quantify aqueous solutes using simple laboratory devices. Students can receive credit for only one of CHEM 201L, CHEM 209, CHEM 210. Pre - or corequisite: CHEM 201. Every term.

CHEM 202 Introduction to Environmental Chemistry 3.0; 3 cr.

An introduction to the fundamentals of physical, inorganic, and organic chemistry, with applications to environmental problems. This course surveys atomic and molecular structure, solutions, equilibrium, acids and bases, oxidation-reduction, reaction kinetics with emphasis on mechanisms of organic free radical reactions, and basic radioactivity. Students can receive credit for CHEM 201 and CHEM 202. Prerequisites: CHEM 101 and CHEM 101L or equivalent. Every term.

CHEM 203 Introductory Chemical Techniques 1.3; 2 cr.

A laboratory course on the methods of quantitative analysis, physical chemistry measurements, and inorganic semi-micro qualitative analysis, with applications to environmental problems. Not open to chemistry majors. Pre- or corequisite: CHEM 200, CHEM 201, or CHEM 202. Annually.

CHEM 204 Physical Chemistry for Chemical Engineers 2.0; 2 cr.

An introduction to the basic principles of chemical kinetics, surface phenomena and colloids: reaction rates and mechanism; theories of reaction rates; catalysis; photochemistry; colloids; adsorption on surfaces; surface analytical techniques. Not open to chemistry students. Prerequisites: CHEM 102 and CHEM 102L. Every summer.

CHEM 205 Introductory Chemistry Laboratory 1.4; 2 cr.

A laboratory course on the methods of quantitative analysis, physical chemistry measurements, and inorganic semi-micro qualitative analysis. Not open to chemistry majors. Pre- or corequisites: CHEM 200, CHEM 201, or CHEM 202. Every term.

CHEM 206 Quantitative Analysis 3.4; 4 cr.

A course that covers gravimetric and volumetric techniques; acid/base, complex formation, and redox titrations; electrochemistry and an introduction to chromatography and spectrophotometric analysis. This course is designed for biology majors. Not open to chemistry majors. Students cannot receive credit for both CHEM 206 and CHEM 215-216. Prerequisite: CHEM 201. Occasionally.

CHEM 207 Survey of Organic Chemistry and Petrochemicals 3.3; 4 cr.

A survey of organic chemistry which mainly covers properties and reactions of aliphatic and aromatic hydrocarbons, functional groups, including alkyl halides, alcohols and ethers, aldehydes and ketones, carboxylic acids and derivatives. This course surveys polymers, petrochemicals and their general use in industry. The laboratory component covers the basic organic lab skills such as recrystallization, distillation, extraction, chromatography and some synthesis experiments. Designed for chemical engineering students. Students cannot receive credits for both CHEM 208 and CHEM 207; CHEM 211 and CHEM 207. Prerequisite: CHEM 102 or equivalent. Annually.

CHEM 208 Brief Survey of Organic Chemistry 3.0; 3 cr.

A brief survey designed for students majoring in agriculture or public health that covers the following topics: hydrocarbons, stereoisomerism, organo halogens, oxygen containing groups, carbonyl groups, carboxylic acids and their derivatives, amines, carbohydrates, and amino-acids. Students cannot receive credit for both CHEM 208 and CHEM 211. Prerequisites: CHEM 101 and CHEM 101L; or CHEM 200 or equivalent. Every term.

CHEM 209 Introductory Organic Laboratory 1.3; 2 cr.

A course of basic experiments in organic chemistry, including synthesis and techniques of separation and purification of organic compounds. Students can receive credit for only one of CHEM 201L, CHEM 209, CHEM 210. Pre- or corequisite: CHEM 208. Every term.

CHEM 210 Organic Laboratory for Non-Majors 1.4; 2 cr.

Basic experimental techniques in organic analytical chemistry (melting and boiling point, chromatography, distillation, extraction, recrystallization), performing reactions in synthetic organic chemistry. Students can receive credit for only one of CHEM 201L, CHEM 209, CHEM 210. Pre- or corequisite: CHEM 212. Every term.

CHEM 211 Organic Chemistry I 3.0; 3 cr.

An introduction to organic chemistry organized according to functional groups. This course covers synthesis, properties, and reactions of aliphatic and aromatic hydrocarbons and alkyl halides, with emphasis on mechanistic and stereochemical aspects of organic reactions. Designed for chemistry majors and premedical study. Students cannot receive credit for both CHEM 208 and CHEM 211. Prerequisite: CHEM 201. Every term.

CHEM 212 Organic Chemistry II 3.0; 3 cr.

A course that covers synthesis, properties, and reactions of organic functional groups, including alcohols and ethers, aldehydes and ketones, carboxylic acids and derivatives, amines, phenols, and aryl halides; chemistry of difunctional compounds and of molecules of biological importance, including carbohydrates, proteins, and nucleic acids; and organic structure determination by spectroscopic methods. Emphasis is placed on reaction mechanism and stereochemistry, as well as on the design of multi-step syntheses. Designed for chemistry majors and premedical study. Prerequisite: CHEM 211. Every term.

CHEM 215 Analytical Chemistry 3.0; 3 cr.

A course that covers fundamental analytical processes, including solution equilibria, titrations, electrochemical theory and applications, chromatography and spectrophotometric techniques. Students cannot receive credit for both CHEM 215 and CHEM 206. Prerequisite: CHEM 201. Every term.

CHEM 216 Analytical Chemistry Laboratory 1.4; 2 cr.

Experimental work in related areas of chemical analysis and instrumentation including: complexometric analysis; ion-selective electrodes; spectrophotometric analysis; molecular spectroscopy; atomic spectroscopy; liquid chromatography; ion chromatography, gas chromatography, calibration methods (standard addition method and internal standard method), data analysis using statistical methods with uncertainty determination, multicomponent analysis. Prerequisite: CHEM 201L. Pre- or corequisite: CHEM 215. Every term.

CHEM 217 Thermodynamics and Chemical Dynamics 3.0; 3 cr.

A course that covers the basic principles of chemical thermodynamics and chemical dynamics; mathematical machinery of the laws of thermodynamics; heat, work and energy; first, second and third laws of thermodynamics; thermodynamics of chemical reactions, phase transformations and phase equilibria; thermodynamics of solutions; transport properties: diffusion, viscosity, ion transport, thermal conductivity; chemical kinetics and reaction mechanisms. Pre- or corequisite: MATH 202. Prerequisite: CHEM 201. Annually.

CHEM 218 Quantum Chemistry 3.0; 3 cr.

A course that covers failures of classical physics, quantum theory, Schrödinger equation, particle in a box, harmonic oscillator, rotational motion, hydrogen atom, atomic orbitals, spin, Pauli exclusion principle, complex atoms, term symbols, molecular structure, hybridization, Hückel theory, rotation, vibration, and electronic spectra. Students cannot receive credit for both PHYS 212 and CHEM 218. Pre- or corequisite: MATH 202. Prerequisite: CHEM 201. Annually.

CHEM 219 Analytical and Instrumental Chemistry for Chemical Engineers 3.0; 3 cr.

An introduction to chemical measurements and modern instrumental methods of chemical analysis: sample preparation; error analysis; chemical separations; chromatographic; spectroscopic; electrochemical, and surface analysis techniques. Not open to chemistry students. Prerequisites: CHEM 102 and CHEM 102L. Annually.

CHEM 220 Physical Chemistry Laboratory 1.6; 3 cr.

Experiments in thermodynamics, kinetics, electrochemistry, spectroscopy, and exercise in computational chemistry. Prerequisites: CHEM 201L and CHEM 217. Pre- or corequisite: CHEM 218. Annually.

CHEM 225 Organic Structure Determination 1.6; 3 cr.

Experiments in the techniques of purification, separation, and synthesis of derivatives of organic compounds; theory and practice in the analysis of organic compounds by infrared, ultraviolet-visible spectrophotometry, mass spectrometry, and nuclear magnetic resonance; identification of pure compounds and of components of mixtures of organic compounds by chemical and spectral methods. Prerequisites: CHEM 201L and CHEM 212. Annually.

CHEM 228 Inorganic Chemistry 3.0; 3 cr.

A course that covers atomic structure, molecular structure (VBT, MOT), molecular shape (VSEPR), symmetry and group theory, the structure of solids (metals, ionic), acids and bases (Brønsted, Lewis, HSAB, solvents). Prerequisite: CHEM 201. Annually.

CHEM 229 Coordination Compounds 3.0; 3 cr.

A course that covers d-metal complexes (structures and symmetries, bonding and electronic structure, reactions of complexes); electronic spectra of complexes; reaction mechanisms of d-block complexes (ligand substitution reactions in square-planar and octahedral complexes, redox reactions, photochemical reactions). Prerequisite: CHEM 228. Annually.

CHEM 230 Senior Seminar 1.0; 1 cr.

A literature search of a specific topic in chemistry. A written report and oral presentation in a seminar form. Prerequisite: Senior standing. Every term.

CHEM 231 Organic Synthesis 1.4; 3 cr.

Experiments in multistep synthesis of organic compounds, with an emphasis on methods used for synthesis and isolation, and characterization of intermediates and products. Prerequisite: CHEM 201L. Pre- or corequisite: CHEM 212. Annually.

CHEM 232 Inorganic Synthesis 1.4; 3 cr.

Experiments in synthesis, separation, purification, and characterization of inorganic main-group and transition metal compounds by IR, UV-Vis, NMR, and ESR spectroscopy. Prerequisite CHEM 201L. Pre- or co-requisite CHEM 229. Annually.

CHEM 233 Topics in Physical Chemistry 3.0; 3 cr.

A course that covers a selection of topics in thermodynamics, advanced kinetics, and techniques in physical analysis; thermodynamics of phase transformation; theoretical and experimental aspects of rates of reactions; rate laws of complex reactions, catalysis, adsorption isotherms, spectroscopic techniques (e.g., laser spectroscopy, NMR, EPR); surface analysis and imaging techniques; X-ray crystallography. Prerequisite: CHEM 217. Pre- or corequisite: CHEM 218. Annually.

CHEM 234 Instrumental Analytical Chemistry 3.0; 3 cr.

A course that provides students with a solid knowledge in the chemistry of separation and identification. It introduces chemistry students to many analytical techniques and instruments that are widely used in different laboratories in the fields of chemistry, chemical engineering, environmental health, biochemistry, forensic science, toxicology, industrial hygiene, medicine, pharmacology, pharmacy, geology, agriculture, and other industrial applications. It includes chemometry and detailed description of sample preparation techniques; electroanalytical techniques (potentiometry, electrogravimetry, coulometry and voltammetry); spectroscopic methods (components of optical instruments, optical atomic spectrometry, atomic absorption and atomic fluorescence spectrometry, atomic emission spectrometry, molecular luminescence spectrometry); separation methods (liquid, gas, supercritical-fluid, chiral and capillary electrophoresis chromatography) and related hyphenated (coupled) techniques (GC/ MS, HPLC/APCI-APPI-ESI/MS). Prerequisite: CHEM 215. Pre- or corequisite: CHEM 216. Annually.

CHEM 295 Special Topics in Chemistry 3.0; 3 cr.
Prerequisite: Senior standing in Chemistry. Alternate years.

CHEM 299 Independent Study 3.0; 3 cr.
Independent chemical research carried out under the direction of a faculty member, including presentation of the results in the form of a senior thesis. Offered to senior students in good standing, by arrangement with the project director. Every term.

34 + 6 Credits in Chemistry

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (6)**	**Understanding the World (44 - 47), Quantitative Reasoning (3)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+6+ 47+9+3)	Required Arabic course (3) Required English courses: ENGL 203 (3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required (6)	Core: CHEM 201(3), 211(3), 212(3), 215(3), 217(3), 218(3), 228(3), 229(3) Electives: CHEM 233(3), CHEM 234(3), BIOL 220(3) Science courses (12): PHYS 211(3), MATH 201(3), MATH 202(3), CMPS 201 or 203 or 209(3)	Required course (3)
Seminar (1)				CHEM 230(1)	

Laboratory (13–19)				Computer Science (3): CMPS 201 or 203 or 209(3) Chemistry courses (9–15) Core: CHEM 201L(1), CHEM 216(2), 220(3), 225(3) Electives2: CHEM 231(3), 232(3) Science courses (1): PHYS 211L	
Research Project (0 or 3)				CHEM 299(3)	

Critical Humanities for the Liberal Arts (CHLA)

Director:	Bou Ali, Nadia
Professors:	Hout, Syrine S.; Jarrar, Maher Z.
Associate Professors:	Bou Ali, Nadia; Goodfield, Eric
Assistant Professors:	Gonzalez, Maya Andrea; Middlemiss Sanazaro, Marie Claire
Senior Lecturer	Harb, Sirene
Lecturers:	Bizri, Rana; Bualuan, Hayat H.; Ekmekji, Arda; El Amm, Charbel; Hassan, Hani R.; Korangy, Alireza; Kozah, Mario
Instructors:	Arasoghli, Aida A.; Hariri, Muhannad
Visiting Instructors:	Yu, Fen; Wieland, Klaus

The Critical Humanities for the Liberal Arts Program (CHLA) at the American University of Beirut is a unique, interdisciplinary space for critical inquiry into ideas that inform civilization.

Mission Statement

The mission of CHLA is to provide undergraduate courses in the humanities that support the American University of Beirut's goals in general education and the advancement of knowledge. CHLA is committed to engaging students from all the faculties of the university in the study of the liberal arts. The program is interdisciplinary in nature. Its mission is to study the history of ideas; introduce students to primary texts; develop critical thought in the humanities; instill an awareness of global and contemporary concerns and foster humanistic knowledge.

Requirements

According to the General Education requirements at AUB, all students are required to take a total of 9 credits in the Cultures and Histories and 3 credits in Human Values.

A minimum of 3 credits of those 12 must be taken from CHLA courses. Students can choose a course that is most compatible with their area of specialization and interests.

All CHLA courses are included among the General Education courses, all courses fulfill the designation 'Cultures and Histories'. In addition to fulfilling the 'Cultures and Histories' GE designation, CHLA 210 fulfills the 'Social Inequalities' designation, and CHLA 214 fulfills the 'Human Values' designation.

All CHLA 210-214 courses count as both Sequence I and Sequence II for students admitted before Fall 2023-24

Sequence I

- CHLA 201 (every term): Ancient Near East and Classical Civilizations (3 cr.)
- CHLA 202 (every term): Medieval, Islamic, and Renaissance Civilizations (3 cr.)
- CHLA 205 (every term): Ancient, Medieval, Islamic, and Renaissance Civilizations (3 cr.)

Sequence II

- CHLA 203 (every term): Enlightenment and Modernity (3 cr.)
- CHLA 204 (every term): Contemporary Studies (3 cr.)
- CHLA 206 (annually): Modern and Contemporary Studies (3 cr.)

The following CHLA courses are not included among the General Education Cultures and Histories courses: FREN 201, FREN 202, GERM 201, GERM 202, CHIN 201, CHIN 202, CHIN 203.

Explanation

Students are required to take a Sequence I course before taking a Sequence II course. This is because acquaintance with basic intellectual elements from the epochs covered in Sequence I courses will help students in understanding elements covered in Sequence II. Moreover, successfully completing a Sequence I course allows students to take any other CHLA course. Students must have sophomore status or above to take a Sequence I course and junior status to take a Sequence II course. Sequence I and Sequence II courses may not be taken simultaneously unless a Sequence I course has already been completed.

Restrictions

- CHLA 205 overlaps with 201 and 202. Thus, CHLA 205 cannot be taken if the student has taken either 201 or 202, and vice versa.
- CHLA 206 overlaps with 203 and 204. Thus, CHLA 206 cannot be taken if the student has taken either 203 or 204, and vice versa.

Prerequisites

- ENGL 102 or its equivalent is a prerequisite for all CHLA courses numbered 200 and above. ENGL 203 is a co-requisite for all CHLA courses numbered 200 and above.
- Students in the Freshman class may not enroll in CHLA courses numbered 201–206. For all other CHLA courses numbered 200 and above, freshman students may only enroll after the consent of the course instructor.

Minor in Critical Humanities

A minor in critical humanities requires 15 credits: CHLA 204 or CHLA 206, CHLA 209, and three courses chosen from CHLA 210-214

Sequence I and Sequence II Course Offerings

CHLA 201 Ancient Near East and Classical Civilizations 3.0; 3 cr.

An introduction to fundamental elements of Ancient Mesopotamian, Greek, and Roman world views that continue to influence us today. Starting with the Epic of Gilgamesh, the course moves on to explore the Greek and Roman worlds through epic, drama, history, and philosophy, in some of the most influential texts from that period of human history. CHLA 201 cannot be taken if the student has taken CHLA 205. Every term. Previously CVSP 201.

CHLA 202 Medieval, Islamic, and Renaissance Civilizations 3.0; 3 cr.

An introduction to fundamental elements of late Classical, Medieval, Islamic, and Renaissance worldviews that continue to influence us today. This course focuses particularly on Christian and Islamic thought as presented in texts such as those of Augustine, Al Ghazali, Ibn Tufayl, Ibn Rushd, Aquinas, Dante, Ibn Khaldun, and Luther. Selected texts from the Renaissance period round off the course. CHLA 202 cannot be taken if the student has taken CHLA 205.Every term. Previously CVSP 202.

CHLA 203 Crossroads of Modern Thought 3.0; 3 cr.

An introduction to fundamental elements of the Enlightenment and Modernity. The course engages texts expressing contrasting views of the same topic paired into thematic blocks: Introduction, The Scientific Revolution, State and Social Contact, Enlightenment and its Critics, Modernity Beyond Enlightenment. CHLA 203 cannot be taken if the student has taken CHLA 206. Prerequisite: Any Sequence I course. Every term. Previously CVSP 203.

CHLA 204 Contemporary Studies 3.0; 3 cr.

An introduction to some of the most seminal influences in thought that have shaped our contemporary world from the late 19th century to the present time. This course typically explores themes and developments such as evolutionary theory, Nietzschean radical critique, depth-psychology, astrophysics, philosophy of science, revolution, the absurd, existentialism, gender issues, and postcolonial literature and criticism, from both the Western and the Arab worlds. CHLA 204 cannot be taken if the student has taken CHLA 206. Prerequisite: Any Sequence I course. Every term. Previously CVSP 204.

CHLA 205 Ancient, Medieval, and Renaissance Civilizations 3.0; 3 cr.

A composite of CHLA 201 and 202, covering selected works from the periods described above. CHLA 205 cannot be taken if the student has taken either CHLA 201 or CHLA 202. Every term. Previously CVSP 205.

CHLA 206 Modern and Contemporary Studies 3.0; 3 cr.

A composite of CHLA 203 and 204, covering selected works from the periods described above. CHLA 206 cannot be taken if the student has taken either CHLA 203 or CHLA 204. Prerequisite: Any Sequence I course. Occasionally. Previously CVSP 206.

Courses Restricted to Freshman Students

CHLA 110 Gods and Creation: East and West 3.0; 3 cr.

A course that examines different literary understandings of the origins of the universe as found in texts from a variety of world cultures. Annually. Previously CVSP 110.

CHLA 111 Youth and Rebellion in Modern Literature 3.0; 3 cr.

An introduction to the themes and challenges of autonomy and independence as experienced by youth, studied through major literary works of the past centuries. Annually. Previously CVSP 111.

CHLA 112 Contemporary Arab Identity 3.0; 3 cr.

An examination of literary, historical, and socio-political texts that express contemporary Arab self-awareness. Annually. Previously CVSP 112.

Courses Supplementary to the Regular Offerings

CHLA 209 (A, B, C, D, E...) Theories and Methods 3.0; 3 cr.

This course is an introduction to the fundamental questions studied by the critical humanities. It aims to introduce undergraduates to major critical theories of modernity and the contemporary. The course aims to develop foundational skills for other CHLA courses such as textual interpretation and critical analysis. The course covers the following themes but is not restricted to them: modernity, postmodernity, ideology, fetishism.

CHLA 210 (A, B, C, D, E...) Social Inequalities (gender, race, class) 3.0; 3 cr.

These courses aim to raise students' critical awareness of social inequalities through a tripartite division: gender and sexuality, race, and class. Their aim is to familiarize students with how structures of inequality are produced through discourse and practice in a diverse set of historical contexts. Readings are interdisciplinary, covering but not restricted to the fields of social theory, anthropology, psychoanalysis, philosophy, political economy, the arts, literary studies and political theory amongst others.

CHLA 211 (A, B, C, D, E...) The Normal and the Pathological 3.0; 3 cr.

These courses aim to raise students' critical awareness of the assumed distinctions between health and sickness and the normal and the pathological. This distinction is approached in the following fields of inquiry but not restricted to them: 1) life systems or living organisms and the theory of evolution, where we observe the contingencies underlying adaptation, 2) human sexual health and sickness, where the distinction between normal and pathological does not hold, and 3) rational or reasonable thought, where the relation between madness and reason is explored in a non-relativistic manner.

CHLA 212 (A, B, C, D, E...) Science, Culture, and Society 3.0; 3 cr.

Course aims to raise students' critical awareness of the history of science, its intellectual framework, and the multifaceted impact it has had and continues to have on human life. In these courses students will read and analyze scientific, literary, and philosophical works that explore the ways in which science has changed, or should change, the way we understand ourselves and the world in which we live. The course will offer a historical background as well as engage in themes that are relevant to our contemporary world such as: automation, AI, technological advances in the worldwide web, etc.

CHLA 213 (A, B, C, D, E...) Nature and Society 3.0; 3 cr.
The environment in which we live and how we conceptualize it are integral parts of how we understand ourselves, each other, our projects, and the significance of human life. Courses under this designation aim to raise students' critical awareness of issues related to ecology by examining and comparing primary texts and media from different traditions - ancient, modern, and contemporary – in order to better understand the relationship between our conceptions of nature on the one side, and of human life and values on the other. Courses under this designation will cover one or more of the following divisions: nature in the age of myth, nature and the medieval world, nature and modernity, modern ecology. Under each division, students will read, analyse, and discuss texts or media chosen by the instructor from a list of approved resources.

CHLA 214 Human Values (A, B, C, D, E...) 3.0; 3 cr.
Courses aim to raise students' awareness of issues related to human values by asking questions such as: What is the value of values? What are they good for and why do they often contradict or align with one another? If values form an inevitable and often invisible lens through which we understand ourselves and the world, how can we come to understand them? They will question the structure and purpose of values as responses to conceptual and historical problems such as particularity and universality, the social and the natural, solidarity and individuality, freedom and obligation, tradition and futurity, self and other, or other themes within and between traditions. These courses introduce students to values in a variety of contexts and traditions and make selective use of ethical, literary, psychological, philosophical, scientific, historical, spiritual or other resources.

CHLA 261 Civilization Through the Arts I 3.0; 3 cr.
An introduction to the appreciation of art. More of a cultural history than an art historical survey, this course aims to provide the student with general knowledge about how the understanding of art, artist and beauty/the aesthetic has changed in time and place. Previously CVSP 250.

CHLA 262 Civilization Through the Arts II 3.0; 3 cr.
The course critically examines the terms 'modern' and 'art' and the association of modern art with Western art. It then focuses on non-Western modern art, taking Lebanon as an example. Previously CVSP 251.

CHLA 263 Modern and Contemporary World Theatre 3.0; 3 cr.
This course examines a number of plays from across different artistic, cultural and linguistic traditions. The focus will be on reading and analyzing these plays for an appreciation of aesthetic innovations, modes of theatrical expression, and their place within particular social or cultural contexts. Course materials may include filmed versions of the plays for comparison. Annually. Previously CVSP 212.

CHLA 270 Survey of Nineteenth-Century French Literature in English 3.0; 3 cr.
A survey of the major French poets and novelists of the nineteenth century with selected readings from Hugo, Lamartine, Baudelaire, and Rimbaud to Stendhal, Balzac and Zola. Annually. Previously CVSP 215.

CHLA 271 A Survey of Twentieth-Century French Literature in English 3.0; 3 cr.
A survey of the major French poets and novelists of the twentieth century with an emphasis on the main artistic currents from Proust, Colette, Gide, Sartre, and Camus, to surrealism in poetry and the New Novel by Robe-Grillet, Nathalie Sarraute, and Marguerite Duras. Annually. Previously CVSP 216.

CHLA 272 Modern Russian Literature 3.0; 3 cr.
Russian short stories, novels and plays have had a major impact on world literature. The course offers a close reading of texts from authors such as Gogol, Dostoyevsky, Tolstoy, Chekov, Gorky and Solzhenitsyn that reflect socio-political and psychological changes undergone in Russia from the nineteenth century to our own times. Previously CVSP 217.

CHLA 295 Special Topics in Cultural Studies 3.0; 3 cr.
At the discretion of the program. May be repeated for credit on different topics. Prerequisite: Junior level and above, or consent of instructor.

CHIN 201 Chinese I 3.0; 3 cr.
Every term.

CHIN 202 Chinese II 3.0; 3 cr.
Prerequisite: CHIN 201. Every term.

CHIN 203 Chinese III 3.0; 3 cr.
Prerequisite: CHIN 202.

FREN 201 Elementary French I 3.0; 3 cr.
Every term.

FREN 202 Elementary French II 3.0; 3 cr.
Every term.

FREN 211 Intermediate French 3.0; 3 cr.
Prerequisite: FREN 202.

GERM 201 Elementary German I 3.0; 3 cr.
Elementary German.

GERM 202 Elementary German II 3.0; 3 cr.
Prerequisite: GERM 201.

GERM 211 Intermediate German 3.0; 3 cr.
Prerequisite: GERM 202.

Department of Computer Science

Chairperson:	Safa, Haidar H.
Professors:	El-Hajj, Wassim; Safa, Haidar H.
Associate Professors:	Abu Salem, Fatima K.; Elbassuoni, Shady; Khabbaz, Maurice
Assistant Professors:	Assaf, Rida; El Hajj, Izzat; Mouawad, Amer
Senior Lecturer:	Jureidini, Wadi' N.
Lecturers:	Kobeissi, Mohamed A.; Raheel, Saeed
Instructors:	Aoude, Loa; Fatairi, Nour

The Department of Computer Science offers a program leading to the degree of Bachelor of Science (BS) in Computer Science. It also offers a program leading to the degree of Master of Science (MS) in Computer Science. For more information about the department visit https://www.aub.edu.lb/fas/cs/Pages/default.aspx

Mission Statement

The Department of Computer Science at the American University of Beirut prepares students for advanced studies and professional careers in the dynamically changing world of computing and information technology. Our programs combine the theoretical foundations of computing with the practical knowledge of software development vital to industry, to provide broad and integrated curriculums.

The department offers a Bachelor of Science (BS) degree in computer science, designed to be completed typically in three years after the freshman year. It also offers a Master of Science (MS) program designed to provide advanced and specialized education in computing, offered in formats that meet the needs of both working professionals and full-time students.

The department has vigorous research programs in theoretical computer science, systems, machine learning and data science, and software engineering. Our faculty members are committed to contributing to the advancement of the field of computing through scholarly activities, in which our students play a vital role.

BS in Computer Science

The BS program aims at imparting graduates with a solid foundation in computing at both the theoretical and practical levels, thus conferring the ability to design, build, and deploy sophisticated systems using state-of-the-art technologies in a broad array of areas. It also develops an appreciation of the transformative impact that computing has had on a wide variety of disciplines. Students are trained in quantitative reasoning, the use of fundamental principles and ideas (abstraction, modularity, data structures, algorithmics, computability, calculus, and logic) for analysis and problem solving, and disciplined development of modern software systems. The BS program adheres to ACM's (Association of Computing Machinery) standards for knowledge areas learning outcomes.

BS/MS in Computer Science

A study plan is presented that allows students to finish the requirements for the BS and MS degrees in four years (including summers) after the freshman year.

BE in Computer Science & Engineering (CSE)

AUB also offers a program in Computer Science and Engineering (CSE) leading to the degree of Bachelor of Engineering (BE). The BE in CSE is offered by the Department of Electrical & Computer Engineering in collaboration with the Department of Computer Science. Students who have completed the requirements for a BS in Computer Science have the option to transfer to the BE program in CSE, provided they achieve a qualifying overall GPA. Transferring students can finish the CSE degree in four calendar years, provided they follow an appropriate study plan.

Minor in Computer Science

A minor in computer science requires the completion of the following 18 credits: CMPS 201, CMPS 202, CMPS 211 (or MATH 211), CMPS 214, and 3 additional credits from the following: CMPS 215, CMPS 221, CMPS 231, CMPS 240, CMPS 241, and CMPS 271, and 3 additional credits from CMPS courses numbered 214 and above (except CMPS 297T). [Note: This minor is not open to students from the ECE Department.]

Minor in Computational Science

A minor in Computational Science requires the completion of the following 18 credits: 12 required credits (CMPS 201 or CMPS 203, CMPS 202, MATH/CMPS 251, MATH 281 or CMPS 254), 6 credits out of the following: MATH 211 (or CMPS 211), DCSN 200, PHYS 222, or a tutorial course in either PHYS 231 or PHYS 232, a course in bioinformatics, or a chemistry course which has computational contents.

Minor in Data Science

A minor in data science requires the completion of the following 18 credits: CMPS 201 or CMPS 203, CMPS 244, CMPS 261, CMPS 262, one of the following (STAT 201, STAT 210, STAT 230, STAT 233, BUSS 200, EDUC 227,ECON 213, or NURS 203), and MATH 218 or MATH 219. [Note: This minor is not open to Computer Science students and students from the ECE Department.

Minor in Software Development and Design

A minor in software development and design requires the completion of the following 18 credits: CMPS 201, CMPS 202, CMPS 244, and CMPS 271, and two of CMPS 270, CMPS 278, CMPS 279, and CMPS 288. [Note: This minor is not open to Computer Science students and students from the ECE Department.]

Minor in Gaming

The Gaming Minor can be attained by any AUB student who fulfills 18 credits which vary depending on the student's major. Humanities, creative arts, graphic design, and related majors must take the following 3 courses: CMPS 201 or CMPS 203, GRDS 141, CMPS 204. Science, engineering, math, and other STEM majors (including computer science) must take the following 3 courses: CMPS 202, CMPS 285, CMPS 288. All majors must take 2 out of the following courses: ENGL 264, ENGL 297, MCOM 291P. All majors must also take 1 out of the following courses: ENGL 254G, EDUC 275.

Degree Requirements

To graduate with a BS in computer science, a student must complete the following requirements:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from the degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Major Requirements

- Computer science: CMPS 201, CMPS 202, CMPS 214, CMPS 215, CMPS 221, CMPS 240, CMPS 241, CMPS 271, and 18 additional credits in computer science courses numbered 214 and above (except CMPS 297T).
- Technical electives: Three credits to be chosen from the following: CMPS elective numbered 214 or above (except CMPS 297T), BIOL 251, ECON 214, ECON 217, FINA 210, MATH 210, MATH 261, MATH/STAT 234, MATH/STAT 238, PHYS 222, PHYS 228, PHYS 235, PSYC 222, PSYC 229.
- Mathematics: MATH 201, MATH 211 (or CMPS 211), MATH 218 (or MATH 219), and STAT 230 (or STAT 233).

All prospective computer science majors are expected to complete CMPS 201, MATH 201, MATH 211 or CMPS 211, MATH 218, CMPS 202, and STAT 230 in the sophomore year. Computer science majors are expected to complete CMPS 214, CMPS 221, CMPS 241, and CMPS 271 in the junior year, and CMPS 215, and CMPS 240 in the senior year, and maintain an average grade of at least 2.3 in computer science courses. Students must have a grade of at least C+ in CMPS 201, and a grade of at least C+ in CMPS 202 before they are allowed to enroll in most CMPS courses.

Sample Study Plan for BS

A typical study plan could have the following distribution of CMPS courses:

Students starting in the Fall term:

First Year

- Fall term: CMPS 201, CMPS 211, MATH 201
- Spring term: CMPS 202, MATH 218, STAT 230

Second Year

- Fall term: CMPS 214, CMPS 221, CMPS 241
- Spring term: CMPS elective, CMPS elective, CMPS 271

Third Year

- Fall term: CMPS 215, CMPS 240, CMPS elective
- Spring term: CMPS elective, CMPS elective, CMPS elective

Students starting in the Spring term:

First Year

- Spring term: CMPS 201, CMPS 211, MATH 201
- Fall term: CMPS 202, MATH 218, STAT 230

Second Year

- Spring term: CMPS 214, CMPS 221, CMPS elective
- Fall term: CMPS 241, CMPS 271, CMPS elective

Third Year

- Spring term: CMPS 215, CMPS elective, CMPS elective
- Fall term: CMPS 240, CMPS elective, CMPS elective

Sample Study Plan for BS/MS

First Year

- Fall: CMPS 201, CMPS 211, MATH 201
- Spring: CMPS 202, MATH 218, STAT 230
- Summer: CMPS 221

Second Year

- Fall: CMPS 214, CMPS 241, CMPS elective
- Spring: CMPS 215, CMPS 240, CMPS 271
- Summer: CMPS Elective

Third Year

- Fall: CMPS 215, CMPS elective, CMPS elective, CMPS graduate course
- Spring: CMPS elective, 3 Graduate Courses

Fourth Year

- Fall: 3 graduate courses + comprehensive (for thesis and project options)
- Spring: 3 graduate courses (for course-based option) or 2 graduate courses + project (for project option) or thesis (for thesis option)

Introductory Courses

CMPS 101 Introduction to Computer Science 2.2; 3 cr.
This course introduces the skills, concepts, and capabilities needed for effective use of information technology (IT). It includes logical reasoning, organization of information, managing complexity, operations of computers and networks, digital representation of information, security principles, and the use of contemporary applications such as effective Web search, spreadsheets, and database systems. Also, it includes a basic introduction to programming and problem solving through scripting web applications. Every term.

CMPS 201 Introduction to Programming 3.3; 3 cr.
This course introduces students to programming and computational thinking. A high-level programming language is used. Students will learn the principles of imperative and object-oriented programming in addition to basic data types, flow control (repetition and selection constructs), procedures and functions, parameter passing, scoping, recursion, arrays, and classes. Students are briefly introduced to simple algorithms and data structures. This course was previously numbered CMPS 200.

CMPS 202 Data Structures 3.3; 3 cr.
This course consolidates algorithm design and programming techniques, with an emphasis on abstract data types. The course introduces students to the design, analysis, and implementation of data structures as well as some of the key algorithms operating them. Topics include lists, stacks, queues, deques, sets/maps, search trees (binary search trees and AVL trees), heaps/priority queues (heap sort), hash tables, and graphs (breadth-first search and depth-first search). Prerequisite: a grade of at least C+ (or 70) in CMPS 201. This course was previously numbered CMPS 212. Every term.

CMPS 203 Programming for Everyone 3.3; 3 cr.
This course is designed for students with no prior exposure to computer science or programming. It aims to help students, regardless of their major, to feel justifiably confident of their ability to write small programs that allow them to accomplish useful goals. To this end, it provides students with a brief introduction to many topics in computer science so they will have an idea of what is possible when they need to think about how to use computation to accomplish some goals later in their career. The course uses the Python programming language. Not open to computer science students.

CMPS 204 Animation Tools 3.2; 3cr.
This course teaches students the knowledge needed to create digital prototypes of 2D and 3D games. The course covers: the conceptual framework of interactive environments, game programming approaches, techniques and tools, manipulation of visual effects and sound, object animation, movement control, worlds, and interactivity. Prerequisite: CMPS 201.

CMPS 206 Computers and Programming for the Arts 2.2; 3 cr.
This course is an introductory computer course that presents computing and information, and illustrates their use. The student is introduced to computers and their role in society with emphasis on conceptual understanding as well as operational proficiency. Topics include principles of computer operations both from the hardware and software perspectives, basic networking concepts, web authoring concepts including HTML, cascading style sheets, publishing, and data manipulation using spreadsheets and databases. No credit is given to computer science majors. Students can get credit for only one of CMPS 206, CMPS 208, or CMPS 209. Annually.

CMPS 207 Programming for Digital Art 3.3; 3 cr.
This course introduces students to the technical and conceptual skills necessary for developing websites and for analyzing and visualizing real data. In web design, students will learn

HTML5 and CSS3. In data analysis and visualization, students will learn to code using Python with an emphasis on organizing, analyzing, and plotting data. Visualizations produced by Python can then be embedded into html pages. The core skills learned in this course will be applicable to most programming languages. Not open to computer science students. Annually.

CMPS 208 Computing for Business 3.2; 3 cr.
Introduces Excel as a computer tool to plan, create, and use spreadsheets to formulate and solve business problems. It exposes students to a wide coverage of spreadsheet topics from introductory concepts such as problem formulation, writing formulas and functions, charting, grouping, and error prevention to more powerful and advanced features such as pivot tables, and analysis needed in decision-making. In addition, it boosts students' ability to collect, analyze, and forecast business and financial data to generate valuable insights. The course offers students an opportunity to apply skills in a laboratory environment in which they can experiment using Excel business problems designed for some selected topics. It provides the tools to perform modeling, calculations, analysis of various phenomena encountered in other courses such as finance, operations management, human resources, etc. No credit is given to computer science majors. Students can get credit for only one of CMPS 206, CMPS 208, or CMPS 209.

CMPS 209 Computers and Programming for the Sciences 2.2; 3 cr.
This course is designed to cover the essential computer skills needed by students in sciences. The course introduces how computers and Internet technologies work by emphasizing conceptual understanding as well as practical operational proficiency. Specifically, the course covers the essential concepts needed for designing spreadsheet applications, building personal relational databases, and programming using Visual Basic. Other topics covered include networking basics. No credit is given for computer science majors. Students can get credit for only one of CMPS 206, CMPS 208, or CMPS 209. Every term.

CMPS 211 Discrete Structures 3.1; 3 cr.
This course introduces students to discrete structures, focusing on those relevant to computing sciences. Topics covered include Logic and Proofs, Sets, Sequences, Functions, Growth of Functions, Algorithms and their complexities, Induction and Recursion, Counting, and Recurrence Relations. This course is equivalent to MATH 211. Every term.

CMPS 214 Design and Analysis of Algorithms 3.1; 3 cr.
This course introduces systematic methods for the design and (asymptotic) analysis of advanced algorithms and data structures. Topics include searching, sorting, order statistics, divide-and-conquer, greedy algorithms, dynamic programming, multi-threaded algorithms, matrix algorithms, as well as (advanced) graph algorithms. Several data structures are also studied such as red-black trees, binomial heaps, Fibonacci heaps, and suffix trees. Prerequisites: CMPS 211 or MATH 211 and a grade of at least C+ (or 70) in CMPS 202. This course was previously numbered CMPS 256. Annually.

CMPS 215 Theory of Computation 3.0; 3 cr.
A course that covers basics of automata and language theory, computation theory, and complexity theory. Topics include regular expressions, finite automata, context-free grammars and parsing, pushdown automata, closure properties, Turing machines, Church's thesis, reductions and decidability, time complexity and NP-completeness, space complexity, polynomial-space and log-space computations, circuit complexity, probabilistic computations and complexity classes, approximation algorithms, and selected topics as time permits. Prerequisites: CMPS 214. This course was previously numbered CMPS 257. Annually.

Computer Architecture and Parallel Computing

CMPS 221 Computer Organization and Design 3.0; 3 cr.
This course covers the fundamentals of computer architecture with a focus on single-core processor design. Topics include: digital logic design, combinational and sequential logic, hardware for computer arithmetic, floating point arithmetic, assembly programming, instruction set architecture, datapath design, pipelining and pipeline hazards, memory organization, cache design, and virtual memory. Prerequisites: CMPS 211 or MATH 211 and a grade of at least C+ (or 70) in CMPS 202. This course was previously numbered CMPS 255. Annually.

CMPS 224 GPU Computing 3.0; 3 cr.
This course covers parallel computing in the context of processors with many computational cores, with particular emphasis on data parallelism and general purpose GPU programming. The course introduces the CUDA programming model as well as the GPU architecture and memory organization. The course then covers how to map algorithms to parallel hardware and common optimizations for parallel code using numerous parallel patterns and applications case studies, such as: vector addition, matrix multiplication, convolution, stencil computation, histogram, reduction, prefix-sum, ordered merge, sorting, sparse matrix computation, graph traversal, and others. The course also covers a selection of advanced parallel programming practices. Students cannot receive credit for both CMPS 224 and EECE 696. Prerequisites: CMPS 221 or Instructor Consent.

Programming Languages and Compilers

CMPS 231 Programming Languages 3.0; 3 cr.
This course covers the fundamentals of programming language design and implementation. The course introduces functional programming and examines the language design principles underlying functional, imperative, and object-oriented languages. Type systems are also introduced. The course also covers the initial stages of programming language implementation, including lexing, parsing, and semantic analysis. Prerequisite: a grade of at least C+ (or 70) in CMPS 202. This course was previously numbered CMPS 258. Annually.

CMPS 232 Compiler Construction 3.0; 3 cr.
This course covers the design and implementation of optimizing compilers starting from source code representation down to machine code. Topics include intermediate representations, linkage and storage conventions, intermediate code generation for imperative and object-oriented languages with polymorphism, global dataflow analysis and the iterative dataflow algorithm, local and global optimizations, backend code generation, and register allocation. Prerequisites: CMPS 221. This course was previously numbered CMPS 274. Annually.

CMPS 240 Operating Systems 3.0; 3 cr.
This course provides an introduction to the fundamentals of operating system function, design, and implementation. It contains a theory component illustrating the concepts and principles that underlie modern operating systems and a practice component to relate theoretical principles with operating system implementation. The course is divided into three major parts. The first part of the course discusses concurrency (processes, threads, scheduling, synchronization, and deadlocks). The second part of the course discusses memory management (memory management strategies and virtual memory management). The third part of the course concerns file systems, including topics such as secondary storage systems and I/O systems. If time permits, the following topics will be briefly examined: Virtualization, security, distributed synchronization, and perhaps other topics. A case study of a contemporary operating system like UNIX accompanies the course. Prerequisite: CMPS 221. This course was previously numbered CMPS 272. Annually.

CMPS 241 Systems and Network Programming 3.0; 3 cr.
This course introduces students to computer systems from a programming perspective to prepare them for more advanced systems topics such as operating systems, computer networks, and computer and information security. Students will learn a low-level system language and use it to design and develop high quality system applications. Additional topics include but not limited to memory management, concurrency, socket programming, inter-process communication, parallel and distributed computing, networking overview, basics of client-side and server-side programming, and security issues in computing systems. Prerequisite: a grade of at least C+ (or 70) in CMPS 202 . This course was previously numbered CMPS 273. Annually.

CMPS 242 Computer Networks 3.0; 3 cr.
An introduction to network architectures and protocols, placing emphasis on Internet design principles and methodology. Specific topics include application layer protocols, network programming, transport protocols, circuit switching and packet switching, routing algorithms, multicast, local and wide area networks, error detection and correction, and performance evaluation. Prerequisite: CMPS 221. This course was previously numbered CMPS 284. Annually.

CMPS 243 Computer and Information Security 3.0; 3 cr.
This course introduces students to the world of information and computer security. Students will be exposed to various security vulnerabilities of computing and networking systems and learn their fundamental aspects such as cryptography, user authentication, access control principles, trusted computing & multilevel Security, database security, SQL injection attacks, malicious software, worms, malwares, viruses, denial-of-service attacks, intrusion detection and prevention systems, firewalls, etc. Also, other topics related to operating system security, web security, wireless security, and Internet security are covered as time permits. The course will examine causes of security breaches and give methods to help prevent them. Prerequisite: a grade of at least C+ (or 70) in CMPS 202 and senior standing. This course was previously numbered CMPS 283.

CMPS 244 Database Systems 3.1; 3 cr.
This course covers the fundamental concepts of database systems. Topics include data modeling using the Entity-Relationship model and the Relation model; query languages including relational algebra and SQL; File Organization and Indexing; Normalization; database programming; and NoSQL databases. The course is offered in blended-format and includes a term project. Prerequisite: a grade of at least C+ in CMPS 202 or (a grade of at least C+ in (CMPS 201 or CMPS 203) and junior standing). This course was previously numbered CMPS 277. Annually.

Computational Science

CMPS 251 Numerical Computing 3.1; 3 cr.
Techniques of numerical analysis: number representations and round-off errors, root finding, approximation of functions, integration, solving initial value problems, Monte-Carlo methods. Implementation and analysis of the algorithms are stressed. Projects using MATLAB or a similar tool are assigned. Prerequisites: a grade of at least C+ (or 70) in CMPS 201 or EECE 230, and MATH 201. This course is equivalent to MATH 251. Annually.

CMPS 254 Numerical Linear Algebra 3.0; 3 cr.
A course on direct and interactive methods for solving general and special systems of linear equations, covering LU decomposition, Choleski decomposition, nested dissection, marching algorithms; Jacobi, Gauss-Seidel, successive over-relaxation, alternating directions, and

conjugate gradient iterative methods. This course is equivalent to MATH 281. Prerequisites: MATH 218 or MATH 219. Prerequisite or Co- requisite: CMPS 251. This course was previously numbered CMPS 281. Annually.

Artificial Intelligence and Data Science

CMPS 261 Machine Learning 3.1; 3 cr.
This course covers Machine Learning theory, algorithms, and applications. Machine Learning is currently at the heart of Artificial Intelligence. It enables computational systems to adaptively improve their performance with experience accumulated from the observed data. This course balances theory and practice and covers the mathematical as well as the heuristic aspects. It also covers the latest trends in Machine Learning such as deep learning. Prerequisites: a grade of at least C+ (or 70) in CMPS 201 or CMPS 203, one of the following (BUSS 200, STAT 201, STAT 210, STAT 230, STAT 233, EDUC 227,ECON 213, or NURS 203), and MATH 218 or MATH 219. This course was previously numbered CMPS 287.

CMPS 262 Data Science 3.1; 3 cr.
This course introduces foundational elements comprising the data science pipeline. It covers techniques in data acquisition, cleaning, and preparation for machine learning, basic applied machine learning techniques spanning distance-based algorithms, rule-based algorithms, and black box algorithms, basic statistics for machine learning (descriptive, inferential, and estimation statistics), basic time series analysis and forecasting techniques, data production techniques using knitr and R-Markdown, and machine learning interpretability using SHAP. The course is delivered using both the R and Python programming languages. Prerequisites: a grade of at least C+ (or 70) in CMPS 201 or CMPS 203, one of the following (BUSS 200, STAT 201, STAT 210, STAT 230, EDUC 227,ECON 213, or NURS 203). This course was previously numbered CMPS 276.

Software Engineering

CMPS 270 Software Construction 3.0; 3cr.
Software Construction provides methods, tools and techniques to develop, modify and maintain complex and efficient software systems. Topics include object-oriented design; specifications and invariants; abstract data types, testing, design patterns, concurrency; version control and event driven programming. Prerequisite: a grade of at least C+ (or 70) in CMPS 202. This course was previously numbered CMPS 252.

CMPS 271 Software Engineering 3.0; 3 cr.
This course introduces practical industry-standard software engineering best practices to students that have already written moderate sized software. Students are exposed to full development lifecycle methodologies, choosing the right SDLC, requirements management, software design, design patterns, testing. A group term project provides a holistic hands-on experience building an end-to-end software application using agile principles and emulating a real-world environment often for real clients with real needs. Other topics covered include working in a team, professionalism, project management, and ethics. Prerequisite: a grade of at least C+ (or 70) in CMPS 202. This course was previously numbered CMPS 253. Annually.

CMPS 278 Web Programming and Design 3.3; 3 cr.
This course introduces the fundamentals needed to program on the Internet as well as the state-of-the-art technologies used in designing and developing rich multi-tiered web-based applications. It presents the basics of client-side/server-side web programming and the skills and tools needed to create dynamic Web-based applications. It provides in-depth coverage of various markup languages and their associated cascading style sheets, several client side and server side scripting languages (such as C#, PHP and JavaScript including JQuery, Angular, and NodeJS) in addition to AJAX-enabled rich Internet applications, client-side technologies, web services, Web Servers, and multi- tiered applications using relational database systems. Prerequisite: a grade of at least C+ (or 70) in CMPS 202. Annually.

CMPS 279 Mobile Applications Development 3.0; 3 cr.
This course introduces students to the world of mobile applications development from a software engineering perspective. Students will learn the importance of a good design for a mobile application, in addition to being able to write a basic to intermediate mobile application. The course includes many software design patterns and user interface design patterns. Students will learn how to collect, store, and present data in a mobile application, in addition to using the different exciting features of a mobile such as locations, graphics, cameras, and other features. Pre-requisite: a grade of at least C+ in CMPS 202. Annually.

Graphics and Gaming

CMPS 280 Digital Media Programming 3.0; 3 cr.
The class is an introduction to digital media programming and processing. The course explains the essential technology behind images, animations, sound, and video and illustrates how to write interactive programs that manipulate these media in creative ways. The class assumes basic knowledge in Java or a first course in programming. Prerequisite: a grade of at least C+ (or 70) in CMPS 201. This course was previously numbered CMPS 230.

CMPS 285 Computer Graphics 3.0; 3 cr.
A course that covers the practice of, and underlying mathematical foundation for, interactive graphics programming. Topics include basic graphics systems, graphics primitives and attributes, windows and viewports, clipping, geometric transformations, color systems, 2D texture mapping, and introduction to 3D graphics. Programming in OpenGL will be used. Prerequisite: a grade of at least C+ (or 70) in CMPS 202. Annually.

CMPS 286 Computer-Aided Geometric Design 3.0; 3 cr.
A course that discusses the representation of free-form curves and surfaces in modeling objects by computers, including curve approximation and interpolation, spline curves (Bezier and B-splines), visual smoothness of curves, geometric continuity, parameterization of curves, introduction to surface interpolation and approximation, and spline surfaces (Bezier and B-splines). Prerequisite: CMPS 285. Biennially.

CMPS 288 Game Programming 3.0; 3 cr.
This course introduces students to game programming using state of the art technologies. The course covers both theoretical backgrounds and implementation details of different components of games. Topics covered will be the physical control of a game character, interactions between objects, inventory, HUD, and AI. Pre-requisite: a grade of at least C+ in CMPS 202. Annually.

CMPS 289 Human Computer Interaction 3.0; 3 cr.
This course describes the psychological principles of human-computer interaction. Evaluation of user interfaces. Usability engineering. Task analysis, user-centered design, and prototyping. Conceptual models and metaphors. Software design rationale. Design of windows, menus, and commands. Voice and natural language I/O. Response time and feedback. Color,

icons, and sound. Internationalization and localization. User interface architectures and APIs. Case studies and project. Prerequisites: CMPS 271. Biennially.

Special Courses

CMPS 290 Internship 0.0; 0 cr.
This course requires students to undergo professional training in computer science for eight full weeks at a recognized firm subject to department approval. Prerequisite: Consent of Instructor.

CMPS 296 Computer Science Tutorial 1–3 cr.
Prerequisite: Senior standing.

CMPS 297 Special Topics in Computer Science 1.0-3.0; 1–3 cr.
A course on selected topics which change according to the interests of instructors and/or students. Topics are chosen from state-of-the-art innovations in software and computer information systems. Prerequisite: Consent of instructor. Annually.

CMPS 299 Capstone Project 3.0; 3 cr.
A course to enhance students' skills with practical experience giving them the opportunity to integrate knowledge accumulated in different courses. In this course, students must deliver a software product which passes through the design, analysis, implementation, testing, and evaluation stages. Prerequisites: consent of the instructor and senior standing.

CMPS 299A Capstone Project 1.0; 1 cr.
It is the first course in a series of two courses (CMPS 299A and CMPS 299B), taken in consecutive semesters. The objective of both courses is to enhance students' skills with practical experience giving them the opportunity to integrate knowledge gained from courses across the curriculum. Students must work in teams and can pursue either an applied or research project. If the project is applied, students must identify the problem, analyze it, identify/define functional and non-functional requirements and constraints, and propose a valid software architecture. If the project is research oriented, students must identify the problem, analyze the work related to the problem being tackled, and propose a novel solution to the problem. Regardless of the choice of project, students must document their work in the form of written reports and oral presentations. Prerequisites: consent of the instructor and senior standing. Every term.

CMPS 299B Capstone Project 2.0; 2 cr.
It is a continuation of CMPS 299A, where the project that was started in CMPS 299A is completed. If the project is applied, students must deliver a fully functional software along with the proper documentation. If the project is research oriented, students must deliver a report that includes the motivation of the work and its impact, related work, proposed approach, evaluation, and comparison with other approaches. Prerequisites: CMPS 299A. Every term.

42 Credits in Computer Science

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (6)	Understanding the World (3), Quantitative Reasoning (54)	Community-Engaged Learning (3)	Technical Electives (3)

Lecture Courses (9+12+ 6+3+3 +54+3)	Required Arabic course (3) Required English courses (usually 6): ENGL 203(3), 204(3), as determined by placement	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required courses (6)	Required Understa- nding the World courses (3) Required CMPS courses (24): CMPS 201(3), 202(3), 214(3), 215(3), 221(3), , 240(3), 241(3), 270(3) Required CMPS elec- tives (18): to be chosen from CMPS courses above 214 (Except CMPS 297T) Required mathematics courses (12): MATH 201(3), MATH 211(3) (or CMPS 211), MATH 218 (or 219), STAT 230 (or 233)	Required courses (3)	Required 3 credits course (3): CMPS elective numbered 214 or above (Except CMPS 297T), BIOL 251, ECON 214, ECON 217, FINA 210, MATH 210, MATH 261, MATH/ STAT 234, MATH/ STAT 238, PHYS 222, PHYS 228, PHYS 235, PSYC 222, PSYC 229
Seminar (0)						
Labor- atory				CMPS 201, 202, 278		
Research project (0 or 3)						

Department of Earth Sciences

Chairperson:	Doummar, Joanna J.
Professor:	Abdel-Rahman, Abdel-Fattah M.
Associate Professors:	Doummar, Joanna J.; Salah, Mohamed K.
Assistant Professors:	Haidar, Ali T. ; Nemer, Tony S.
Instructor:	Khadra, Wisam M.

The Department of Earth Sciences offers programs leading to the degree of Bachelor of Science in Geology and Master of Science degrees in certain areas of the vast field of earth sciences. It also offers a more broadly-based program leading to the degree of Bachelor of Science in Petroleum Geosciences. Students wishing to transfer to Geology or Petroleum Geosciences must secure the approval of the department. In addition, students must have a strong background in sciences and have taken the freshman science program or its equivalent. The department also offers undergraduate elective courses which include GEOL 101, GEOL 102, GEOL 103, GEOL 104, GEOL 106, and GEOL 201 in the area of general Geology, and GEOL 204, GEOL 205, GEOL 206, GEOL 208 and GEOL 227 in the fields of environmental and planetary Geology.

Field trips are a required part of most Geology courses.

Mission Statement

The Department of Earth Sciences provides a solid grounding in Geosciences at the service of a sustainable Earth. Through a series of foundational courses, the student acquires a thorough appreciation of the physical, chemical, and biological processes shaping the structure and evolution of the Earth's geosphere, atmosphere, hydrosphere, and biosphere and the complex interactions between them. Process-based concepts combined with fieldwork techniques, lab, and computational experience allow the construction of quantitative models of relevance to resource exploration (e.g., water, oil and gas, and minerals), risk and hazard assessment (e.g., earthquakes and landslides), and emerging environmental issues (e.g., landfills, soil, and water contamination). A venerable geological museum features a historical collection of rocks, fossils, and maps which bring the field to the classroom with in-house exposure to Earth Science processes. With our track-oriented approach and interdisciplinary curriculum, our graduates acquire an appreciation of the broad relevance of geosciences to landscapes, built and natural environments, and life's evolution around them. We seek to provide our students with the knowledge, conceptual frameworks, and technical skills that prepare them to lead successful careers as professional geoscientists and/or future researchers.

BS Degree in Geology

The requirements for a BS degree in Geology are 90 credits for students entering the department at the sophomore level, including 36 credits in the major. The distribution of university requirements is as follows:

Core required Geology courses: GEOL 201, GEOL 203, GEOL 207, GEOL 213, GEOL 216,

GEOL 216L, GEOL 219, GEOL 221, GEOL 223, GEOL 223L, GEOL 226, GEOL 297, GEOL 298 and GEOL 299 which is a total of 30 credits, in addition to two required Geology elective courses (6 credits).

Students have to take three required Quantitative Reasoning (9 credits) - MATH 201, STAT 210 or STAT 231, and CMPS 203 or equivalent. In addition to two Understanding the World courses (6 credits) from Chemistry and/ or Physics. Students may opt for MATH 202 or Understanding the World course to fulfill the 3 remaining mandatory credits.

Students are also required to take a total of 6 credits to be selected from a list of approved departmental courses or interdepartmental courses. A 0-credit mandatory internship course GEOL 299 provides students with the opportunity to acquire a professional experience in the field of Earth Sciences.

No course may be taken without its prerequisite unless authorized by the department chair.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Students admitted in Geology are eligible to continue in the program provided they obtain, by the end of their third regular term at AUB, a minimum average of 2.3 in any three out of the following five courses: GEOL 201, GEOL 216, GEOL 213, and GEOL 223. Otherwise, they will normally be dropped from the department. Consideration for readmission requires a minimum cumulative average of 2.3 overall and a minimum average of 2.3 in any three out of the following five Geology courses: GEOL 201, GEOL 216, GEOL 213, and GEOL 223, and this should be achieved within the following two regular terms (at the very latest) after being dropped from the major. Majors must complete the following courses, in which a general average of 2.3 or more must be maintained in core geology required courses.

BS Degree in Petroleum Geosciences

The requirements for a BS degree in Petroleum Geosciences are 90 credits for students entering the department at the sophomore level, including 40 credits of Geology courses, 6 credits of chemistry and physics courses, 6 credits of business courses, 3 credits in economics (ECON 211 or 212) and 3 credits in education (EDUC 215 or 230). The distribution of university requirements is as follows:

The core courses of the Petroleum Geosciences program (totaling 58 credits) are GEOL 201, GEOL 203, GEOL 207, GEOL 216, GEOL 211, GEOL 212 (or equivalent), GEOL 213, GEOL 219, GEOL 221, GEOL 222 & GEOL 214 (or equivalent), 225 or equivalent, GEOL 226, GEOL 227, GEOL 229 (or equivalent), GEOL 297, GEOL 298, ACCT 210, MNGT 215, and ECON (GE); one of the following chemistry courses: CHEM 201, CHEM 202, or CHEM 208, as well as one of the following physics courses: PHYS 204, PHYS 205, or PHYS 210. In addition, a required elective course, CMPS 203, MATH 201, or STAT 210, must be completed.

Students admitted in Petroleum Geosciences are eligible to continue in the program provided they obtain, by the end of their third regular term at AUB, a minimum average of 2.3 in any three out of the following courses: GEOL 201, GEOL 211, GEOL 212, GEOL 213, and GEOL 222. Otherwise, they will normally be dropped from the department. Consideration for readmission requires a minimum cumulative average of 2.3 overall and a minimum average of 2.3 in any three out of the following five Geology courses: GEOL 201, GEOL 211, GEOL 212, GEOL 213, and GEOL 222. This should be achieved within the following two regular terms (at the very latest) after being dropped from the major.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in Geology

To obtain a minor in Geology, students must complete the following core course GEOL 201, and any four courses from the following: GEOL 209, GEOL 211 or 216, GEOL 213, GEOL 222 or 223, and GEOL 227 (for a total of 15 credits).

Course Descriptions

GEOL 101 The Earth, Present and Past 3.0; 3 cr.

A freshman level study of the present-day processes that shape the Earth we live on, such as plate tectonic activity, rock formation and erosion, coupled with an overview of the origin and history of the Earth and life. Every term.

GEOL 102 Environmental Physical Geography 3.0; 3 cr.

An introduction to the structure, classification, physical processes and characteristics of the Earth's atmosphere, hydrosphere and biosphere, dynamics of change, and associated environmental impacts. Every term.

GEOL 103 Introduction to Marine Geology 3.0; 3 cr.
A freshman level survey of oceanic geological processes, wave dynamics, submarine springs, marine economic mineral resources, marine communities, pollution, global change, and marine-related environmental issues. Every term.

GEOL 104 Natural Disasters 3.0; 3 cr.
A freshman level course covering events involving natural forces that have major devastating effects on humankind. These include mud flows, landslides and slope failure, earthquakes, tsunamis, explosive eruptions and volcanic hazards, meteoritic impacts and mass extinctions, hurricanes and tornadoes, flooding, and forest fires. Every term.

Geol 106 Water and Climate 3.0; 3 cr.
A freshman-level course highlighting the science of water as a vital resource, including the water cycle, and the difference between streams, rivers, springs, and wells. This course presents also the main scientific evidence of climate change and its possible effects on water resources availability, demand, and supply in a changing world. Several worldwide initiatives for climate change adaptation and water resources management will be also addressed and discussed through presentations, readings, and class debates. Every term.

GEOL 201 Physical Geology 3.0; 3 cr.
An introduction to minerals, igneous, sedimentary and metamorphic rocks, geological structures, and external Earth processes, including the geologic work of streams, glaciers, groundwater, wind, and the plate tectonics theory. Every term.

GEOL 203 Physical Geology Laboratory 0.2; 1 cr.
An introduction to the identification of rocks and minerals in hand specimen, geographic and geological maps, and basic interpretation of geological data. Every term.

GEOL 204 Dinosaurs and Life History 3.0; 3 cr.
A sophomore and higher-level course covering topics that include structure and tectonics of the Earth, origin and evolution of life, climatic changes through time, life forms throughout the geologic eras, bacteria and algae in the Precambrian, trilobites, fishes and first trees, in the Paleozoic, dinosaurs, birds and reptiles, in the Mesozoic, mammals, in the Cenozoic, major extinction events in Earth's history, and the theory of evolution. Not open for PTGS or Geology students. Every term.

GEOL 205 Earth Resources and Energy 3.0; 3 cr.
A study of the main economic mineral resources and traditional and alternate energy resources, with an emphasis on the environmental impacts of their use and misuse. A special emphasis is given to regional issues. Open to both arts and sciences students, but not to Geology and Petroleum Geosciences students. Every term.

GEOL 206 Planetary Geology 3.0; 3 cr.
A sophomore and higher-level course covering topics that include the origin of the solar system, Earth as a model of planetary evolution, meteorites and impact craters, planetary geology of planets Mercury, Venus, Mars and its recent discoveries, Jupiter and the asteroidal belt, Saturn and Titan, Uranus, Neptune and Pluto and their major satellites, with some emphasis on the patterns of variation among planets. Planetary magnetic fields, atmospheres, bulk chemical compositions, internal structure, and present geologic activities are covered. Not open for PTGS or Geology students. Every term.

GEOL 207 Map Interpretation 2.2; 1 cr.
A course on the interpretation of topographic, geomorphological, and geological maps for the inference of geological properties and geometries. This course also introduces spatial interpolation techniques and the construction of geologic maps and cross-sections using dedicated software. Prerequisites: GEOL 201 or consent of instructor. Annually.

GEOL 208 Water in a Changing World 3.0; 3 cr.
This course provides a brief introduction to the science of water, both from a geological/hydrological/environmental and from an archaeological/historical perspective. The course explores how societies in the past and in the present dealt or deal with water management issues. The course aims to provide students with the opportunity to explore water related issues with supported science and historical evidence. Formerly: GEOL 290 A. Students cannot receive credit for both GEOL 208 and AROL230. Annually.

GEOL 209 Building & Destruction of Mountains 3.0; 3 cr.
A sophomore and higher-level (GE natural-science) course covering topics that include global landforms and tectonics, endogenic processes and the role of Earth's mantle, exogenic processes (fundamentals of weathering and erosional agents), fluvial, groundwater, and aeolian processes, coastal processes and reshaping of the seashore, glacial / periglacial processes and landforms, sea-level change, uplift, and inundation, as well as present geologic activities related to Earth's landforms. Every term.

GEOL 210 Geomorphology 3.0; 3 cr.
An introduction to the study of land forms and the interaction of external geological forces and erosion agents with the structure and composition of their surface rocks. This course is also an examination of the interaction between the internal and external Earth processes responsible for the development of land forms. Prerequisites: GEOL 201 and GEOL 203, or consent the of instructor. Occasionally.

GEOL 211 Crystallography and Physical Mineralogy 2.2; 3 cr.
An introduction to the study and classification of crystals; properties of minerals as related to their crystal structure; identification, description, and classification of minerals. This course entails practical work with crystal models and hand specimens of common minerals. Students cannot receive credits for GEOL 211 and GEOL 216/GEOL 216L. Annually.

GEOL 212 Optical Mineralogy 2.2; 3 cr.
An introduction to the theory of crystal optics, the polarizing microscope, and methods of mineral identification based on their optical properties. This course is also a systematic study of the common rock forming minerals in thin sections. Prerequisite: GEOL 211 or consent of instructor. Students cannot receive credits for GEOL 212 and GEOL 216/GEOL 216L. Annually.

GEOL 213 Structural Geology 2.2; 3 cr.
An introduction to the study of rock deformation, the relationship between stress and strain, and the interpretation of structures and their significance to regional and global tectonics. Prerequisite: GEOL 201. Annually.

GEOL 214 Stratigraphy 2.2; 3 cr.
A course on the principles of interpretation of the sedimentary rocks and methods of correlation and an introduction to the stratigraphy of Lebanon in the context of the regional geology of the Middle East. Prerequisite: GEOL 222 or consent of instructor. Students cannot receive credits for GEOL 214 and GEOL 223/GEOL 223L. Annually.

GEOL 216 Mineralogy and Optical Mineralogy 2.2; 3 cr.
An introduction to the main concepts of crystallography, fundamentals of crystal chemistry, classification of the main mineral groups, mineral associations, and ore minerals/metals formation, introduction to the theory of crystal optics, the interaction of light and matter, and the resultant optical properties used for mineral identification under the optical microscope, the relation between physical/optical properties of minerals and their internal atomic structures, and a brief introduction to the use of specific minerals in environmental and medical applications. The practical work is given in a separate Lab-course. Annually. Previously GEOL 211 GEOL 212.

GEOL 216L Mineralogy and Optical Mineralogy Laboratory 0.2; 1 cr.
GEOL 216L is an introduction to crystallography, determination of crystal systems and point groups, identification of the main rock-forming and ore minerals in hand specimens using their physical properties, introduction to crystal optics and the optical microscope, a systematic study of the common rock-forming minerals in thin sections and their identification based on their distinct optical properties, and use of chemical data to calculate mineral stoichiometry. Annually. Previously GEOL 211 GEOL 212.

GEOL 219 Geologic Field Methods 0.3; 2 cr.
An introduction to the applied methods and concepts used in field geological mapping. The students will learn how to write geological reports, produce geological maps and cross-sections, and investigate geological problems based on extensive mapping fieldwork in Lebanon. Prerequisites: GEOL 207, GEOL 223, and GEOL 213 or consent of the instructor. Annually.

GEOL 221 Petrology 2.2; 3 cr.
A course on the origin, composition, occurrence, and classification of igneous and metamorphic rocks and their systematic identification in hand specimens and in thin sections. Prerequisite: GEOL 216 and GEOL 216L or consent of instructor. Annually.

GEOL 222 Sedimentology 2.2; 3 cr.
A study of the characteristics and classification of sedimentary rocks using petrographic and field study methods, with some focus on diagenetic processes, depositional environments, and elementary basin analysis. Pre- or corequisites: GEOL 202 and GEOL 212, or consent of instructor. Students cannot receive credits for GEOL 222 and GEOL 223/GEOL 223L. Annually.

GEOL 223 Sedimentology and Stratigraphy 2.2; 3 cr.
This course is a sophomore and higher-level course covering topics that include basic theoretical knowledge in sedimentation and stratigraphy. The student will get acquainted with depositional systems, carbonates, bio-sedimentology, diagenesis, provenance, geochemistry, sediment transport, and basin analysis. This course also focuses on the vertical and lateral relationships between units of sedimentary rocks that are defined on the basis of lithologic and geophysical properties, paleontological characteristics, and age relationships. Previously GEOL 222 and GEOL 214.

GEOL 223L Sedimentology and Stratigraphy Lab 0.3;1 cr.
Laboratory component of sedimentology and stratigraphy. The students learn how to use basic and advanced techniques to classify sedimentary rocks based on their chemical composition and texture and relate them to a depositional environment. Furthermore, they learn some basic skills for thin section preparation, inspection with a polarizing microscope, potentially with the Scanning Electron Microscope (SEM). They will apply the sieving and counter coulter techniques to obtain particle size distribution curves and will analyze them statistically. Additionally, two sessions are devoted for the identification of vertebrate and invertebrate macro and micro fossils. This course introduces the students to correlations using seismic stratigraphy and other methods in stratigraphy.

GEOL 224 Regional Geology 3.0; 3 cr.
A course on the geology of the Middle East region, with emphasis on its stratigraphy, structure, geological history, and tectonic evolution, and with reference to oil and mineral resources in the region. Prerequisites: GEOL 213 and GEOL 222, or consent of instructor. Annually.

GEOL 225 Petroleum Geology 3.0; 3 cr.
A course on hydrocarbon formation and occurrence as oil and gas fields, source and reservoir rocks, petroleum traps, as well as exploration and extraction methods. Prerequisites: GEOL 213, GEOL 222, or consent of instructor. Annually.

GEOL 226 Introduction to Geophysics 3.0; 3 cr.
A junior/senior level course covering the basic principles and fundamental concepts of the main geophysical methods: seismic, electrical, electromagnetic, and geophysical borehole logging techniques, as well as gravimetry and magnetometry. Applications of the various geophysical techniques in some domains as mining of ore minerals, the geotechnical field and the exploration of hydrocarbons and other natural resources are covered briefly. Prerequisite: GEOL 201. Annually.

GEOL 227 Alternate Energy & Climate 3.0; 3 cr.
A sophomore and higher-level (GE natural-science) course that offers a wide overview on fossil fuels and environmental impacts, principles & processes involved in harvesting alternate energy resources: solar energy, hydropower and water resources, wind power, biomass energy, geothermal and tidal energy, nuclear energy and its impacts, climate science, anthropogenic climate forces and the resultant effect on climate change. Every term.

GEOL 229 Individual Field Work Project 0.18; 6 cr.
A complete and independent geological investigation of a designated area and preparation of a detailed geological map, cross-sections, and report. For geology majors who have junior or senior standing. Pre- or corequisite: GEOL 219. Annually.

GEOL 271/272 Directed Study in Geology 1.0-3,0; 1–3 cr.
A tutorial that may be repeated for credit with different topics or may replace a required course. Occasionally.

GEOL 290 Special Topics in Geology 1.0-3,0; 1–3 cr.
A course that covers a variety of topics in Geology not typically offered by the department. May be repeated for credit. Every term.

GEOL 297 Geological Mapping 0.18; 3 cr.
This course is a complete and independent geological investigation of a designated area and the preparation of a detailed geological map and geological field report. For juniors and seniors in the major. Prerequisite: GEOL 219. Annually. Previously GEOL 229.

GEOL 298 Applications in Earth Sciences 3.0; 3 cr.
GEOL 298 is a capstone course where students apply the knowledge and skills acquired in various core and required courses in real-life problems or research questions in tracks related to Environmental Geosciences, Engineering Geosciences, Life resilience and Extinctions, Resources Exploration, Petroleum Geosciences, and Geosciences for Landscapes. Open for major only, annually. Prerequisite: GEOL 297 and completion of at least 2 major related electives.

GEOL 299 Professional Experience 0 cr.
Six full weeks of approved internship in a recognized consulting and/or contracting firm or research institute in AUB, Lebanon, or abroad, that allows students to apply their knowledge and skills in the applied field of Earth Sciences. Open to junior and senior major students only. Prior approval of instructor.

36 Credits[1]

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (Min. 6)	Understanding the World Quantitative Reasoning (9:3/6+3/6)	Community-Engaged Learning (3)
Lecture Courses (9+12+6+36 +9+3)	Required Arabic course (3) Required English courses: 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required credits in Societies and Individuals to be selected from an approved GE list: 6 credits	Required Geology courses: GEOL 201(3), 216[4](3), 213[2,4](3), 219[2,4](3), 221[2,3,4](3), 223[2](3), 226(3), 297[2,3](3), 298(3) Elective geology courses: GEOL 204[2,3](3), 208(3), GEOL 209[2,3](3), 225[2,3](3), 271[2,3] (3), 272[2,3](3), 290(3) Two understanding the world courses must be an approved general education course from outside the major (PHYS 204, 205, 210) or CHEM 201, 202,208) Required quantitative reasoning courses: CMPS 203(3), MATH 201(3) and STAT 210 (3) or STAT 231(3) Math 202 or understanding the world course (3) credits from approved GE in physics or chemistry and courses in Biology (BIOL 201 and BIOL 202)	To be selected from an approved GE list

Seminar (18 + 12)				Geology courses: GEOL 201(3),213[2,3,4](3), 216[2,3](3), 221[2,3,4](3), 223[2,3,4](3), 226(3) Elective geology courses: GEOL 225[2,3](3), GEOL 208, GEOL 209[2,3](3), GEOL 227[2,3](3), GEOL 290(3) Two approved GEOL courses or approved courses from MSFEA, FAS (BIOL), FHS and FAFS	
Laboratory (11+4)				Required geology courses: GEOL 203(1), GEOL 207 (1), GEOL 216L (1), GEOL 223L[2,4](1), GEOL 213[2,3,4] (3), GEOL 219[2,4] (2), GEOL 221[2,4](3), GEOL 226(3)	
Research Project (36+12)				Required geology courses: GEOL 219[2](2), GEOL 297[2,4](3), GEOL 298[2,3,4](3), GEOL 299[2,3](0)	

[1] Plus 50 required and elective credits
[2] Combined lecture, laboratory (field), and research project courses
[3] Combined lecture and seminar courses
[4] Combined lecture and lab courses

40 Credits[1] in Petroleum Geoscience

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 6)**	**Major requirements (40) Understanding the World, Quantitative Reasoning (6:3+3)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+9+3 +37+6+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required business courses: ACCT 210(3), MNGT 215(3) Economics course: ECON 211(3) or ECON 212(3) One approved GE Societies and Individuals course (3): EDUC 215(3) or EDUC 230(3)	Required geology course: GEOL 201(3), 211(3), 212[2,4](3),213[2,4](3), 214[2,3](3), 219[2,4](3), 221[2,3,4](3),222[2,3,4](3), 225[2,3](3), 226[4](3), 227(3), 229[2,3](6) Chemistry and physics courses: CHEM 208 and one of PHYS 204(3), PHYS 205(3), PHYS 210(3). Elective geology courses: GEOl 271[2,3](3), 272[2,3](3), 290(3) Required elective computer science courses: MATH 201(3), STAT 210(3) or CMPS 203(3)	To be selected from an approved GE list
Seminar (30+12)				Required geology courses: GEOL 2012(3), 213[2,3,4](3), 214[2,3](3), 219[2,4](2), 221[2,3,4](3), 222[2,3,4](3), 225[2,3](3), 229[2,3](6) Elective geology courses: 271[2,3](3), 272[2,3](3), 290(3)	

Laboratory (13,3)				Required geology courses: GEOL 203(1), GEOL 207(1), 211(3), 212[2,4](3), 213[2,3,4](3), 222[2,3,4](3), 226[4](3), 227[4](3)	
Research Project (27+12)				Required geology courses: GEOL 201[4](3), 213[2,3,4](3), 214[2,3](3), 219[2,4](3), 221[2,3,4](3), 222[2,3,4](3), 225[2,3](3), 229[2,3](6) Elective geology courses: GEOL 271[2,3](3), 272[2,3](3), 318[3,4](3)	

[1] Plus 50 required and elective credits
[2] Combined lecture, laboratory (field), and research project courses
[3] Combined lecture and seminar courses
[4] Combined lecture and lab courses

Department of Economics

Chairperson:	Neaime, Simon E.
Professor Emeritus:	Makdisi, Samir
Professor:	Neaime, Simon E.
Associate Professor:	Salti, Nisreen I.
Assistant Professors:	Abboud, Ali; Tuncay, Muhammed Alparslan; Yamout, Nadine
Lecturers:	Bou Nassar, Makram; Ramadan, Usamah H.
Instructors:	El Baba, Nora; Hamdan, Dana; Kanaan, Maya Z.; Makki, Ghina; Makki, Malak, Z.; Nader, Pamela; Rbeiz, Sylvia; Sabra, Raja

BA in Economics

Mission Statement

The undergraduate program in Economics is a rigorous quantitative program which enhances students' analytical skills and critical thinking. In addition to broader economic concepts, the understanding of economic issues pertaining to the Middle East and North Africa region is given special attention. The department is committed to a liberal arts philosophy and the development of leadership skills in the field of economics. The Program develops its students' professional competencies and responsible citizenship skills, and prepares them for a variety of careers in economic research, financial economics, and banking.

Degree Requirements

The requirements for a BA degree in Economics are 90 credits for students entering the department at the sophomore level. Students accepted in economics must attain an average of 2.3 or above in major courses during the first three terms in order to remain in the program. The distribution of these courses is as follows:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Major Requirements

- Major Courses: 36 credits of Economics courses including 21 credits as required courses (ECON 211, ECON 212, ECON 213 (or STAT 230), ECON 214, ECON 215, ECON 217, ECON 227), and 15 credits as elective economics courses
- Required courses from outside the department: 12 credits including MATH 201, MATH 202, MATH 218 (or MATH 219), and ACCT 210
- Electives from outside the department: 6 credits of free electives. Students majoring in Economics are restricted from taking MATH 203 and MATH 204 as a free elective.

Transfers from other programs to a major in economics require an overall average of 3.0 or more; a minimum grade of B in each of ECON 211 and ECON 212; a minimum grade of C+ in ENGL 203; and a minimum cumulative average of 2.3 in MATH 201 and MATH 202.

Economics majors whose economics average falls below 2.3 in their first two terms in the major will be placed on departmental probation. Majors who have an average below 2.3 in their economics courses at the end of their third regular term in the major will be dropped from the major.

Minor Requirements

The minor program in economics requires 15 credits: ECON 211, ECON 212, one of ECON 214 or ECON 239 or ECON 243, at least one of ECON 217 or ECON 227, and one elective other than ECON 213 chosen from the available offerings, provided their prerequisite (or equivalent) has been satisfied.

Course Descriptions

ECON 101 Introduction to Microeconomics 3.0; 3 cr.
An introductory survey of the principles of microeconomics, designed primarily for freshman students. Annually.

ECON 102 Introduction to Macroeconomics 3.0; 3 cr.
An introductory survey of the principles of microeconomics, designed primarily for freshman students. Annually.

ECON 203 Survey of Economics 3.0; 3 cr.
Elementary principles of microeconomics and macroeconomics and applications. Students majoring in economics cannot receive credit for ECON 203. Students who take ECON 203 may not receive credit for either ECON 211 or ECON 212. Every term.

ECON 211 Elementary Microeconomic Theory 3.0; 3 cr.
General principles of microeconomics; includes elements of supply and demand, consumer behavior, costs, market structures, and income distribution. Students cannot receive credit for both ECON 211 and AGSC 212; however, the courses will not be treated as equivalent. Students cannot receive credit for ECON 211 and AGSC 212. Every term.

ECON 212 Elementary Macroeconomic Theory 3.0; 3 cr.
General principles of macroeconomics; aggregate supply and demand framework is used to analyze overall movements in prices and national output, inflation and unemployment, and monetary and fiscal policies. Students cannot receive credit for both ECON 203 and ECON 212. Every term.

ECON 213 Economic Statistics I 3.0; 3 cr.

Display of data, properties of probability, methods of enumeration, conditional probability and independent events; univariate and bivariate distributions corresponding to both discrete and continuous variables; expectation, variance, covariance and correlation, moment generating functions, independent random samples and the central limit theorem; basics of confidence intervals and hypothesis testing. Pre- or Co-requisite: MATH 201. Equivalent course: STAT 230. Students can get credit for only one of BUSS 200, ECON 213, EDUC 227, STAT 201, STAT 210, or STAT 230. Every term.

ECON 214 Economic Statistics and Econometrics 3.1; 3 cr.

Classical linear regression model and the multiple regression model in matrix form; estimation methods (OLS, MLE, MME); properties of estimators; multicollinearity, serial correlation, heteroskedasticity; causal inference; binary and limited response dependent variables. Prerequisites: ECON 211 or ECON 212, ECON 213 or STAT 230, and MATH 201. Corequisite: MATH 218 or MATH 219. Every term.

ECON 215 Applied Econometrics 2.2; 3 cr.

A comprehensive treatment of advanced econometric techniques applied in cross-sectional, time series, and panel data models. Topics include but are not limited to instrumental variable approach; regression discontinuity design; fixed effect models; difference-in-differences; validation tests; time trends and seasonality; stationarity and unit root problem; VAR; and cointegration. Prerequisite: ECON 214. Every term.

ECON 217 Intermediate Microeconomics 3.0; 3 cr.

Theory of allocation of resources; consumers' choice and classical demand theory, exchange and welfare; theory of production and cost; price and output determination under alternative market structures; game theory and applications to oligopoly. Prerequisites: ECON 211 and MATH 201. Every term.

ECON 218 Behavioral Economics 3.0; 3 cr.

This course is a continuation of Intermediate Microeconomics and offers an introduction to behavioral and experimental economics. It uses neo-classical economics as a benchmark from which psychologically informed models are derived. The course covers the foundations of individual behavior in economics under certainty and uncertainty, the paradoxes of choice, and alternative choice models. It also examines the elements of experimental economics including auctions, bargaining, and simulated markets and the elements of behavioral game theory such as public goods games, dictator games, and ultimatum games.

ECON 219 Economics of Financial Markets 3.0; 3 cr.

A survey of capital markets and asset pricing models; determination of the links between financial markets monetary policy, and economic growth. Prerequisite: ECON 227. Annually.

ECON 221 History of Economic Thought 3.0; 3 cr.

A survey of the history of economic thought, both theory and policy, with an emphasis on contemporary economic thought. Prerequisite: ECON 217 or ECON 227, or consent of instructor. Annually.

ECON 222 Labor Economics 3.0; 3 cr.

A survey of the demand for and supply of labor, investment in human capital, market structure and efficiency of labor markets, collective bargaining, income distribution, and unemployment. Prerequisite: ECON 217. Annually.

ECON 223 Economics of the Middle East 3.0; 3 cr.

A study of the resource endowment of the Arab Middle Eastern economies; their development experience, and the general outlook for growth and development. Prerequisites: ECON 217 or ECON 227, ECON 211 and ECON 212. Occasionally.

ECON 226 Public Economics 3.0; 3 cr.

Introduction on the nature and the role of governments in the economy. This course covers market failure and government intervention, government failure and public choice, economic analysis of public policy, inequality and tax policy. Prerequisite: ECON 217. Annually.

ECON 227 Intermediate Macroeconomics 3.0; 3 cr.

A study of the aggregate approach to economics, including the determination of output, employment, interest rates, and the price level. Inflation and stabilization policies, budget deficits and the national debt, business cycles, theories of consumption, and investment behavior. Prerequisites: ECON 211, ECON 212, and MATH 201. Corequisite: MATH 202. Every term.

ECON 228 Monetary Economics 3.0; 3 cr.

Central banking and instruments of monetary management, alternative theories of the demand for money, the balance of payments and the processes of its adjustment. Prerequisite: ECON 227. Annually.

ECON 230 Economic History 3.0; 3 cr.

Economic development of Europe and other areas up to 1914, with special emphasis on a number of distinct problems in different countries and historical periods. Prerequisites: ECON 217 or ECON 227, ECON 211 and ECON 212. Occasionally.

ECON 232 The Economics of Institutions 3.0; 3 cr.

This course will examine the role played by institutions and political economy considerations in determining overall economic performance. The course aims to describe the role and evolution of institutions in economic growth, to understand basic models of politics, and to provide an introduction to the dynamic effects of fiscal and monetary policy. By the end of the course, students should be able to understand the role of institutional failure, models of governance and mis-governance, optimal fiscal policy, and the concepts of reputation, credibility, and time inconsistency. Prerequisites: ECON 227.

ECON 235 International Trade 3.0; 3 cr.

Classical trade model, the Heckscher-Ohlin theorem and subsequent theoretical developments, tariffs, domestic distortions, customs union, trade, and economic growth. Prerequisite: ECON 217. Annually.

ECON 236 International Finance 3.0; 3 cr.

A study of macroeconomic equilibrium in an open economy. Topics covered include the interpretation of the national accounts, exchange rate determination, monetary policy in an open economy under fixed and floating exchange rates, balance of payments crises and contagion, and a historical perspective of the international monetary systems. Prerequisites: ECON 217 and ECON 227. Annually.

ECON 237 Economic Development I 3.0; 3 cr.

An introduction to development economics that covers the theory and empirics of development, quality of life, poverty, inequality, and knowledge-based policy making in the context of the challenges faced by developing countries including market-oriented reforms, impact of globalization, urbanization, agricultural development, and gender equality. Prerequisite: ECON 217 or ECON 227. Annually.

ECON 239 Introduction to Mathematical Economics 3.0; 3 cr.

Linear algebra, single variable optimization, multi-variable optimization, and constrained optimization- basic theoretical concepts and practical applications- with an emphasis on the use of general functional forms and on comparative statics and with several examples drawn from the economics of uncertainty. Prerequisite: ECON 217. Annually.

ECON 240 Economic Development II 3.0; 3 cr.

Models of economic development and growth; macroeconomic planning; policy formulation and implementation in developing countries. Prerequisite: ECON 227. Annually.

ECON 241 Industrial Organization 3.0; 3 cr.

Application of microeconomics; analysis of factors affecting market structure, conduct and firm behavior in imperfectly competitive industries; survey of theories relating to intensity of competition and maintenance of market dominance; rationale for antitrust laws. Prerequisite: ECON 217. Annually.

ECON 242 Energy Economics 3.0; 3 cr.

This course introduces key aspects of major energy markets including oil, natural gas, coal, electricity, nuclear power, and renewable energy. It focuses on building economic models to analyze the various energy markets and uses these models to explore taxes and social welfare, government regulation and deregulation, public policy, and externalities. Prerequisite: ECON 217. Occasionally.

ECON 243 Introduction to Game Theory and Economic Behavior 3.0; 3 cr.

Basic concepts and methods of game theory with applications to economic problems, Nash equilibrium, mixed strategies, zero sum games, repeated games. Prerequisite: ECON 217. Annually.

ECON 290 Special Topics in Economics (A,B,C...) 3.0; 3 cr.

May be repeated for credit on different topics. Prerequisite: Junior or senior standing. Annually.

ECON 295 Senior Seminars in Economics 3.0; 3 cr.

Senior Seminars in Economics.

36 Credits in Economics (21 + 15)

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Economics and Societies and Individuals (21+15+3+3)	Understanding the World (6), Quantitative Reasoning (9)	Community-Engaged Learning (3)
Lecture Courses (9+12+42 +6+12)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required economics courses (18): ECON 211(3), 212(3), 213(3), 214(3) [P213], 215, [P214], 217(3) [P211, 212], 227(3) [P211, 212] Five elective economics courses from the following and/or seminar courses (15): ECON [P214] 218(3) [P217] 219(3) [P214, P227], 221(3) [P217, P227], 222(3) [P217] 223(3) [P221, P212], 226(3) [P217], 228(3) [P227],230(3) [P211, P212], 232(3) [P227] 235(3) [P217], 236(3) [P217, P227], 237(3) [P217], 239(3) [P217], 240(3) [P227], 241(3) [P217], 242(3) [P217], 243(3) [P217], 290(3) and 295(3). Required business course (3): ACCT 210(3)	Understanding the World electives (6) Required mathematics courses: MATH 201(3), 202(3) [P201], 218(3) or 219(3) and CMPS 209 or CMPS 201 (3) or CMPS 203	Required (3)

			One Societies and Individuals course must be an approved General Education course from outside the major		
Laboratory (0)					
Research project (0)					

Department of Education

Chairperson:	Karami Akkary, Rima R.
Professors:	BouJaoude, Saouma B.; Ghaith, Ghazi M.; Khamis, Vivian E.
Associate Professors:	Al-Hroub, Anies M.; Amin, Tamer G.; Baytiyeh, Hoda M.; El Hassan, Karma; El-Mouhayar, Rabih R.; Karami-Akkary, Rima R.; Khishfe, Rola F.
Assistant Professor	Khalil, Lina
Lecturers:	Bou Zeineddine, Amal R.; El-Khatib, Lara; Hout, Hanin; Karameh, Jinan.; Mouawad, Rim; Osman, Enja; Shukri Balaa, Rola
Instructors	Jouni, Nidal

The Department of Education offers programs at both the undergraduate and graduate levels. The undergraduate level program leads to a Bachelor of Arts degree in Education/Elementary. The post-BA/BS Diploma Program leads to a Teaching Diploma, Diploma in Special Education, or Diploma in Educational Management and Leadership. Students can also complete the Diploma program concurrently with a relevant BA/BS degree. The graduate program leads to a Master of Arts degree in Education.

BA in Education/Elementary

Mission Statement

The Bachelor of Arts in Education/Elementary Program aims at developing students' knowledge base for teaching and competence in professional practice as well as promoting a commitment to personal professional development and active participation in the professional community. Through fulfillment of coursework, field-based experiences, and professional community service activities, students are prepared to enter the field of teaching and/or graduate studies in education as reflective practitioners, literate in information and communication technology, and critical thinkers committed to the human and moral values of lifelong learning, integrity, innovation, civic responsibility, and leadership.

BA Program

The BA program is based on various conceptualizations of teacher preparation programs and contemporary international best practices and trends, and is aligned with international standards. The program prepares all students for both homeroom and subject matter teaching, the latter concentration (Language Arts/Social Studies, Mathematics/Science and Art/Music) being the student's choice. The program is structured developmentally where course offerings are scheduled by year, distributed over the sophomore, junior and senior years. The developmental distribution is based on core common courses and methodology-practicum courses.

The bachelor's degree in Elementary Education aims at developing:

- professional understanding of children and their learning needs at the elementary level,
- theoretical understanding and practical skills in homeroom and subject matter teaching,
- broad-based competencies in methods and techniques of teachin to meet learning needs,
- adequate knowledge of subject matter taught in elementary schools.

Degree Requirements

The program for the BA in Education/Elementary is based on the completion of at least 90 credits as follows:

- University General Education Requirements (39 cr.), with 9 cr. of the 39 cr. must be Education courses
  - Cultures and Histories (9 cr.)
  - Human Values (3 cr.): At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA.
  - ENGL 203 (3cr.), ENGL 204 (3cr.); and ARAB Communication Skills Course (3 cr.)
  - Societies and Individuals (6 cr.): One Course (3 cr.) must be an approved General Education course from outside the major and one course (3 cr.) from the major.
  - Understanding the World (6 cr.): one course (3 cr.) must be an approved General Education course from outside the major and one course (3 cr.) from the major.
  - Quantitative Reasoning (3 cr.) Students are required to take at least a total of 9 cr. from Understanding the World and Quantitative Reasoning with at least 3 cr. from each
  - Community Engaged Learning (3 cr.)
  - At least one of the GE or major courses should cover the theme of Social Inequalities.
- Education Requirements (45 cr.)
  - Core Education Courses (24 cr.): EDUC 211 or EDUC 216, EDUC 215, EDUC 217, EDUC 219, EDUC 221, EDUC 223 or EDUC 225, EDUC 231, EDUC 232
  - Methods Courses (9 cr.): EDUC 233, One of the following pairs: EDUC 228 and EDUC 229 (art and music) [currently frozen], EDUC 245 and EDUC 251 (language arts, English or Arabic, and social studies); or EDUC 252 and EDUC 257 (math and science)
  - Seminar (3 cr.): EDUC 291
  - Practicum courses (9 cr.): EDUC 268A, EDUC 268B and EDUC 268C or EDUC 268D
- Subject Matter Courses (12 cr.)
  - Specialization Courses (9 cr.): These are from 200 and above. They include EDUC 218 and one course in each of mathematics and science. Special mathematics and science courses designed for teaching in the elementary school are offered by the department (EDUC 271, EDUC 272, EDUC 273,

and EDUC 274) and must be taken to fulfill this requirement.
  - Electives within Subject Matter (3 cr.): 3 credits in art or music
- General Electives (3 cr.)

Minors in Education

The department offers three minors with the aim of providing students with a comprehensive understanding of the psychological, philosophical, administrative, and professional foundations of education.

1. Minor in Educational Psychology (15 credits)

The Educational Psychology minor is designed to allow students from many disciplines to explore child, adolescent, and adult development, concerns, and opportunities. Coursework includes consideration of the dynamics of learning and motivation in school settings, introduces major topics, issues, and trends in special education. In addition, the coursework will provide students with the knowledge and skills needed to the application of theories and principles of development, learning, memory, motivation, individual differences, instruction, school guidance and counseling, classroom management, and measurement and evaluation. To complete a minor in Educational Psychology, students must take the following:

- EDUC 215 Learning and Human Development
- EDUC 221 Introduction to Special Education.
- EDUC 223 Introduction to Guidance and Counseling
- EDUC 217 Measurement and Evaluation for Classroom Teachers
- EDUC 280 Behavior Modification and Classroom Management or EDUC 232 Classroom Management in the Elementary School

2. Minor in Educational Administration and Policy

The minor in educational administration and policy is suitable for students interested in exploring education from an administrative and policy perspective to contribute to the improvement of educational systems. It is especially relevant for non-education students pursuing research-focused master's degrees in educational administration and policy studies. The Minor in Educational Administration and Policy offers students a foundational understanding of educational systems, laws, policies, effective leadership organizational change and instructional strategies. It also allows them to explore the role of schools in society and the impact of culture, diversity, and social factors on education. To complete a minor in Educational Administration and Policy, students must take the following:

- EDUC 211 The School and the Social Order
- EDUC 212 Educational Laws and Policies
- EDUC 213 Introduction to Educational Administration
- EDUC 215 Learning and Human Development or EDUC 225 Child and Adolescent Development
- EDUC 230 Instructional Strategies

3. Minor in STEAM Education

STEAM stands for Science, Technology, Engineering, Arts and Mathematics. This minor in STEAM Education provides students from a variety of different disciplines in the natural sciences, mathematical and computer sciences, social sciences, or humanities with an introduction to the field of education, by leveraging their interests in their respective fields. The

minor also highlights how instruction can cut across and integrate across traditional school disciplines. To complete a minor in STEAM Education, students must take the following:

- EDUC 230 Instructional Procedures
- EDUC 220 Instructional Media and Techniques
- EDUC 273 Science for Elementary Teachers I
- EDUC 218 Children's Literature or EDUC 231 Reading Instruction in the Elementary School
- EDUC 271 Problem Solving in Arithmetic and Algebra or EDUC 272 Problem Solving in Probability, Statistics and Geometry

BA in Education

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Economics and Societies and Individuals**	**Subject Matter**	**Understanding the World (6), Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+57 +6+3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values Elective (3): Art or Music	Required Education courses (30 cr.): EDUC 211(3) or EDUC 216(3); 215 (3), 217 (3); 219(3); 221(3); 223(3) or 225(3); 230(3); 231(3); 232(3)	Required courses (9 cr.)*	Required Understanding the World courses (6 cr.) from the approved General Education courses; one from outside the Department	EDUC 268A, EDUC 268B, EDUC 268C or EDUC 268D

			One Societies and Individuals course must be an approved General Education course from outside the major General Elective(3 cr.)		Required Quantitative Reasoning courses (3 cr.) from the approved General Education courses	
Seminar (3)			EDUC 291(3)			
Laboratory/ Research Project (18)			One pair of: EDUC 245/251 (6); 252 /257 (6); 228/229 (6) EDUC 233 (3) EDUC 268A (3) EDUC 268B (3) EDUC 268C or EDUC 268D (3)			

*Subject Matter Courses (9 cr.)

- EDUC 218 (3)
- 6 credits in mathematics and science: one in mathematics (EDUC 271) and one in the sciences (EDUC 273)

Diploma Programs

Teaching Diploma Programs

Students enrolled for a Bachelor and Diploma/Teaching Diploma must satisfy the full requirements of both degrees and complete at least a total of 111 credits. The Teaching Diploma Program prepares students to become elementary and secondary schoolteachers. This requires specialization in a subject matter area that can be completed before or during professional preparation in the Department of Education. The program is comprised of a total of 21 credit hours in education. This preparation culminates in a teaching diploma that qualifies a student to teach at either the elementary or the secondary level.

Teaching Diploma in Elementary Education

Education Course Requirements

- EDUC 215
- EDUC 231
- EDUC 232
- Elective
- For students concentrating on Homeroom Teaching: EDUC 233, 268A, 268B
- For students concentrating on teaching Language Arts, English or Arabic, and Social Studies: EDUC 245, 251, 268C
- For students concentrating on teaching Mathematics and Science: EDUC 252, 257, 268D

Subject Matter Requirements

These include 24 credit hours in courses numbered 200 or above distributed over two subject matter areas from the following combinations: a) Arabic and social studies, b) art and music, c) English and social studies, and d) mathematics and science. The mathematics and science courses offered by the Department of Education (EDUC 271, EDUC 272, EDUC 273, EDUC 274) may be considered to satisfy part of the subject matter requirement in mathematics and science. EDUC 218 may be used to satisfy part of the subject matter requirements for language arts concentrations (Arabic–social studies and English–social studies).

Teaching Diploma in Secondary Education

Education Course Requirements

- EDUC 211 or 216
- EDUC 215
- EDUC 230
- Two methods courses from the sequence EDUC 237-256 plus one relevant course from the sequence EDUC 261-269
- An elective in education

Subject Matter Requirements

Students must complete the requirements for a bachelor's degree in a subject matter area taught in elementary and/or secondary schools before they are granted this diploma. These areas include Arabic, English, health, informatics, math, science, and social studies. In case of a shift in major, students are required to complete a minimum of 24 credit-hours in the new subject matter area in courses numbered 200 or above.

NOTE: Only courses that are in areas taught in intermediate and secondary schools qualify for subject matter courses for the purposes of the Teaching Diploma.

Methods Courses

Methods courses at the secondary level are subject matter oriented; i.e., they deal with teaching a subject matter that has been chosen by the student as a major field of specialization. The distribution is as follows:

EDUC 237, EDUC 238	Theories and Methods of Health Education
EDUC 241, EDUC 242	Teaching of Arabic
EDUC 243, EDUC 244	Teaching of English as a Foreign Language
EDUC 246, EDUC 248	Informatics Education
EDUC 249, EDUC 250	Teaching of Social Studies
EDUC 253, EDUC 254	Teaching of Math
EDUC 255, EDUC 256	Teaching of Sciences

In the case of students who are actual teachers in a recognized school, special arrangements may be made with the instructors of the methods courses to adjust field experience components in courses such as methods courses and practicum.

Admission to the Teaching Diploma Programs

New students should obtain an application from the Office of Admissions and apply as new students. Applications are reviewed by the department and, when accepted, students are classified as special students working for the teaching diploma. Completion of the bachelor's degree is a requirement for admission of new students to the teaching diploma programs. AUB students working for their bachelor's degree at AUB should complete a form no later than the first semester in their Junior year informing the Department of Education of their intent to complete the requirements for a diploma. Once notified the Department of Education will assign the students an academic advisor to help them generate a study plan to fulfill their diploma requirements.

Qualifications for the Teaching Diploma and Official Recognition by the Lebanese Government

Teaching Diploma in Elementary Education

Students qualify for the teaching diploma upon completion of the program of study as detailed above, attaining a cumulative average of 2.3 or above in its courses, and receiving the recommendation of the Department of Education. To receive an official recognition of the Teaching Diploma as equivalent to the License d'Enseignement in elementary education, the candidate should meet the following:

- holds the Baccalaureate Part II or equivalent,
- has completed the diploma requirements with 21 term credits in the field of education over and above the total number required for a bachelor's degree.
- and has completed a minimum of 45 term credits in the field of education.

Teaching Diploma in Secondary Education

Students qualify for the teaching diploma upon completion of the program of study as detailed above, attaining a cumulative average of 2.3 or above in its courses, and receiving the recommendation of the Department of Education. To receive an official recognition of the Teaching Diploma as equivalent to the License d'Enseignement in education the candidate should meet the following:

- holds the Baccalaureate Part II or equivalent,
- has a bachelor's degree in a subject taught at the secondary level (Arabic, English, informatics, mathematics, science, and social studies),
- and has completed the diploma requirements (21 term credits in the field of education) over and above the total number required for a bachelor's degree.

Diploma in Special Education

The special education diploma program is a 21-credit program designed to help students develop the skills, knowledge, and values needed to specialize in the teaching of children and youth with special educational needs with an emphasis on mild and high incidence exceptionalities: Learning Disabilities (LD) or Giftedness and Talent (G&T). Collaboration and consultation skills will be the cornerstone of the program.

Track One: Learning Disabilities

The Learning Disabilities (LD) track is designed to serve the needs of four groups: (1) Teachers who plan to participate in teaching students with learning disabilities in their schools in Lebanon or other Arab countries, (2) teachers who want to learn how to accommodate the weaknesses of LD students in their regular classrooms or other educational settings, (3) trainee teachers employed in non-school settings who want to know how to work with children and youth with learning disabilities, and (4) parents interested in the education of students with learning disabilities. The 21-credit program is designed to develop awareness, positive attitudes, and understanding about teaching students with learning disabilities, as well as competence in curriculum development, delivery, and evaluation.

Track Two: Gifted and Talented Education

The Gifted and Talented Education track is designed to serve the needs of four groups: (1) Teachers who plan to participate in the education of identified gifted and talented students in their schools in Lebanon or elsewhere in the Arab world, (2) teachers who want to learn how to accommodate the unique needs of gifted and talented students in their regular classrooms, (3) trainee teachers employed in non-school settings who want to know how to work with gifted and talented children and youth, and (4) parents interested in gifted and talented education. The 21-credit program is designed to develop awareness, positive attitudes, and understanding about teaching gifted and talented students, as well as competence in curriculum development, delivery, and evaluation. For admission to Special Education Diploma, students can enroll concurrently in a bachelor program or after completing the bachelor's degree. It is preferable if the student's undergraduate major is in education or in psychology, but students with other undergraduate majors may be considered. For successful completion of the program, students should achieve at least a cumulative average of 2.3. The program is composed of the following courses:

Table: Two Tracks of Emphasis in Special Education: Learning Disabilities (LD) or Gifted and Talented (G&T)

	Track 1: LD Emphasis Area		**Track 2: G&T Emphasis Area**	
Requirements	**Course**	**Course Field & term Hours**	**Course**	**Course Field & term Hours**
Core Courses	EDUC 215 EDUC 221 EDUC 222	3.0; 3 cr. 3.0; 3 cr. 3.0; 3 cr.	EDUC 215 EDUC 221 EDUC 222	3.0; 3 cr. 3.0; 3 cr. 3.0; 3 cr.
Method Courses (Area of Specialty)	EDUC 280 EDUC 281	2.2; 3 cr. 5.2; 6 cr.	EDUC 280 EDUC 282	2.2; 3 cr. 5.2; 6 cr.
	EDUC 283A	0.6; 3 cr.	EDUC 283B	0.6; 3 cr.
	Total	**21 cr.**	**Total**	**21 cr.**

Students can choose to pursue both areas of concentration, thereby completing a total of 30 credits.

Requirements (21 cr.)

- Basic Courses (9 cr.): EDUC 215, EDUC 221, and EDUC 280
- Methods Courses (12 cr.): EDUC 222, EDUC 281 or EDUC 282, and EDUC 283A or EDUC 283B

Diploma in Educational Management and Leadership

The purpose of this diploma is to provide knowledge and practical training in the areas of educational management and leadership. Holders of this diploma are prepared to become managers of schools and educational training institutions and programs.

Requirements	
EDUC 211 or EDUC 216	EDUC 224
EDUC 212	EDUC 226
EDUC 213	EDUC 230
EDUC 214	

For admission to diploma in Educational Management and Leadership, students can enroll concurrently in a bachelor program or after completing the bachelor's degree. A minimum of one year of relevant professional experience in an educational setting is preferred. Students qualify for the Diploma in Educational Management and Leadership upon recommendation from the department and completion of the specified program of study with a cumulative average of 2.3 or above.

Course Descriptions

EDUC 211 The School and the Social Order 3.0; 3 cr.
A course on the importance of teaching as a profession in the larger context of social and cultural change; the manner in which teaching can influence the nature and direction of change; contrasts between advanced and developing countries. Annually.

EDUC 212 Educational Laws and Policies 3.0; 3 cr.
A course on the educational laws that govern public and private schools, including policies related to various educational levels, certification and equivalency issues, government approval, syllabi, book authorship, examinations, and educational plans. Annually.

EDUC 213 Introduction to Educational Administration 3.0; 3 cr.
A survey of various aspects of educational administration, with emphasis on leadership theories and organizational structure, functions, and responsibilities of educational administrators, and public control of education. Annually.

EDUC 215 Learning and Human Development 3.0; 3 cr.
An introduction to instructional theory, the nature of intelligence, child development, learning and behavior management, with an emphasis on the basic implications for classroom teaching. Annually.

EDUC 216 Philosophy of Education 3.0; 3 cr.
A review of the development of educational thought as expressed in the writings and ideas of major philosophers. This review endeavors to deal with thought in the context of the historical times. Arab thought is included. Annually.

EDUC 217 Measurement and Evaluation for Classroom Teachers 3.0; 3 cr.
An introduction to and practice in the construction, use, and interpretation of classroom tests. Prerequisite: EDUC 215. Annually.

EDUC 218 Children's Literature 3.0; 3 cr.
A study of the diverse elements of ancient and modern children's literature. Topics include poetry, fairy tales, epics, myths and legends, fantasy, fiction, and illustrated stories. The skill of using literature effectively with children is particularly stressed. Annually.

EDUC 219 The Use of Computer Applications in Education 2.2; 3 cr.

This course examines how to use technology to support teaching and learning. This course is designed to prepare students to integrate a variety of computer-based technologies into the K-12 curriculum such as Web 2.0 (blogs, wikis, google apps), spreadsheets, and slideshows implemented through lesson activities. Students can get credit for only one of CMPS 206, CMPS 209, or EDUC 219. Annually.

EDUC 220 Instructional Media and Techniques 2.2; 3 cr.

This course explores the use of Interactive White Boards (IWBs) and other interactive instructional media techniques in education. This course will equip students with knowledge and skills to create effective and interactive lessons and activities that enhance teaching and learning. Media techniques and principles are implemented through activities and projects appropriate to use for all majors. Annually.

EDUC 221 Introduction to Special Education 3.0; 3 cr.

An introduction to special education and the various categories of exceptionality, including nature, causes, educational characteristics of children with intellectual disabilities, learning disabilities, emotional and behavioral disturbance, communication disorders, visual impairment, hearing impairment, physical disabilities, autism spectrum disorder, and giftedness. Annually.

EDUC 223 Introduction to Guidance and Counseling 3.0; 3 cr.

An introduction to the field of guidance and counseling. The role of the counselor in school and community settings is emphasized. Annually.

EDUC 225 Child and Adolescent Development 3.0; 3 cr.

A chronological study of typical and atypical cognitive, linguistic, emotional, and physical development from the prenatal period through adolescence. The relative influences and interactions of heredity and environment, and the impact of development on learning and school success are examined. Students who receive credit for EDUC 225 cannot receive credit for PSYC 210. Annually.

EDUC 226 Personnel Management and Development 3.0; 3 cr.

A course on personnel policies and procedures; recruitment, salary scales, benefits, promotions and pension plans; job description and evaluation; organizing the personnel department; training and development of human resource programs in educational institutions. Annually.

EDUC 227 Statistics in Education 3.0; 3 cr.

A course on descriptive statistics, correlation, prediction, and statistical inference as applied to educational situations. Students who receive credit for this course cannot receive credit for any other introductory statistics course, such as STAT 201, STAT 210, STAT 230, MATH 233, or ECON 213. Annually.

EDUC 230 Instructional Procedures 3.0; 3 cr.

An introduction to instructional planning, teaching strategies, classroom management, and evaluation procedures. Annually.

EDUC 231 Reading Instruction in the Elementary School 3.0; 3 cr.

A course on trends, theories, and practices in the teaching and evaluation of reading in the elementary school; alternative teaching/learning strategies for developing readiness, comprehension, and evaluation of progress in reading. Annually.

EDUC 232 Classroom Management in the Elementary School 3.0; 3 cr.

This course explores classroom management concepts, terminology, approaches, and strategies. Students analyze issues related to classroom organization and governance through the use of case studies. The course presents theories of classroom management. Topics are based on behavioral modification and classroom management systems. Annually.

EDUC 247 Computer-Based Instructional Packages 2.2; 3 cr.

A course on the design and production of computer-based educational packages using multimedia and hypermedia techniques. Students are expected to use digital technology to produce applications that are deliverable through the internet, CD-ROMs, or other digital media. Annually.

EDUC 271 Problem Solving in Arithmetic and Algebra 3.0; 3 cr.

A course that focuses on using problem solving as an integral constituent of mathematics teaching in elementary and intermediate school mathematics. The purpose of the course is to support students in developing a deep understanding of mathematical concepts and procedures in arithmetic and algebra. Annually.

EDUC 272 Problem Solving in Probability, Statistics and Geometry 3.0; 3 cr.

A course that focuses on using problem solving as an integral constituent of mathematics teaching in elementary and intermediate school mathematics. The purpose of the course is to support students in developing a deep understanding of mathematical concepts and procedures in probability, statistics and geometry. Annually.

EDUC 273 Science for Elementary Teachers I 3.0; 3 cr.

An in-depth study of science concepts and skills in pre-secondary science curricula. Annually.

EDUC 274 Science for Elementary Teachers II 3.0; 3 cr.

An in-depth study of science concepts and skills in pre-secondary science curricula. Annually.

EDUC 275 Learning in and through Gaming 3.0; 3 cr.

This course examines the connections between learning and gaming. It examines what is, or can be, learned through playing computer games including physical and social concepts and historical narratives. It also examines the learning principles underlying game design. Through the course, students learn about the positive affordances of computer games but also learn to adopt a critical perspective on game content and design. Occasionally.

EDUC 290 Special Topics 1.0-3.0; 1-3 cr.

A course that deals with special issues and concerns not included in regular courses. The following examples are taken from topics given during the last few years: Music for elementary teachers, visual arts for elementary teachers, and trends in early childhood education. May be repeated for credit. Annually.

EDUC 291 Senior Seminar (Issues in Elementary Education) 3.0; 3 cr.

A seminar intended for majors in elementary education that focuses on one or more current issues in elementary education. Annually.

EDUC 292 Senior Seminar (Education in Arab Countries) 3.0; 3 cr.

A seminar intended for majors in education that focuses on educational issues in one or groups of Arab countries. Annually.

Methods Courses

EDUC 214 Management in Practice 1.4; 3 cr.

A course on managing, planning and organizing, and personnel management; supervised training at AUB and practical experiences in schools and other institutions, such as hospitals, technical institutions, colleges, and universities under the supervision of the course instructor and professional practitioners. Prerequisite: EDUC 213. Annually.

EDUC 222 Introduction to Assessment in Special Education 3.0; 3 cr.

An introduction to theory and uses of assessment techniques and instruments in special education. Emphasis is placed on educational implications for learners with special needs. Annually.

EDUC 224 Instructional Supervision 1.4; 3 cr.

Workshops in supervision methods at AUB and practical skills in schools and other educational institutions, supervised by the course instructor and professionals in the field; approaches to instructional supervision for the generalist and specialist supervisor; communicating, motivating, evaluating, and monitoring of staff and professionals; promoting individual and group development, and overseeing curriculum development. Annually.

EDUC 228 The Teaching of Art in Elementary School 2.2; 3 cr.

A course on the theory and practice in teaching visual art in the elementary school with observation and practice teaching in classrooms. Corequisite: EDUC 230. Annually.

EDUC 229 The Teaching of Music in Elementary School 2.2; 3 cr.

A course on the development of students' basic skills in music (general vocal and instruments), combined with a study of source materials in the teaching of music. This course also includes observation and practice teaching in classrooms. Corequisite: EDUC 230. Annually.

EDUC 233 Methods of Homeroom Teaching 2.2; 3 cr.

This course prepares homeroom teachers for taking overall class responsibility as well as teaching the main areas of the primary school curriculum. Topics include language arts, science, mathematics, and social studies teaching methods and activities. There is also focus on classroom organization, planning of teaching and learning, resource selection and management, and assessment and evaluation. Corequisite: EDUC 232. Annually.

EDUC 237 Theories and Methods of Health Education I 2.2; 3 cr.

An introduction to the major theories of health behavior and health promotion. Emphasis is placed on the application of health behavior theories to health promotion and education practice. Students cannot receive credit for both EDUC 237 and HCPH 237. Corequisite: EDUC 230. Annually.

EDUC 238 Theories and Methods of Health Education II 1.4; 3 cr.

An introduction to the assumptions we make about communication and key elements of the communication process. This course deals with factors that inhibit communication as well as some of the functions of communication as they relate to increasing positive health behavior and group effectiveness. This course aims at enhancing writing and oral presentation skills as well as effective interaction skills with peers and supervisors at work. Cross-listed as HCPH 203, Communication for Health Professionals. Students cannot receive credit for both EDUC 238 and HCPH 203. Prerequisite: EDUC 237. Annually.

EDUC 240 The Teaching of Arabic in Elementary Schools 2.2; 3 cr.

A course on the theory and practice in methods of teaching Arabic in elementary schools with observation and practice teaching in classrooms. Corequisite: EDUC 230. Annually.

EDUC 241 The Teaching of Arabic I 2.2; 3 cr.

A course on theory and method of teaching Arabic language and literature at the secondary level, with emphasis on new approaches. Corequisite: EDUC 230. Annually.

EDUC 242 The Teaching of Arabic II 1.3; 3 cr.

A practicum of classroom observation and supervised practice teaching of Arabic language and literacy at the secondary level. Prerequisite: EDUC 241. Annually.

EDUC 243 The Teaching of English as a Foreign Language (TEFL) I 2.2; 3 cr.

A course on theoretical background and approaches to the teaching of English as a foreign/second language; principles and techniques of teaching the basic language skills; includes classroom observation and micro teaching practices. Corequisite: EDUC 230. Annually.

EDUC 244 The Teaching of English as a Foreign Language II 1.4; 3 cr.

A course on the preparation and evaluation of teaching materials through individual and group projects; guided and supervised practice teaching in schools. Prerequisite: EDUC 243. Annually.

EDUC 245 The Teaching of Language Arts (English or Arabic) in Elementary School 2.2; 3 cr.

A course on theoretical background and approaches to the teaching of language arts (English or Arabic) in the elementary school; principles and methods of teaching the language skills; includes classroom observation and micro teaching practices. Corequisite: EDUC 232.

EDUC 246 Computer Programming at the School Level 2.2; 3 cr.

A course that explores computer programming techniques suitable for teaching Informatics and other subject matters at the school level. This course includes cognitive theoretical background and practical work. Special emphasis is placed on the use of programming as a means to promote thinking skills. Corequisite: EDUC 219 or EDUC 220. Annually.

EDUC 248 Methods for Teaching Informatics 2.2; 3 cr.

A course on concepts, trends, and skills needed to design and teach curriculum materials for informatics education; analysis and evaluation of informatics curriculum; methods and techniques of teaching informatics at the school level; includes demonstrations and observation of actual computer lab sessions. Prerequisite: EDUC 246. Annually.

EDUC 249 The Teaching of Social Studies I 2.2; 3 cr.

A course on approaches to the teaching of history, geography, and civics; adaptation of social science concepts and generalizations to the secondary level. Corequisite: EDUC 230. Annually.

EDUC 250 The Teaching of Social Studies II 1.4; 3 cr.

A practicum of classroom observation and supervised practice teaching of social science, or history, geography, and civics in neighboring schools. Prerequisite: EDUC 249. Annually.

EDUC 251 The Teaching of Social Studies in Elementary School 2.2; 3 cr.

A course on the theory and practice in methods of teaching history, geography, and civic education in elementary school, with observation and practice teaching. Corequisite: EDUC 232. Annually.

EDUC 252 The Teaching of Mathematics in Elementary School 2.2; 3 cr.

A course on the theory and practice in methods of teaching mathematics in elementary school, with observation and practice teaching. Corequisite: EDUC 232. Annually.

EDUC 253 The Teaching of Mathematics I 2.2; 3 cr.

A course on the pedagogical and mathematical basis of various approaches in mathematics teaching in middle and secondary schools; includes demonstrations, classroom observation, and applications. Corequisite: EDUC 230. Annually.

EDUC 254 The Teaching of Mathematics II 1.4; 3 cr.

An analysis and preparation of teaching/learning materials, plans, and tests for mathematics teaching, including supervised practice teaching and individual and group meetings. Prerequisite: EDUC 253. Annually.

EDUC 255 The Teaching of Science I 2.2; 3 cr.

A course on the nature of science and its implication in teaching; critical study of various science teaching techniques; survey and practice in the utilization of instructional materials. Corequisite: EDUC 230. Annually.

EDUC 256 The Teaching of Science II 1.4; 3 cr.

A review of various science curriculum projects and programs; curriculum planning, micro-teaching, and practicum in classroom observation and teaching. Prerequisite: EDUC 255. Annually.

EDUC 257 The Teaching of Science in Elementary School 2.2; 3 cr.

A course on the theory and practice in methods of teaching science in the elementary school, with observation and practice teaching. Corequisite: EDUC 232. Annually.

EDUC 261 Practicum in TEFL in Secondary School 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 243. Annually.

EDUC 262 Practicum in Teaching Math in Secondary School 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 253. Annually.

EDUC 263 Practicum in Teaching Science in Secondary School 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 255. Annually.

EDUC 264 Practicum in Health Education 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 237. Annually.

EDUC 265 Practicum in Teaching Arabic in Secondary School 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 241. Annually.

EDUC 266 Practicum in Teaching Social Studies in Secondary School 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 249. Annually.

EDUC 268A Practicum in Elementary School (Homeroom Teaching) I 0.6; 3 cr.

Application of theories and development of homeroom materials and assessment. Guided and supervised homeroom teaching in schools. Prerequisites: EDUC 232, EDUC 233. Annually.

EDUC 268B Practicum in Elementary School (Homeroom Teaching) II 0.6; 3 cr.

Observation and practice in homeroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisites: One of EDUC 233, EDUC 268A. Annually.

EDUC 268C Practicum in Elementary School (Language Arts/Social Studies) 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisites: EDUC 245, EDUC 251. Annually.

EDUC 268D Practicum in Elementary School (Mathematics/Science) 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisites: EDUC 252, EDUC 257. Annually

EDUC 269 Practicum in Teaching Informatics 0.6; 3 cr.

Observation and practice in classroom situations under the guidance of university course instructors and cooperating schoolteachers. Prerequisite: EDUC 246. Annually.

EDUC 280 Behavior Modification and Classroom Management 3.0; 3 cr.

The application and analysis of behavior change techniques with exceptional learners in various educational settings. Theories and applications of individual and group behavior management plans are emphasized. Pre- or corequisite: EDUC 215, 221 and 222. Annually.

EDUC 281 Learning Disabilities: Concepts, Identification, and Program Development 5.2; 6 cr.

Current theories, identification models and instructional practices are analyzed and implemented into newly developed and/or existing interdisciplinary units of instruction that provide differentiated learning for students with learning disabilities. Prerequisite: Either EDUC 221 or EDUC 222. Pre- or corequisite: EDUC 280. Annually.

EDUC 282 Gifted and Talented Learners: Concepts, Identification, and Program Development 5.2; 6 cr.

Current theories, identification models and instructional practices are analyzed and implemented into newly developed and/or existing interdisciplinary units of instruction that provide differentiated learning for gifted and talented students. Prerequisite: Either EDUC 221 or EDUC 222. Pre- or corequisite: EDUC 280. Annually.

EDUC 283A Practicum in Special Education 0.6; 3 cr.

Supervised teaching experience to develop and demonstrate teaching competence for children with learning disabilities. Corequisite: EDUC 281 or EDUC 282. Second term. Annually.

EDUC 283B Practicum in Special Education 0.6; 3 cr.

Supervised teaching experience to develop and demonstrate teaching competence for gifted and talented children. Corequisite: EDUC 281 or EDUC 282. Second term. Annually.

Department of English

Chairperson:	Currell, David
Professors:	Choueiri, Lina G.; Hout, Syrine C.; Mejcher-Atassi, Sonja; Myers, Robert E.; Shaaban, Kassim A.
Associate Professors:	Currell, David; Gonsalves, Joshua D.; Harb, Sirène H.; Mehmood Ali, Tariq
Assistant Professors:	Avant, Doyle R.; Dasgupta, Sreemoyee
Lecturers:	Rantisi, Rima; Sfeir, Maya
Instructors	Baalbaki, Rula

Communication Skills Program

Director of Communication Skills:	Khoury, Malakeh
Assistant Director of Communication Skills:	Fleszar, Dorota
Instructors:	Al-Sayyed, Amany; Deeb, Rima; Fleszar, Dorota; Hodeib, Heba; Iskandarani, Rima; Jaber, Nagham; Johnson, Ryan; Khoury, Malakeh; Kodeih, Rabab; Maktabi, Sawsan; Mikati, May; Moughabghab, Emma; Riman, Soha; Shadid, Rima; Sleiman, Tamara; Zreik, Hassan

Department Course Offerings

The English Department offers courses in English language, English literature, literature in translation, visual and digital culture, and creative writing. The department also offers communication skills courses which are part of the university general education requirements.

Undergraduate Degrees

The English Department offers two undergraduate degree programs: the BA in English Literature and the BA in English Language.

Degree Requirements

A BA degree in Language or Literature requires 90 credits for students entering their major as sophomores. The distribution requirements for these credits are explained in the following sections.

Major Courses

39 credits in courses listed under Literature (BA in English Literature) or Language (BA in English Language), with no more than 6 credits in the form of creative writing courses (i.e. ENGL 239, ENGL 264, ENGL 297, or courses in the range ENGL 249-254).

English Literature BA Course Requirements

The requirements

for Literature majors are as follows:

- ENGL 205 English Literature I
- ENGL 207 English Literature II
- ENGL 209 Survey of American Literature
- ENGL 212 Shakespeare
- ENGL 221 Introduction to Literary Theory
- ENGL 229 History of the English Language
- ENGL 238 Academic Writing for English Majors
- One comparative literature course chosen from ENGL 240-243
- ENGL 292 Capstone Seminar, which must be taken in the senior year
- Four additional courses chosen from among those numbered ENGL 210 to 297, excluding 293

The recommended sequence

for Literature majors is:

- ENGL 203 at the earliest opportunity
- ENGL 205, ENGL 207, ENGL 209, and ENGL 229 in the first year of study
- ENGL 221 preferably in the second year, and only after completing ENGL 203
- ENGL 238 in the immediate next term after taking ENGL 204
- ENGL 292 must be taken in the senior year

English Language BA Course Requirements

The requirements

for Language majors are as follows:

- ENGL 227 Introduction to Language
- ENGL 228 Phonetics
- ENGL 229 History of English Language
- ENGL 230 Language in Society or ENGL 232 Language Acquisition
- ENGL 238 Academic Writing for English Majors
- ENGL 231 English Grammar or ENGL 294 Special Topics in Grammar
- Three additional courses chosen from among the department's Language offerings
- ENGL 212 Shakespeare
- Two courses chosen from ENGL 205 English Literature I, ENGL 207 English Literature II and ENGL 209 Survey of American Literature
- One additional course can be chosen from among the department course offerings, including creative writing courses

Teaching Diploma Courses

Both Literature and Language majors may also take courses leading to the teaching diploma. The requirements for the teaching diploma are specified under the Department of Education catalogue section.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Electives

Both Literature and Language majors are required to take 12 credits of free electives.

Requirements for Acceptance to English BA Programs

Students wishing to major in Language or Literature are accepted provisionally until they have achieved a grade of C+ or more in ENGL 203 (Academic English) and ENGL 204 (Advanced Academic English) and in two of the four introductory courses: ENGL 205 (English Literature I), ENGL 207 (English Literature II), ENGL 209 (Survey in American Literature) and ENGL 227 (Introduction to Language). Normally, the courses may be repeated only once.

English Minors

The department offers minors in Language, Literature, Creative Writing, Translation, Theater, and Gender Studies. An American Studies minor is housed in the Center for American Studies and Research (CASAR), a Film and Visual Culture minor is housed in the Department of Media Studies, and a Gaming minor is housed in the Department of Computer Science.

A minor in Literature

requires 15 credits. Two core courses from among the following:

- ENGL 205 English Literature I
- ENGL 207 English Literature II
- ENGL 209 Survey of American Literature
- One comparative literature course from ENGL 240-243
- And any two courses from the different categories of the literature curriculum

A minor in Language

requires 15 credits:

- ENGL 227 Introduction to Language
- Four other courses chosen from the department's Language offerings

A minor in Creative Writing

requires 15 credits. Three courses chosen from the following:

- ENGL 239 Screenwriting
- ENGL 249 Fiction Writing
- ENGL 250 Poetry Writing

- ENGL 251 Playwriting
- ENGL 252 Creative Nonfiction
- ENGL 253 Cultural Writing
- ENGL 254 Special Topics in Creative Writing
- ENGL 264 Fiction Writing for Video Games

Two 200-level courses chosen from among the following: ENGL 236, any course listed under Literature but not including those specified above, and any course in creative writing offered by the Department of Arabic and Near Eastern Languages.

A minor in Translation

(in collaboration with the Department of Arabic and Near Eastern Languages) requires the following:

- ARAB 225 Translation
- ENGL 233 Introduction to Translation

Three courses chosen from the following:

- ARAB 211 Survey of Arabic Grammar
- ARAB 212 Survey of Arabic Grammar
- ARAB 226 Translation
- ARAB 227 Arabic Linguistics
- ARAB 228 Arabic Linguistics
- ENGL 221 Intro to Literary Theory
- ENGL 231 English Grammar or ENGL 294 Advanced Topics in Grammar
- One comparative literature course from ENGL 240-243.
- ENGL 247 Discourse Analysis
- ENGL 255 Literatures in Translation - any letter(s)
- ENGL 262 Advanced Topics in Translation – any letter(s)
- Any course offered by the Department of English with a significant translation studies component, with approval of the chair

A minor in Theater

requires 15 credits. One of the following options, representing 6 credits, is required:

- THTR 259 Workshop in Theater Production
- THTR 250 Workshop in Stage Directing & THTR 258 Theater Production Practices

Remaining credits may be taken from among the following courses:

- Any courses with the THTR prefix (see the full list under Theater Program)
- ARAB 240 Modern Arabic Drama
- CHLA 212 Modern and Contemporary World Theater
- ENGL 212 Shakespeare
- ENGL 216 Drama
- ENGL 251 Playwriting
- ENGL 297 Theatrics of Gaming
- Any course that significantly addresses theater, performance or dramatic literature, with approval of the chair

A minor in Gender Studies

requires 15 credits from any of the following courses:

- ENGL 234 Gender and Language
- ENGL 258 (any letter) Gender and Sexuality
- EPHD 334 Reproductive Health
- HIST 262 Gender in Classical Islamic Society
- HPCH 202 Sexuality and Public Health
- SOAN 225 Gender and Culture
- Special Topics, seminars, and/or course sections with emphases on Gender, Sexuality, and/or Women's Studies – with approval of the Chair of the Department of English

Communication Skills Course Descriptions

Please check https://www.aub.edu.lb/fas/english/Commskills/Pages/Placement.aspx for placement requirements for all Communication Skills Courses.

ENGL 100 (A & B) Intensive English Courses 0.0; 0 cr.

An integrated skills course that develops students' linguistic and communicative competence in preparation for a full-time university program. A broad range of activities and readings in various disciplines exposes students to campus culture and university-level discourse. Through regular practice in oral and written activities, students develop appropriate and effective expression in English.

ENGL 102 Enrichment Course in English 3.0; 3 cr.

This course develops critical thinking and oral and written fluency through close reading, analysis, and responses to academic texts. Special attention is given to identifying arguments and rhetorical devices as well as applying appropriate conventions of grammar, mechanics, and usage. Every term.

ENGL 203 Academic English 3.0; 3 cr.

This course introduces students to the demands of critical reading and writing college level texts. Through a recursive process of exploration, discovery, and writing, students develop ownership of texts and practice their voice to compose a documented synthesis. Every term.

ENGL 204 Advanced Academic English 3.0; 3 cr.

This course provides training in writing analyses, syntheses and critiques of advanced college-level texts. Throughout the semester, students polish their research skills by examining and evaluating different aspects of argumentation. The course culminates in an argumentative research paper. Prerequisite: ENGL 203. This course does not count toward graduation for students in MSFEA. Every term.

ENGL 206 Technical English 3.0; 3 cr.

This course immerses engineering students in the best practices of technical communication for their discipline. It focuses on making complex information accessible to different audiences while emphasizing evidence-based argumentation appropriate for specific contexts. Special attention is given to style, conventions, the recursive technical writing process, research methodology, and collaboration. Prerequisite: ENGL 203. For students in MSFEA only. Every term.

Literature Course Descriptions

ENGL 101 Introduction to Literature 3.0; 3 cr.

An introduction for freshman students to literature in English. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Occasionally.

ENGL 103 Introduction to Drama 3.0; 3 cr.

An introduction for freshman students to drama in English. The course focuses on a selection of major playwrights from different periods. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Occasionally.

ENGL 104 Introduction to Poetry 3.0; 3 cr.

An introduction for freshman students to poetry in English. The course focuses on a variety of authors and periods and contexts. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Occasionally.

ENGL 105 Introduction to American Literature 3.0; 3 cr.

An introduction for freshman students to American writing from the colonial period to the present. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Occasionally.

ENGL 106 Introduction to World Literature 3.0; 3 cr.

An introduction to non-British and non-American literatures in English. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Occasionally.

ENGL 109 Introduction to Creative Writing 3.0; 3 cr.

An introduction to various forms of creative writing for freshman. Students will produce a portfolio of original work. Prerequisite: Freshman status; pre- or corequisite: ENGL 203 or ENGL 204, based on placement. Students may not receive credit for both ENGL 109 and ENGL 236. Occasionally.

ENGL 205 English Literature I 3.0; 3 cr.

A course that covers major literary works from the early medieval period to the late eighteenth century. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or higher, based on placement. Every term.

ENGL 207 English Literature II 3.0; 3 cr.

A course that covers major works of literature from Romanticism to the contemporary period. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or higher, based on placement. Every term.

ENGL 209 Survey of American Literature 3.0; 3 cr.

A course that covers major works of American literature and a broad range of writers. Readings may vary from term to term. Pre- or corequisite: ENGL 203 or higher, based on placement. Every term.

ENGL 210 (A, B, C, D, E...) Literature of the Middle Ages 3.0; 3 cr.

A course covering major works of medieval literature, with attention to both form and cultural context. Some attention to the original language may be given. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 211 (A, B, C, D, E...) Early Modern Literature 3.0; 3 cr.

A course that covers major works of sixteenth and seventeenth-century literature, with attention to both form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 212 Shakespeare 3.0; 3 cr.

A course that covers several representative plays by Shakespeare, with attention to form, cultural context and the theatrical practices of the period. Some attention to Shakespeare's poetry or adaptation may be given. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Every term.

ENGL 213 (A, B, C, D, E...) Neo-Classical and Romantic Age 3.0; 3 cr.

A course that covers major works of eighteenth and early nineteenth-century literature, with attention to both form and cultural contexts. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 214 (A, B, C, D, E...) Victorian Literature 3.0; 3 cr.

A course that covers major works of the Victorian period, with attention to both form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 215 (A, B, C, D, E...) Twentieth-Century Literature 3.0; 3 cr.

A course that covers major works of the twentieth century largely within the Anglophone world, with attention to both form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 216 Drama 3.0; 3 cr.

A course that covers a variety of dramatic forms from the modern and contemporary Anglophone world, with attention to form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally.

ENGL 217 The Novel 3.0; 3 cr.

A course that covers theories of the novel as well as literary examples from the eighteenth century to the present, largely in the Anglophone world, with attention to genre, form, and social context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally.

ENGL 218 Poetry 3.0; 3 cr.

A course that covers a variety of poetic forms from across all periods, largely in the Anglophone world, with attention to form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally.

ENGL 219 Film as Text 3.0; 3 cr.

A course that covers a variety of cinematic forms, with attention to both the technical components of film and to cultural context. Prerequisite: ENGL 203 or higher, based on placement. Annually.

ENGL 220 (A, B, C, D, E...) Contemporary Anglophone Literature 3.0; 3 cr.

A course that covers significant works of recent times in the Anglophone world. Readings vary from term to term, but might include settler colonial literatures, literatures of the Middle East, Africa, the Caribbean, global south, or south Asian world. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 221 Introduction to Literary Theory 3.0; 3 cr.

A course that covers significant movements in the history of literary theory, with emphasis on the application of different theoretical schools in contemporary literary and cultural analysis. Prerequisite: ENGL 203 or higher, based on placement; and English major status or permission of instructor. Every term.

ENGL 222 (A, B, C, D, E...) Literature and Cultural Studies 3.0; 3 cr.

A course that examines works of literature in relation to emergent trends in cultural studies. Approach will vary from term to term, but might include Marxism and cultural materialism, biopolitics and disability, animal studies and posthumanism. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 223 (A, B, C, D, E...) Literature and Science 3.0; 3 cr.

A course that examines literary texts, and the discipline of literature in relation to the history and various disciplines of science. Readings may vary from term to term, but might include literature and scientific research, scientific discovery, or technology. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 224 (A, B, C, D, E...) Early American Literature 3.0; 3 cr.

A course that covers pre-twentieth-century American literature, with particular emphasis on relationships between form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 225 (A, B, C, D, E...) Modern American Literature 3.0; 3 cr.

A course that covers American texts from the modern period with attention to form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 226 (A, B, C, D, E...) Contemporary American Literature 3.0; 3 cr.

A course that covers developments in contemporary American literature, with attention to form and cultural context. Readings may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 236 Creative Writing 3.0; 3 cr.

A workshop-based course in which students explore a variety of creative forms. Approach will vary from course to course, but will cover at least four genres such as fiction, nonfiction, poetry, drama, short film or graphic novel. Every term. Students may not receive credit for both ENGL 109 and ENGL 236.

ENGL 239 Screenwriting 3.0; 3 cr.

A workshop-based course that covers the artistic and technical aspects of screenwriting. Students will produce short, original screenplays. Occasionally.

ENGL 240 (A, B, C, D, E...) Literature and Empire 3.0; 3 cr.

A course that focuses on relationships between imperial formations and literary cultures in comparative historical perspective. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 241 (A, B, C, D, E...) Transnational Literatures 3.0; 3 cr.

A course featuring networks of literary texts emerging from different locales with an emphasis on historical contexts of migration, diaspora and crisis. Prerequisite: ENGL 203 or higher, based on placement Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 242 (A, B, C, D, E...) World Literature 3.0; 3 cr.

A course that covers significant texts from different origins, time periods, and genres as well as their resonance in global contexts via translation, adaptation and rewriting. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 243 (A, B, C, D, E...) Postcolonial Literature 3.0; 3 cr.

A course that examines the relationships between literature and imperialism, exploring literary and theoretical texts that have emerged in and about the global south in the era following colonization. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 244 (A, B, C, D, E...) Special Topics in Literature 3.0; 3 cr.

A course that varies in content and focuses on a topic not currently covered in the curriculum. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 249 Fiction Writing 3.0; 3 cr.

A workshop-based course that covers key elements in writing fiction. Students will produce a body of original fiction. Occasionally.

ENGL 250 Poetry Writing 3.0; 3 cr.

A workshop-based course that covers a variety of poetic styles across cultures and traditions. Students will produce a collection of original poems. Occasionally.

ENGL 251 Playwriting 3.0; 3 cr.

A workshop-based course that covers that artistic and technical aspects of playwriting. Students will write original one-act plays to be staged. Occasionally.

ENGL 252 Creative Nonfiction 3.0; 3 cr.

A workshop-based course that covers the writing of memoir, biography, reportage and reflective essays. Students will produce a collection of original works. Occasionally.

ENGL 253 Cultural Writing 3.0; 3 cr.

A workshop-based course that covers cultural writing as a form of creative prose. Students will produce a collection of original reviews of performance and the literary arts. Occasionally.

ENGL 254 Special Topics in Creative Writing 3.0; 3 cr.

A course that varies in content and focuses on a topic not currently covered in the creative writing curriculum. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 255 (A, B, C, D, E...) Literatures in Translation 3.0; 3 cr.

A course focusing on a body of literature in English translation, with particular focus on form and cultural context. Approach may vary from term to term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 256 (A, B, C, D, E...) Digital Culture 3.0; 3 cr.

A course that covers elements of digital culture and emergent means of analysis. Approach will vary from term to term, but might include digital storytelling, text mining, augmented reality, electronic literature, spatial analysis or new media. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 257 (A, B, C, D, E...) Visual Culture 3.0; 3 cr.

A course that explores the relations between literature and emergent trends in visual culture. Materials may vary from term to term, but might include film, television, web series, photographic narrative, performance art and video art. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 258 (A, B, C, D, E...) Gender and Sexuality 3.0; 3 cr.

A course that examines works of literature in relation to contemporary theories of gender and sexuality. Emphases will vary from term to term, but may include third world feminisms, queer and post-queer theory, affect theory, rhetorics of the body, and new materialist approaches. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 259 (A, B, C, D, E...) Topics in Rhetoric 3.0; 3 cr.

A course that explores the history of rhetoric, rhetorical theory, and rhetoric's linkages with other discourses--from literary studies and linguistics to politics, social theory, visual culture, and digital and other media. Readings will draw upon both western and non-western traditions, with emphasis varying by term. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 260 (A, B, C, D, E...) Topics in Composition 3.0; 3 cr.

A course that focuses on theories of reading and writing and on the teaching of writing. From individual acts of composing to the academic discipline of composition studies, readings examine how writing happens and how it can be taught. With topics varying by term, the course makes connections to scholarship in language, literary studies, and education. Prerequisite: ENGL 203 or higher, based on placement. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 261 (A, B, C, D, E...) Advanced Literary Theory 3.0; 3 cr.

A course that covers a particular theorist or theoretical problem in literary and cultural studies. Topics may vary from term to term, but might include investigations of disciplinary power and biopolitics, contemporary theories of sovereignty and the camp, theories of the event, philosophy and set theory, or theories of virtuality and embodiment. Prerequisite: ENGL 221 or consent of instructor. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 263 Tutoring Writing 3.0; 3 cr.

A course that explores current issues in writing center theory and practice. Students gain insight into the writing process and hands-on practice with the act of peer tutoring. Prerequisite: ENGL 203. Every term.

ENGL 264 Fiction Writing for Video Games 3.0; 3 cr.

A workshop-based course which covers key elements in the writing of stories for video games. Students will produce a body of original narrative. Prerequisite: consent of instructor. Occasionally.

ENGL 290 (A, B, C, D, E...) Tutorial 3 cr.

Directed reading and discussion in a selected topic in literature or language, along with the writing of assigned papers. Prerequisite: An average of 3.2 (or 80) or above in the major. Offered on demand. May be repeated for credit.

ENGL 292 Capstone Seminar for Literature Majors 3.0; 3 cr.

A writing-intensive course for majors that culminates in a research orientated project. Topics and approaches will vary depending on the instructor. Prerequisite: Senior standing. Annually.

ENGL 297 The Theatrics of Gaming 3.0; 3 cr.

A workshop-based course which covers key elements in the intersection of theatre and video games. Students will produce a body of original narrative. Prerequisite: consent of instructor. Occasionally.

BA in English Literature: 39 Credits in English

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9),** **Human Values (3)**	**Societies and Individuals (Min.)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+54 +9+3)	Required Arabic course (3) Required English courses (3 or 6, based on placement): ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits and 3 credits Human Values Required English literature courses (18): ENGL 205, 207,209 ,212, 221; one comparative literature course chosen from ENGL 240-243 Required English language courses (3): ENGL 229 Electives (12): four courses from among those numbered ENGL 210 to 297, excluding 293	Electives General Education (min. 6)	Understanding the World Electives (min. 6) Quantitative Thought Electives General Education (min. 3)	Required (3)
Seminar/ Workshop (3)		Required Writing for Majors (3): ENGL 238			
Research Project (3)		Required Capstone Course (3): ENGL 292			

Language Program

Mission Statement

The mission of the BA program in Language is to promote a multifaceted view of language. The program provides students with a foundational understanding of the principles and issues within current approaches to language and introduces them to various aspects of the structure, use, and learning of language, with a focus on English. Through teaching and mentoring, the program encourages the students to apply their analytical skills to their experience outside the classroom, and prepares them for employment in areas such as English language teaching and publishing, and for the pursuit of advanced degrees in linguistics.

Language Course Descriptions

ENGL 107 Language and Culture 3.0; 3 cr.

An examination of the complex relation between language and culture. The course deals with ways in which language reflects and shapes culture. Topics include: human vs. non-human communication, linguistic relativity, cross-cultural pragmatics, etc. Occasionally.

ENGL 108 Beginning Translation 3.0; 3 cr.

An introduction to Arabic-English-Arabic translation. Students develop their translation skills by translating texts in various genres. Occasionally.

ENGL 227 Introduction to Language 3.0; 3 cr.

A general introduction to the study of language structure and use. Students familiarize themselves with methods of linguistic analysis, which they apply to English and other languages. Every term.

ENGL 228 Phonetics 3.0; 3 cr.

A study of the articulatory, auditory, and acoustic features of sounds from a variety of languages. The practical component of this course involves practice in transcription and production of sounds. Annually.

ENGL 229 History of the English Language 3.0; 3 cr.

An introduction to the cultural and linguistic history of the English language in a global context. The course covers the historical evolution of the English language, attempts at standardizing English and its contact with other languages, as well as the contexts of its twenty-first century expansion. Annually.

ENGL 230 Language in Society 3.0; 3 cr.

An examination of the social factors that influence and shape language variation. This course investigates how language is used in both ordinary and formal social exchanges. Topics include multilingualism and language choice, regional and social variations and language attitudes. Occasionally.

ENGL 231 English Grammar 3.0; 3 cr.

A study of grammar through exploration and analysis. The course introduces students to the concepts and arguments used to describe and understand word and sentence structures of English. Occasionally.

ENGL 232 Language Acquisition 3.0; 3 cr.

An introduction to first and second language acquisition. The course highlights topics such as contexts of learning, learner characteristics, universals of language acquisition and the nature-nurture debate. Occasionally.

ENGL 233 Introduction to Translation 3.0; 3 cr.

An introduction to translation theories and practices. The course offers hands-on opportunities to practice translation between Arabic and English. Pre- or co-requisite: ENGL 203 or higher. Every term.

ENGL 234 Language and Gender 3.0; 3 cr.

An introduction to the large body of literature on language and gender, with focus on current issues in gender studies from a linguistic perspective. Students examine how language in use mediates and is mediated by the social construction of gender identities. Occasionally.

ENGL 235 Politics of Language 3.0; 3 cr.

An examination of the connection between language and power. This course explores the relationship between language and the indexing, creation and maintenance of power relationships. Topics include standard and non-standard varieties, accented speech and language ideologies. Occasionally.

ENGL 238 Academic Writing for English Majors 3.0; 3 cr.

A course for English majors that covers methods and practices of reading, writing, and research specific to the study of language and literature. Attention is placed on analytical thinking, critical reading, and persuasive writing at an advanced level appropriate to the discipline. Prerequisite: English major status and ENGL 204, or consent of instructor. Every term.

ENGL 245 Assessing Language Proficiency 3.0; 3 cr.

An introduction to the theory and practice of foreign/second language assessment. The course considers reasons to assess language skills, what exactly is assessable, and how a fair assessment can be made. The social and political implications of assessment policy are investigated. Occasionally.

ENGL 246 Applied Linguistics 3.0; 3 cr.

A course that focuses on the areas of society where language plays a vital role. It studies the application of linguistic theories, concepts and research in solving practical problems. Topics covered include language policy and planning, issues in communication, language literacy, translingualism, critical discourse analysis, and language ideology. Occasionally.

ENGL 247 Discourse Analysis 3.0; 3 cr.

An introduction to the study of spoken and written texts to understand their meanings. The course considers the relationship between a text and its social and cultural context, and how language is used to present different perspectives on the world and to construct different identities. Occasionally.

ENGL 248 Special Topics in English Language 3.0; 3 cr.

This course changes in content from year to year and focuses on varied topics in English language. May be repeated for credit. Occasionally.

ENGL 262 (A, B, C, D, E...) Advanced Topics in Translation 3.0; 3 cr.

A course that examines in depth a specific topic of translation using texts of significant cultural value. Texts will vary each term, and course work will be done in consideration of theories of translation, form and cultural context. Co- or prerequisite: ARAB 201 or equivalent, Prerequisites: ENGL 108 or ENGL 233, or consent of instructor. Occasionally. May be repeated for credit for a maximum of 6 credits.

ENGL 290 (A, B, C, D, E...) Tutorial 3 cr.

Directed reading and discussion in a selected topic in literature or language, along with the writing of assigned papers. Prerequisite: An average of 80 or above in the major. Offered on demand. May be repeated for credit for a maximum of 6 credits.

ENGL 293 Seminar for English Majors in Language 3.0; 3 cr.

Topics vary depending on the instructor. Prerequisite: Senior standing. Occasionally.

ENGL 294 (A, B, C, D, E...) Advanced Topics in Grammar 3.0; 3 cr.

In-depth study of advanced topics in grammar, such as grammar in context, grammar and discourse, or grammar as science. May be repeated for credit for a maximum of 6 credits. Occasionally.

BA in English Language: 39 Credits in English

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+48 +6+9+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits and 3 credits Human Values Electives (3) Required English language (15): ENGL 227, 228, 229, 230 or 232, 294, or 231 Required English literature (9): ENGL 212, two courses chosen from ENGL 205, 207 and 209 Electives (12): one literature and three language courses from those numbered ENGL 210 to 291, 294	Electives General Education (min. 6)	Understanding the World Electives (min. 6) Quantitative Thought Electives General Education (min. 3)	Required course (3)

Seminar/ Workshop (3)		Elective English: ENGL 236, 239, 249, 250, 251, 252 (formerly 237), 293, 294			
Laboratory (6)		Required English (3): ENGL 238			
Research (6)		Required English (9): ENGL 212, 227, 228, 230			

Theater Program

Courses in theater may be taken towards the Minor in Theater (described above) and/or in fulfilment of other degree requirements.

THTR 100 Discovering Theater 3.0; 3cr.
An introductory course to the art and craft of theater designed to enhance students' enjoyment and understanding of live theater and develop proper theater etiquette. It requires students to watch all off-campus local productions available during the term. Occasionally.

THTR 200 Introduction to Theater 3.0; 3 cr.
An introductory course covering the functions of various theater personnel, a brief survey of the history of theater starting with the classical Greek drama, various types of modern and contemporary dramatic movements, and Arab and Lebanese theater practices. Annually.

THTR 210 Theater History 3.0; 3 cr.
An overview of theater and related entertainment from ancient to modern times. Acting, production, stages, spectacle, audience control, and presentation styles are covered and illustrated with slides, videos, and anecdotes. Occasionally.

THTR 218 Special Topics in Theater History and Dramatic Literature 3.0; 3 cr.
Specialized courses in theater history and dramatic literature, such as Elizabethan Drama, African American Drama, Middle Eastern Theater, Arabic Drama, Contemporary Drama, etc. May be repeated for credit. Occasionally.

THTR 220 Voice and Acting in the Theater 2.2; 3 cr.
A course covering the basics of clear speaking, vocal projection, and acting. Occasionally.

THTR 221 Workshop in Stage Acting 3.0; 3 cr.
An introductory course to the art of stage acting covering a variety of acting styles and techniques from the earliest practitioners to Constantine Stanislavski, Bertolt Brecht, Sanford Meisner, Viola Spolin and Tadashi Suzuki among others. Occasionally.

THTR 240 Design in Theater 2.2; 3 cr.
A course on the basics of design and drawing as applied to theater; specifically stage settings, costume design, and poster design. Occasionally.

THTR 250 Workshop in Stage Directing 3.0; 3 cr.
An introductory course to the art of stage directing focusing on the functions of the director as a storyteller, collaborator, and stager. Occasionally.

THTR 258 Theater Production Practices 2.2; 3 cr.
An introductory course on the functions of various personnel involved in the process of producing a play. Students will mount a play of their choosing on campus. Occasionally.

THTR 259 Workshop in Theater Production 2.8; 6 cr.
An introductory course on the art of theater with a survey of theatrical roles and techniques, including participation in a campus or professional production. Prerequisite: Consent of instructor. Biennially.

THTR 260 (A, B, C...) Special Topics in Theater 3.0; 3 cr.
Specialized courses in interdisciplinary theater studies such as courses in Drama Therapy, Applied Theater, Theater of the Oppressed, Theater for Education, etc. May be repeated for credit. Occasionally.

Department of Fine Arts and Art History

Chairperson:	Sadek, Walid
Professor:	Dahdah, Farès; Sadek, Walid
Associate Professor:	Esanu, Octavian
Assistant Professors:	Hammond, Joseph; Youssef, Jad
Lecturers:	Garro El Khoury, Joelle; Schell, Sarah
Instructors:	Al-Amine, Gheith; Dib, Mansour; El-Hussein, Rula; Khcheich, Rima; Maalouf, Maya; Mrad, Karen; Sabbah, Yasmina; Youssef, Shawki
Artist-in-Residence:	Kahwagi, Bassam

Mission Statement

The Department of Fine Arts and Art History educates students in the arts in all their dimensions, believing that an understanding and appreciation of this area of human endeavor is an essential element in the formation of well-rounded individuals. To that end, we offer courses in studio arts, history and theory of art, and music. Our goal is to educate students with the skills to create meaningful statements in art and equip them to deal with artworks critically, and with scholarship. The department offers three degrees: a BA in Studio Arts, a BA in Art History and an MA in Art History and Curating. The department also offers minors in Studio Arts, Art History and Music.

Studio Arts Program

The Studio Arts (SART) BA Program provides undergraduate students with a strong foundation in studio skills: drawing, painting, sculpture, printmaking, analog and digital photography, video and new technology. The SART faculty members, while trained and skilled in studio techniques, do not espouse a conventional approach to the deployment of these techniques nor do they promote in their teaching a fidelity to the traditions of art. Rather, they all develop teaching methods through the lenses of their own current practices in which the past, present, and future of art are constantly being recomposed in dynamic constellations. The SART BA Program encourages a dynamical recalling of art from within current concerns and develops in students an ability to employ a large array of knowledge and skills with a readiness to open up towards post-studio art practices. The requirement for a BA degree in studio arts is 90 credits for students entering the department at the sophomore level. The distribution of these courses is as follows:

Degree Requirements

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Free Electives Outside the Department

SART 220 and music courses in the department may be allowed 3 crs.

Major Courses

These include:

- 39 credits in Studio Arts: SART 200, SART 201, SART 202, SART 203, SART 204, SART 205, SART 206, SART 207, SART 208, SART 209, SART 221, SART 222, SART 223.
- Field Electives: 9 credits in art history and/or theory.

The minor program in Studio Arts requires 15 credits:

- 3 credits from AHIS 250, AHIS 251, AHIS 252, AHIS 284, or approved alternate.
- 12 credits chosen from SART 200, SART 201, SART 202, SART 203, SART 204, SART206, SART 207, SART 208, SART 221, SART 22 and SART 223 taken according to sequence and following prerequisites.

Course Descriptions

SART 150 Studio Arts for Freshmen 0.6; 3 cr.
This course introduces students to studio practices in drawing, painting and sculpture. The projects develop representational skills based on the observation of nature. Students are introduced to a variety of media and tutored into building a portfolio of their best work. Every term.

SART 200 Drawing 0.6; 3 cr.
This course introduces art students to the fundamentals of observational drawing through a variety of sketching techniques using wet and dry monochromatic media. Through the practice of drawing, students become aware of how we see what we see and acquire the necessary foundation for self-reflection and expression. Students are introduced to pictorial conventions and their historical context through practice and lectures. Open to all students. Annually.

SART 201 Painting I 0.6; 3 cr.
This course builds on the drawing skills acquired in the previous course and proposes the practice of painting as an investigative, expressive and conceptual tool. The introduction of color and an in-depth study of painting materials and techniques allow students to explore the stages of constructing a painting. Students engage with fundamental considerations of material surface, pictorial composition and subject matter in light of examples taken from both historical and contemporary sources. Prerequisite. SART 200 or consent of the instructor. Annually.

SART 202 Painting II 0.6; 3 cr.
This course follows Painting I, further develops students' technical abilities and knowledge and introduces them to the specific practices of key modern and contemporary painters. By exploring the challenges of painting after photography, students raise practical and theoretical questions regarding the possibilities of transforming the world through the painted image. Through a series of focused and open-ended exercises students experiment with their acquired abilities and begin to open-up their work to more complex pictorial challenges, and individual approaches in their practice. Prerequisites: SART 200 and SART 201 or consent of the instructor. Annually.

SART 203 Sculpture 0.6; 3 cr.

This course introduces students to the practice of modeling forms through the observation of nature. In a series of applied projects, students learn the modeling of forms and their organization in space. Students will practice working with clay, cardboard, wood, plaster, and other mixed materials and learn safe studio working habits. Studio practice is accompanied by lectures that historically contextualize the changing conventions of sculpture since the late 19th century. Open to all students. Annually.

SART 204 Sculpture After the Monument 0.6; 3 cr.

With the beginning of Modernism, sculpture disengages from the logic of the public monument and is overtaken by the overlapping but uneven propositions of the autonomous art object and the contradictory individual subject. In this course, students study and practice various Modernist approaches to making objects that begin with the failed late projects of August Rodin and lead towards the beginnings of Minimalism. Prerequisites: SART 203 or consent of the instructor. Annually.

SART 205 The Technological Imagination 0.6; 3 cr.

This course introduces students to new technologies and their impact on how we come to understand our place in the world. Practices of data inscription and the concomitant techniques of data accessibility and salvageability constitute a challenge to anthropocentric conceptions of existence. Through a series of applied exercises as well as theoretical readings, students are initiated into this new field wherein ideas about time, space, materiality, and the primacy of vision are challenged and transformed. Prerequisite: Studio Arts students with senior standing. Annually.

SART 206 Analog Photography 0.6; 3 cr.

This course introduces students to black & white analog photography. Through practical projects students discover the mechanical and conceptual possibilities of the camera and extend their learning in lab sessions that provide thorough darkroom experience. There will be an emphasis on planning a photograph, aperture, shutter speed, white balance, ISO, the use of natural and artificial light and the function of lenses. Open to all students. Annually.

SART 207 The Digital Image 0.6; 3 cr.

This course looks into digitality as a practice in which images are infinitely malleable, reconfigurable, and exchangeable. The pixelized matrix of all digital image making is analyzed, practiced and theorized. Critical texts in visual theory are read and discussed along with developing projects that question the construction of visual hegemonies. Prerequisites: SART 206 or consent of the instructor. Annually.

SART 208 The Moving Image 0.6; 3 cr.

This course builds on the previous two courses in analog still photography and digitality and introduces students to the moving image. Through a series of small and focused projects students are introduced to video art, the film essay, and the documentary. Experimentation with narrativity, image sourcing, appropriation and soundscaping will be encouraged. Critical visual theory of video art and film is read and discussed. Prerequisites: SART 206 and SART 207 or consent of the instructor. Annually.

SART 209 Advanced Studio Practice 0.6; 3 cr.

This course offered last in the curricular sequence of SART opens a space for students to develop a working process and build a personal proposition on a topic of their choice. The course includes opportunities for students to present their work to each other and to develop their critical writing. The course includes studio visits by practicing local and international artists. Prerequisite: Studio Arts students with senior standing. Annually.

SART 221 Painting III 0.6; 3 cr.

This course aims at applying and developing students' existing technical abilities and knowledge of image making by providing the opportunity to fully engage with the process of painting, through self-directed projects. Students will work independently, and in conversation with specific works of modern and contemporary art. Prerequisites: SART 200, SART201 and SART 202 or consent of the instructor. Annually.

SART 222 Sculpture after Sculpture 0.6; 3 cr.

This course extends the practice of sculpture into the open and overlapping fields of architecture, urbanity, landscape, and public institutions. Students will study and practice various approaches such as intervention, excavation, vandalism, non-anthropocentric scales and temporalities, the ready-made, repetition, and ephemerality to think through the discourses that structure our subjectivities and script our aesthetic and political practices. Prerequisites: SART 203, SART 204 or consent of the instructor. Annually.

SART 223 Advanced Image Making 0.6; 3 cr.

In this advanced studio course, students develop, for the duration of the semester, a self-led project situated in the rich ongoing history and imaginative interaction between the moving image and the still photograph. Studio sessions are organized around lectures, technical workshops, group reviews and visits to artists' studios. Through critical experimentation, students develop an audio-visual work informed by their studies in the previous courses SART 206, 207 and 208. Prerequisites: SART 206, SART 207 and SART 208 or consent of the instructor. Annually.

SART 220 (A, B, C...) Special Topics in Studio Arts 0.6; 3 cr.

Specialized courses in studio arts. The enrolled student is required to produce artworks and an essay in critical analysis. Prerequisite: Consent of the instructor. Annually.

Art History Program

The Art History program seeks to train student's skills and concepts needed for research, teaching, and curating. It offers a core program with flexibility in the choice of art history concentrations in various periods and areas, notably the Middle East. The requirement for a BA degree in art history is 90 credits for students entering the department at the sophomore level. The distribution of these courses is as follows:

Degree Requirements

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Elective Requirements

These requirements are any one course (3 cr.) from the following group: PHIL 217, GRDS 331, SOAN 250, ARCH 017, or equivalent.

Free Electives Outside the Department

Music courses in the department may be allowed.

9 cr. (12 cr. for students exempt from the Arabic requirement)

Major Courses

The major courses include 39 credits in the department as follows:

- AHIS 203 or AHIS 204, AHIS 208, and AHIS 207 or AHIS 209, AHIS 210
- AHIS 224, AHIS 251, and AHIS 252
- AHIS 284 and AHIS 285
- Four further courses in Art History, of these, a maximum of two Studio Arts courses may be taken to replace up to two Art History courses

The minor program in Art History requires 15 credits:

- 6 credits chosen from AHIS 203, AHIS 207, AHIS 208, AHIS 209, AHIS 210, or equivalents
- 6 credits chosen from AHIS 221, AHIS 224, AHIS 225, AHIS 226, AHIS 227, AHIS 249, AHIS 263, AHIS 281
- 3 credits from AHIS 250, AHIS 251, AHIS 252, AHIS 284, or approved alternate

Course Descriptions

AHIS 150 Introduction to Art History for Freshmen 3.0; 3 cr.

A course that offers a fundamental overview of art and its development in the Western world, providing the students with a chronology and brief description of the main art periods and movements in the West starting from prehistoric art all the way to contemporary art. Every term.

AHIS 160 Introduction to the History of Photography for Freshmen 3.0; 3 cr.

This course offers a chronological overview of the history of photography and the moving image in the Western world from the nineteenth century until the present. Photographers from Lebanon and the region will also be covered. Occasionally.

AHIS 203 Ancient Mediterranean Art 3.0; 3cr.

This is a chronological examination of major Mediterranean empires taking students from Ancient Egypt to the fall of the western Roman Empire in the late 5th century CE. It aims to introduce students to a wide range of cultures of the ancient world and the role that the visual arts played in society, politics and the formation of their worldviews. Equivalent: ARCH 121.

AHIS 204 Medieval Art 3.0; 3 cr.

This course examines the political, religious and social contexts of art and architecture in the European Middle Ages (c. 500-1400 CE). It considers artistic and cultural shifts after Rome, image as knowledge, migration, conflict, and artistic exchange across Europe and beyond.

AHIS 207 Early Islamic Art and Architecture 3.0; 3 cr.

This course explores the social, political, and cultural developments and changes of art and the built environment of the early Islamic period, from the foundation of Islam during the 7th

century until the mid-13th century. The regions covered in this course include the Middle East, North Africa, Anatolia, Iran, Central Asia, and parts of South Asia. Occasionally.

AHIS 208 Renaissance Art 3.0; 3 cr.

A study of Renaissance art and architecture in Western Europe c.1300 - c.1600. The course covers a variety of influential works, their historical contexts and ways to understand them. Annually.

AHIS 209 Ottomans, Mughals, and Safavids 3.0; 3 cr.

This course explores the art, architecture, and urban culture of the Ottoman Turks, the Safavids of Iran and the Mughals of India, or the "gunpowder empires," which dominated the Middle East and South Asia during the newly globalizing era of the early modern period. Occasionally.

AHIS 210 Enlightenment and Art 3.0; 3 cr.

The course covers the art and architecture of the long eighteenth-century (c. 1650-1830s), with a focus on the relationship of the ideas and philosophies of the Enlightenment and visual culture. It examines the emergence of cultural institutions such as academies, galleries and museums in parallel with new forms and methods of scholarship and philosophy. It will cover the Grand Tour, Neo-Classicism, colonialism, revolution and the romantics. Equivalent: ARCH 122.

AHIS 221 Modern Art and Culture 3.0; 3 cr.

This course covers the late nineteenth century to the 1960s. Artworks will be examined in relationship to their historical and cultural contexts, including contemporary art criticism, reception, and artists' writing. Equivalent: ARCH 223.

AHIS 224 Islamic Art and Modernity 3.0; 3 cr.

This course explores the debates surrounding the historiography of art and architecture that were developing during the nineteenth century in key urban centers in the Islamic world including Beirut, Istanbul, Cairo, and Tehran. Occasionally.

AHIS 225 Art Now 3.0; 3 cr.

This course looks at contemporary art, as it is being produced, diffused and consumed in the present, while questioning what constitutes the present we live in historically, politically and ideologically. Annually.

AHIS 226 Art After the Lebanese Wars 3.0; 3 cr.

The course is an introduction to a number of conceptual and documentary artistic practices in the political context of Lebanon over the last two decades. Occasionally.

AHIS 227 Sound in Visual Culture 3.0; 3 cr.

The course attempts to outline and unpack the rich premise of sonic and aural cultures through art, music, the voice, the soundtrack, radio, as well as other media, within a critical framework. Occasionally.

AHIS 230 Portraiture 3.0; 3 cr.

The course examines the genre of portraiture using examples from across art history to the present day, including social media. It asks what constitutes a genre, what is portraiture, what are its functions for those that make it and within our society. The course aims to bring historical and theoretical lessons to understand individuality, identity, subjectivity, self-presentation and likeness. All periods in art history may form part of the discussions. (Formerly AHIS 249F)

AHIS 249 (A, B, C...) Special Topics in Art History 3.0; 3 cr.
Specialized courses in art history. Occasionally.

AHIS 250 (A, B, C...) Special Topics in Art Theory 3.0; 3 cr.
Specialized courses in art theory. Prerequisite: At least one previous Art History course (or equivalent) or one Special Topics in Art History course or consent of the instructor. Occasionally.

AHIS 251 Theories of Modern Art 3.0; 3 cr.
This course examines the conceptual and theoretical development of modernity and modernism, and its implications for art from the mid-nineteenth to the mid-twentieth centuries. Modernism, the avant-garde and realism as aesthetic regimes form the main framework of theoretical examination.

AHIS 252 Contemporary Art and Theory 3.0; 3 cr.
The course considers the historical and theoretical interrelations between contemporaneity and contemporary art since the end of WWII. The course addresses the ways in which art production, reception and interpretation have undergone drastic transformations against the background of broader historical changes and theoretical paradigm shifts. Annually.

AHIS 261 Methods in Art History 3.0; 3cr.
A study in the tradition and methodology of art historical research. This pursues a discussion of the work of major theorists who have structured the discipline of art history; it includes theories of the evolution of art, iconography, and art criticism. Students will be expected to discuss, analyze, and write about course readings on a weekly basis. Occasionally.

AHIS 262 Seeing Rude and Erudite; Thinking the Visible We See 3.0; 3 cr.
The introductory course approaches visuality by positing a lingering and generative difference between what we see and how we see; between what seems like a transparent access to the world and the representational systems by which the world is made available and accessible to seeing subjects who receive it and evaluate its images. Occasionally.

AHIS 263 Art and Labor 3.0; 3 cr.
This seminar-style interdisciplinary course draws theories and methodologies from art theory, philosophy, critical theory and social and political thought to investigate the question of artistic labor as well as the artwork as a product labor. The question of labor in the artwork is discussed in relation to social labor, and the way in which it both coincides and diverts from the latter. Students will be expected to discuss, analyze, and write about course readings on a weekly basis. Occasionally.

AHIS 281 Collecting and Exhibiting Islamic Art 3.0; 3 cr.
This seminar-style course takes a historiographical and theoretical approach to representations of Islamic art in museums, collections, and universal expositions/ fairs across Europe, the US and the Middle East. Students will be expected to discuss, analyze, and write about course readings on a weekly basis. Occasionally.

AHIS 282 Fighting Words: Criticism and Contemporary Art 3.0; 3 cr.
This writing-intensive, workshop-style seminar delves into the relationship between criticism and contemporary art. It does so by producing the former as a means of defining, disassembling, and/or defending the latter. Prerequisite: ENGL 204. Occasionally.

AHIS 283 History of Art Criticism 3.0; 3 cr.

This is a survey of the history of art criticism, from the advent of the artist profile in sixteenth-century Italy to the appearance of poet- and painter-critics in nineteenth-century France and the rise of journal manifestos in mid-twentieth-century Egypt and Morocco. Occasionally.

AHIS 284 History and Theory of Exhibitions 2.2; 3 cr.

The course introduces students to the history of exhibition-making practices since the 19th century. It focuses on the historical and theoretical reevaluation of those exhibitions that had a major impact upon the way art history is written. The course also introduces students to theoretical approaches to curating art exhibitions. Any two of the following are prerequisites: AHIS 221, AHIS 222, AHIS 224, AHIS 225, AHIS 226, AHIS 251, AHIS 252, AHIS 262, AHIS 282, AHIS 283, or approved alternate. Annually.

AHIS 285 Practices of Curating 2.2; 3 cr.

The course offers a hands-on experience in organizing art exhibitions and related events. Students conduct curatorial research and implement their ideas practically, from writing curatorial concepts to selecting artworks and designing exhibitions at the AUB Art Galleries. Prerequisite: AHIS 284. Annually in the Spring.

Music Program

The minor program in Music seeks to train students in skills and concepts needed to develop as musicians and enhance their capacities as performers, analysts, and audience members. It offers the fundamentals of higher education in music, seeking to balance historical, theoretical, and performance aspects.

The minor program in Music requires 15 credits:

- 6 credits from MUSC 220, 221, 230, 235, 239, 250
- 6 credits from MUSC 200, 205, 231,
- 3 credits from MUSC 262, 263, 265, 266, 269.

Course Descriptions

MUSC 150 Introduction to Western Music History for Freshmen 3.0; 3 cr.

A course that will introduce students to examining music through a critical lens emphasizing the social and cultural context of the music.

MUSC 200 Notation, Analysis and Audiation 3.0; 3 cr.

This course covers musical analysis and audiation as the foundation for comprehension, performance, and creativity in music. It covers the western system of musical notation, including rhythm and the organization of pitches. The course will train students to audiate, sight-sing and write music, to give them the tools to read, perform and analyze music and develop their musicality. Every term.

MUSC 205 Harmony, Form and Composition 3.0; 3 cr.

This course explores western musical harmony, forms and styles. It will include voice leading, functional harmony and harmonic structures. Students will learn how to analyze compositions, with reference to their historic context and traditions, and will practice the fundamentals of composition by writing short pieces in various forms and styles. Prerequisites: MUSC 200, or consent of Instructor. Fall.

MUSC 220 History of Western Music: Medieval to Classical 3.0; 3 cr.

A history of western music from antiquity through the 17th century. It studies the coeval developments of musical technologies, institutions, practices and theories of music, as well as forms, styles and genres in historical and social contexts. Covering the influence of ancient thought, religious and court music, the emergence of polyphony and notation, opera, ballet, orchestras and public concerts. Students will develop a knowledge of musical history, and practice historical and musical analysis through close listening to performances. Fall.

MUSC 221 History of Western Music: Classical to Contemporary 3.0; 3 cr.

A history of western music from c. 1700 to the present. The course includes the development of new systems of patronage and funding, new institutions (such as conservatories and public concert halls) alongside the impact of technologies (such as printing, recording, and electronic and digital tools). Through historical study and close listening students will develop an understanding of music in the west among contemporary debates about its significance and role, and the forms and styles of genres and performances. Spring.

MUSC 230 History of Opera 3.0; 3 cr.

A survey of the history and development of opera from 1598 to the present. Emphasis is placed on the analysis and evaluation of recorded opera performances on film.

MUSC 231 (A, B, C,...) Special Topics in Music Theories 3.0; 3 cr.

Specialized courses in music theories, such as western and non-western musical systems, aesthetics, critical theories and philosophical approaches.

MUSC 235 History of Jazz 3.0; 3 cr.

An investigation of the whole range of jazz history, from its beginning around the turn of the century to the present day.

MUSC 239 (A, B, C, ...) Special Topics in Music History 3.0; 3 cr.

Specialized courses in music history.

MUSC 250 History of Arabic and Middle Eastern Music 3.0; 3 cr.

A course introducing students to the history and key characteristics of Arabic and Middle Eastern music. No previous musical knowledge is required. While the class will be taught in English, it is highly recommended that students have a working knowledge of Arabic prior to taking the course.

MUSC 262 Arabic Music Ensemble 3.0; 3 cr.

Rehearsal and performance in ensemble of Arabic repertoire.

MUSC 263 Western Music Ensemble 3.0; 3 cr.

Rehearsal and performance in instrumental and vocal ensembles. Students will also discover a wide range of music literature, understand the repertoire and learn about the historical stylistic practices of pieces and how to execute them in the performance.

MUSC 265 Western Voice Performance 3.0; 3 cr.

A course on the fundamentals of singing technique and performance, including breath management, vocal registration, musical notation, and song repertoire.

MUSC 266 Arabic Voice Performance 3.0; 3 cr.
A course on the fundamentals of classical Arabic voice performance. Students will be expected to sing in class both in groups as well as alone.

MUSC 269 (A, B, C, ...) Special Topics in Music Performance 3.0, 3 cr.
Specialized courses in music performance.

BA in Studio Arts

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+39 3+6+3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values 6 credits required from Field Electives: 9 crs. of AHIS courses	Two approved General Education courses numbered 200 or above (6 credits)	Two approved General Education courses numbered 200 or above (6 credits) One approved Quantitative Reasoning General Education elective (3 credits)	Required course (3)
Studio Work (39)		SART 200, SART 201, SART 202, SART 203, SART 204, SART 205, SART 206, SART 207, SART 208, SART 209t, SART 221, SART 222, SART 223			
Lecture/Performance: Free electives from outside the department (3 crs.) can include SART 220 and FAAH/Music courses even though these are within the department					

BA in Art History

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+36+6 +6+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	9 credits required in the Cultures and Histories and 3 credits in Human Values. 18 credits including: AHIS 203, AHIS 204, AHIS 208, AHIS 221 or AHIS 252, AHIS 284 3 credits from AHIS 251, AHIS 261, AHIS 262 3 credits from AHIS 207, AHIS 209, AHIS 224, AHIS 281	Two approved General Education courses numbered 200 or above (6 credits)	Two approved understanding the world General Education courses numbered 200 or above (6 credits) One approved Quantitative Reasoning General Education course (3 credits)	Required course (3)
Lecture/ Laboratory (15)		15 credits from additional courses in Art History. Of these up to 6 credits may be from Studio Arts			
Lecture/Performance: Free electives from outside the department (12 crs.) can include FAAH/Music courses even though these are within the department					

Department of History and Archaeology

Chairperson:	Sader, Helene S.
Professor Emerita:	Seeden, Helga
Professor Emeritus:	Seikaly, Samir
Professors:	Cheikh, Nadia; Genz, Hermann P.; Sader, Helene S.; Saliba, George
Associate Professors:	Armstrong, Lyall; Newson, Paul G.
Associate Professor of Practice:	Panayot, Nadine
Assistant Professors:	Abuhusayn, Tarek; Ketsemanian, Varak; Kitlas, Peter; Malleson, Claire; Rabah, Makram
Lecturers:	Nurpetlian, Jack A; Raad, Naseem

The department offers programs leading to the BA, MA, and PhD in Arab and Middle Eastern History. The department also offers programs leading to the BA and MA in Archaeology.

The department also offers academic minors for undergraduate students in History and in Archaeology. In addition, in association with the departments of Biology and Geology, the department offers an interdisciplinary minor in Marine Sciences and Culture.

Requirements for transfer to the department include approval by the department and a grade of C+ or more in any two Culture and Histories courses (excluding the communication skills requirements in Arabic and English). Students expecting to work in Arab and Middle Eastern history must have knowledge of Arabic.

History

Mission Statement

By means of a broad and diversified curriculum, our undergraduate program introduces students to the richness and complexity of Arab and Middle Eastern history. This program is intended to develop not only essential knowledge of the past, but also awareness of the methodological and theoretical problematics involved in the study of history as a discipline in the humanities. Students are motivated to be reflexive, read, research and write critically, analytically, and without prejudice or preconceptions. Courses in European and American history supplement the core offerings, fostering a comparative understanding of the enduring relevance of the past in multiple contexts. In line with the faculty's mission, the program maintains major and minor flexible requirements, leaving room for students to explore other fields of study.

BA in History

Students majoring in history must complete a minimum of 39 credit hours in the department, including HIST 286, HIST 287, HIST 291, and HIST 292. Detailed programs are determined by subcommittees of the department, which advise each student on courses in her/his major, related departments, and electives.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in History

Students choosing to minor in history must complete five courses numbered 200 and above. All minors, especially those considering graduate work in history, are encouraged to take HIST 287 as one of the five courses.

Course Descriptions

HIST 101 History of Early Modern Europe, 1492-1815 3.0; 3 cr. (each)

A chronological and topical survey of the political and socio-economic forces that have shaped early modern Europe and the rest of the world, including the voyages of discovery, the development of a global economy, the Enlightenment, the American Revolution, the French Revolution, and the downfall of Napoleon. Attention is given to teaching students how to tackle historical problems and how to initiate and conduct research. Open to freshman students only. Annually.

HIST 102 History of Modern Europe, 1815-1945 3.0; 3 cr.

A chronological and topical survey of the political and socio-economic forces that have shaped modern Europe and the rest of the world, including the development of ideologies, the advent of imperialism, World War I, the great depression, and the rise of totalitarian regimes and World War II. Attention is given to teaching students how to tackle historical problems and how to initiate and conduct research. Open to freshman students only. Annually.

HIST 103 History of the Arabs and the Middle East I: Seventh to Fifteenth Centuries 3.0; 3 cr.

This course surveys the history of the societies and polities of the Arabs, from the seventh to the end of the fifteenth century. The course will emphasize the contributions of the Arabs and other people in the Middle East to Islamic civilization. The transformation and variety of the societies that comprise this civilization over nine centuries will be illustrated through the use of narrative texts and selected primary sources.

HIST 104 History of the Arabs and the Middle East II: Sixteenth to Twentieth Century 3.0; 3 cr.

This course surveys the history of the societies and polities of the Arabs from the Ottoman conquests of the early sixteenth century to the twentieth century. The course will focus on the following periods and themes: the expansion of the Ottoman empire (16th century); the global crisis of the 17th century; the era of the notables (18th century); the age of revolutions and reform (19th century); European colonial penetration of the region (19th century/20th century); and the period of decolonization and globalization (20th century).

HIST 200 Introduction to the History of the United States 3.0; 3 cr.

An introductory survey of the social and political development of the United States from its colonial origins through the early twentieth century. Principal themes include European settlement of the North American continent and the establishment of an independent United States; the tensions between North and South that culminated in civil war; and the social

transformations brought about by the rise of a market-oriented, industrial society. Open to freshman students. Annually.

HIST 201 Introduction to the Study of History 3.0; 3 cr.

An introduction to some of the main themes and problems of the study of history such as the structures, aims, and methods of historical writing, and related questions such as causation, periodization, and style. The readings in this course are drawn mostly from modern texts in the methodology of history. Annually.

HIST 202 Introduction to the Modern History of the Arab East 3.0; 3 cr.

An introduction to the modern history of the Arab East from the Ottoman conquest until the outbreak of the Arab revolt. This course also uses case studies relating to the rise of local Arab rule and to Arab-Turkish relations in the late Ottoman period. Annually.

HIST 210 Late Antiquity: Faith and Empire 3.0; 3 cr.

This course traces the histories of the Roman and Persian empires and the emergence of the Arab Muslim empire in Late Antiquity, from approximately 300 A.D.-700 A.D., focusing particularly on the Mediterranean World and the Near East and on the role of faith (Christian, Zoroastrian and Islamic) played in the ideological foundations of these empires. Alternate years.

HIST 211 Muhammad and the Origins of Islam 3.0; 3 cr.

An examination of the life of the Prophet of Islam, Muhammad b. ʻAbd Allāh b. ʻAbd al- Muttalib al-Hāshimī. The course analyzes source material for the life of the Prophet, including biographical literature, hadith and the Qur'an and its interpretation. By evaluating these primary sources, the course assesses the historicity and the evolution of the biographical material on the life of the Prophet. Alternate years.

HIST 212 Islamic History: Origins and Empire, 600–750 3.0; 3 cr.

A course that focuses on the origins of Islam in Arabia, Islamic expansion, internal divisions, and the establishment of the Umayyad dynasty. This course emphasizes the themes of Arab expansion and adaptation, the historical roots of Shiism, institutional developments, problems of societal integration, and the factors of decline. Alternate years.

HIST 213 Islamic History: The Rise and Fall of the Abbasids, 750–1055 3.0; 3 cr.

A survey of the Abbasid Caliphate from its establishment in 750 to the Seljuk take- over of Baghdad in 1055. This course studies the origins, interpretation, and results of the Abbasid revolution, the militarization of the state, the emergence of specific institutions, the process of political decentralization, and the flourishing of cultural-scientific achievements. Alternate years.

HIST 214 Islamic History: Military Society in the Middle East, 1055–1500 3.0; 3 cr.

A course that completes the three-part survey of the central lands of Islam, covering the period from the Seljuk conquest in the eleventh century until the Ottoman expansion into the Middle East at the beginning of the sixteenth century. This course traces the fusion of societies that generated a new social and political order in the region. Alternate years.

HIST 216 History of the Fatimid Imamate, 909–1171 3.0; 3 cr.

A survey of the major stages of the Fatimid polity from the turn of the tenth century to its demise at the end of the twelfth century. Major themes include the political institutions of the Fatimid state, the intellectual trends of the Fatimid movement, and the social and economic ramifications of Fatimid rule. Occasionally.

HIST 217 Slaves and Soldiers: The Mamluk Sultanate, 1250–1517 3.0; 3 cr.

An investigation of the politics and society of Egypt and Syria during the regime of the Mamluk Sultanate by means of a chronological and thematic survey of the period from 1250 to 1517. Using all sources available—historical, archaeological, literary—students investigate the origins and nature of the Mamluk institution and its impact on society and politics in the Middle East. Alternate years.

HIST 218 The Abbasid Court 3.0; 3 cr.

A course that focuses on the Abbasid court in the ninth and tenth centuries. It seeks to define the terms court and courtiers within the Abbasid context and studies the structure that defined the court in a physical way, the Abbasid court culture; the role of ceremonial, the interpenetration of harem and court, and the understanding of particular functions of courtiers. Alternate years.

HIST 219 The Formation of Islamic Thought 3.0; 3 cr.

A survey of major disciplines in Islamic thought as they developed in the first four centuries of Islamic history. The course covers topics such as the compilation of the Qur'an and Qur'an interpretation, the development of hadith, the evolution of legal thinking and legal schools, political thought, theological discussions, and sectarian movements. Annually.

HIST 220 Local Histories 3.0; 3 cr.

A term-specific variety of courses that focus on provincial history and deal with the affairs, both urban and rural, of a particular region or locality. Courses may include such titles as Bilad al-Sham, 600–1097 and Rural Syria in Ottoman times. May be repeated for credit under different topics. Occasionally.

HIST 225 Byzantine Empire and Civilization, 330–900 3.0; 3 cr.

A survey of Byzantine history from the foundation of Constantinople in 330 to the end of the Iconoclast controversy and the establishment of the Macedonian dynasty in the later ninth century. Readings focus on doctrinal controversies, the reconstruction of the empire in the seventh century, and foreign relations, as well as artistic and cultural expression. Alternate years.

HIST 226 Byzantine Empire and Civilization, 900–1453 3.0; 3 cr.

A continuation of HIST 225, down to the fall of Constantinople. Topics include the encounter with the Crusades and the Italian maritime states, changes in Byzantine society, and the erosion and fragmentation of the empire in the thirteenth and fourteenth centuries. Alternate years.

HIST 227 Cultures in Contact: The Crusades 3.0; 3 cr.

A survey of the history of the Crusades from the beginning of the movement in the eleventh century until the demise of the Crusader states in the Middle East at the end of the thirteenth century. This course investigates the political and social conditions in the Levant that enabled the Crusaders' initial success and ultimate failure. Alternate years.

HIST 230 Iran: State, Society, and Religion, 1501–1722 3.0; 3 cr.

A course on the origin, expansion, and development of the Safavid state from the establishment of the dynasty as leaders of a Sufi order in the early fourteenth century until the fall of the Safavid dynasty and state in the eighteenth century. In addition to the political history of Persia during this period, this course examines the economic, social, and intellectual life in Persia under the Safavids. Occasionally.

HIST 233 History of the Arabs to 632 (in Arabic) 3.0; 3 cr.

A course that covers Arabia before the coming of Islam, explaining in some detail the history of the various Arabian kingdoms of both Southern and Western Arabia. Particular importance is attached to the study of surviving epigraphy and the historical dimensions of Jahili poetry. Occasionally.

HIST 234 History of the Arabs, 632–750 (in Arabic) 3.0; 3 cr.

A survey of the Rashidun and Umayyad period, with special emphasis on the politics and society of the Umayyad Caliphate and its place in early Arab Islamic civilization. Original texts are used in addition to modern studies. Occasionally.

HIST 235 History of the Arabs, 750–950 (in Arabic) 3.0; 3 cr.

A course that covers the first two centuries of the Abbasid Empire until the arrival of the Buyids, the first dynasty openly to take the Abbasids under their wing. This course places particular emphasis on the culture of the period as well as on Abbasid institutions of government and society. Occasionally.

HIST 236 History of the Arabs, 950–1258 (in Arabic) 3.0; 3 cr.

A course that covers Arab history from the Buyids to the Mamluks, also discussing other major dynasties such as the Seljuks, Zengids, and Ayyubids. Occasionally.

HIST 237 Ottoman State and Society, 1300–1600 3.0; 3 cr.

A course on the formation, consolidation, and expansion of the Ottoman state from its birth as a ghazi principality in northwestern Anatolia in the late thirteenth century until the end of the so-called Classical Age. This course emphasizes political and institutional developments. Alternate years.

HIST 238 Ottoman State and Society, 1600–1923 3.0; 3 cr.

A continuation of HIST 237 which traces the change and transformation of the classical Ottoman system and the responses to it. This course examines the Ottoman reform efforts from traditional reform in the seventeenth century through the Tulip Age and down to the Tanzimat (modernization) of the nineteenth century. Alternate years.

HIST 239 History of the Arab East and Egypt from 1516 to 1798 3.0; 3 cr.

A course that covers the expansion of Ottoman rule into the Arab East and the nature of Ottoman domination and its consequences. Selected case studies investigate the emergence of local Arab autonomies in the seventeenth and eighteenth centuries. Alternate years.

HIST 240 Confronting Modernity: The Arab East and Egypt from 1798 to 1920 3.0; 3 cr.

A course on the Arab provinces of the Ottoman Empire in the age of the Tanzimat, foreign intrusion into the region, and the Arab provinces' progressive incorporation into a developing global economy. Special attention is given to Egypt's bid for autonomy, the nahda and the emergence of national sentiment in the Arab provinces of the Fertile Crescent. Alternate years.

HIST 242 A Social History of the Modern Middle East: 1800–1980 3.0; 3 cr.

A course that examines the historical trajectory and character of social groups— including peasants, workers, middle and upper classes—in the 19th and 20th century Middle East. It explores how the rise of modern interventionist states has transformed everyday social life. Also, it considers the effects, characteristics, and limits of the region's integration into the world economy, and the effect of oil and inter-state warfare on state-society relations. Alternate years.

HIST 243 History of the Arab East and Egypt since 1920 3.0; 3 cr.

The course focuses on the establishment of the mandate system, and other types of western control in the region, the struggle for Arab independence and the foundation of the post-colonial interventionist state. Alternate years.

HIST 244 Sociopolitical History of Modern Iran, 1800–1989 3.0; 3 cr.

The course focuses on the interaction between various social forces and the state in modern Iran. It examines the transformation of the state from a weak 19th century patrimonial monarchy, via an autocratic monarchy, to a post-revolutionary populist hierocracy; and discusses the transformation of tribes, the clergy, merchants, the intelligentsia, peasants, and workers, throughout the modern period. Alternate years.

HIST 245 History of Lebanon from 634 to 1920 A.D. 3.0; 3 cr.

A study of the history of the regions which came to constitute Greater Lebanon. This course analyzes the factors that contributed to the development of a distinctive Lebanese identity. Annually.

HIST 251 History of North Africa and Spain in the Middle Ages 3.0; 3 cr.

A survey of North Africa and Andalusia from the Arab conquest until the eclipse of Muslim power in al-Andalus. Alternate years.

HIST 252 The Middle Ages in Europe 3.0; 3 cr.

A study of the history of the Western half of the Roman Empire during the crisis of the third century until the rise of the earliest nation states in Europe in the tenth and eleventh centuries. Occasionally.

HIST 253 History of Europe from 1350 to 1618 3.0; 3 cr.

A course that covers the transformation of Europe under the twin influences of the Renaissance and the Reformation. Attention is given to the political and socio-economic reorientations provoked by the voyages of discovery and the rise of European colonial empires. Occasionally.

HIST 254 History of Europe from 1618 to 1815 3.0; 3 cr.

A survey of the political and socio-economic evolution of Europe from the outbreak of the Thirty Years' War to the Congress of Vienna. Special attention is devoted to the rise to primacy of England and France and to the revolutionary transformations that the latter experienced. Occasionally.

HIST 255 History of Europe from 1815 to 1871 3.0; 3 cr.

A survey of the failure of the Vienna Settlement to preserve the European political status quo, the transformation of Europe under the impact of industrialization, and the emergence of dynamic new states in Italy and Germany. Occasionally.

HIST 256 World History from 1871 to 1914 3.0; 3 cr.

An examination of the socio-political and economic transformations which culminated with World War I. Attention is paid to the phenomenon of European imperialism and to the failure of the European state system and diplomacy to maintain peaceful co-existence. Occasionally.

HIST 257 The Contemporary World Since 1914 3.0; 3 cr.

A survey of the attempts to reconstruct a new world order at Versailles, the revolutionary overturn of existing orders in Russia, Italy, Germany, and China, the slide into World War II, and its aftermath. Occasionally.

HIST 258 Special Topics in History 3.0; 3 cr.

A term-specific variety of in-depth courses involving a detailed and systematic analysis of a particular topic, region, or nation. Examples of courses offered include Palestine under Mandate, Middle Eastern Monarchies, 1920-1958, Revolution in the Middle East, the Sea in History, Islamic Cities and Urbanism in the Modern Middle East. May be repeated for credit under different topics. Occasionally.

HIST 262 Women and Gender in Classical Islamic Society 3.0; 3 cr.

An investigation of the history of gender roles, perception, and experiences in the social, political, economic, and legal contexts of classical Muslim societies. Through a topical approach, emphasis is placed on the variety of Muslim women's experience. Reading material includes translations of primary sources that will be at the center of class discussions. Alternate years.

HIST 263 Islamic Cities, 600-1500 3.0; 3 cr.

An introductory survey of the development and diversity of cities in the Islamic world from the seventh century until the beginning of the sixteenth century as understood by historians and archaeologists. With some reliance on conceptual writing on urbanism, students will investigate diverse textual and material sources on the origins, forms, and functions of cities within the social, economic, and political contexts of the pre-modern Islamic world. Equivalent to AROL 263. Alternate years.

HIST 271 Race, Class, Gender: Introduction to American Social History 3.0; 3 cr.

A course that begins with the notion of how the study of the American past has been revolutionized in recent decades by social history, which focuses on the experiences of everyday people, particularly those from subordinate social groups. Employing this approach, the course looks at the lives of African-Americans, immigrant workers, and women, and shows how this alters the traditional picture of American history. Occasionally.

HIST 272 Economic History of the United States 3.0; 3 cr.

A survey of the economic life of the United States from colonial times to the present. This course examines the development of the economy and business institutions and corresponding changes in public policy and cultural life. Topics addressed include the colonial economy within the mercantilist system, the economics of slavery, industrialization, the rise of large corporations, government regulation, the Great Depression, the recent decline of traditional manufacturing, and the emergence of a high-technology, service-oriented economy. Occasionally.

HIST 273 The United States and the Middle East 3.0; 3 cr.

An examination of the varying and complex relationship between the United States and the Middle East over the last two centuries. Subjects examined include images of the Middle East in early American political discourse, the activities of American missionaries and the founding of AUB, Arab immigration to the US, the role of American oil companies in the region and the rise of OPEC, Cold War diplomacy toward the Arab states and Israel, the Iran hostage crisis, US intervention in the conflict in Lebanon, and the Gulf War. Occasionally.

HIST 274 The United States in the Twentieth Century 3.0; 3 cr.

A survey of the social, political, and cultural development of the United States from the early twentieth century until recent times. This course emphasizes particular episodes of domestic political reform such as the New Deal, the changing social roles of African-Americans and women, the turmoil of the 1960s and its aftermath, and the role of the United States as a world power. This course is designed as a companion course to HIST 200, although HIST 200 is not a prerequisite for HIST 274. Annually.

HIST 278/279 Special Topics in United States History 3.0; 3 cr. (each)

A course emphasizing a particular subject, theme, period, or region in the history of the United States (e.g., Native Americans, US environmental history, Civil War and Reconstruction, the American West) to be offered by resident or visiting specialists with expertise in the field. May be repeated for credit. Equivalent to AMST 215/230. Occasionally.

HIST 286 Historical Interpretation 3.0; 3 cr.

An introduction to current theoretical trends and interpretations in history and archaeology, including postmodern interpretations. Alternate years.

HIST 287 Historical Writing 3.0; 3 cr.

An applied library course focusing on the conduct of historical and archaeological research and writing. Emphasis centers on historical and archaeological methodology in the identification and utilization of sources, analysis, synthesis, and exposition. Alternate years.

HIST 291/292 Senior Seminar in Arab and Middle Eastern History 3.0; 3 cr. (each)
A seminar in which students work in association on a select topic, report on their progress in class, and incorporate their findings in a detailed paper applying recognized historical methods of referencing and documentation. Alternate years.

39 Credits in History

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Community-Engaged Learning (3)**
Lecture Courses (9+39+6 +6+3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values Nine history courses (27 cr.) from the following two categories: HIST 202, 212, 213, 214, 216, 217, 219, 220, 225, 226, 227, 230, 233, 234, 235, 236, 237, 238, 239, 240, 242, 243, 244, 245, 251, 258, 262, 263 HIST 252, 253, 254, 255, 256, 257, 259, 260, 271, 272, 273, 274, 278, 279 (no more than two courses [6 cr.] may be taken from this category)	Two courses (6) (The academic advisor will recommend particular courses in these disciplines)	Two courses (6) (The academic advisor will recommend particular courses in these disciplines One course (3) in computer literacy	Required course (3)
Seminar (6)		Required history courses: HIST 291(3), 292(3)			
Laboratory (3)				Computer Lab (3)	

Research Project (6)		Required history courses: HIST 286(3), 287(3)			

Archaeology

Mission Statement

The undergraduate program in Archaeology provides students with a working knowledge and critical understanding of the methodological and theoretical principles of archaeological investigation and fieldwork. Its curriculum introduces students to the wealth and diversity of Mediterranean and Near Eastern archaeology. In addition to developing essential knowledge about the material and cultural roots of past societies, the program enhances student awareness about the value and relevance of Lebanon's and the region's archaeological heritage. In line with the faculty's mission, the program maintains major and minor flexible requirements, enabling students to explore other areas of academic interest.

BA in Archaeology

Students majoring in archaeology must complete a minimum of 39 credit hours in the department, including HIST 286, HIST 287, AROL 233 or 234, and AROL 291 or AROL 292. Detailed programs are determined by subcommittees of the department, which advise each student on courses in her/his major, related departments, and electives.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in Archaeology

Students choosing a minor in archaeology must complete five courses numbered 200 and above, including one of the following courses: AROL 211, AROL 212, AROL 233, AROL 234, AROL 291, or AROL 292.

Course Descriptions

AROL 101 Introduction to Archaeology 3.0; 3 cr.

An introductory course on how the world's archaeological resources are threatened and require rescue, protection, and management. Archaeology studies this cultural heritage and rediscovers human experience from its origins to the present. What is the nature of archaeological evidence, and how can it be saved? Every term.

AROL 201 Archaeology in Lebanon 3.0; 3 cr.

A course that presents the archaeology of Lebanon: its history, institutional organization, the state of the evidence, and the problems Lebanon's archaeological heritage is facing. Reports of the country's main excavated sites and standing monuments are studied in combination with required site visits. Alternate years.

AROL 211/212 Methodology 3.0; 3 cr. (each)

A study of the methods of recovery, systematic description, integration, and presentation of archaeological material for the preservation and reconstruction of information from the human past. Special emphasis is given to cultural heritage preservation and education in Lebanon and the Near East. Alternate years.

AROL 213 The Human Story I: The Old Stone Age (up to ca. 10,000 BC) 3.0; 3 cr.

A course on the physical and cultural evolution of hominids and early humans subsisting on food gathering, hunting, and fishing in a Pleistocene environment. The cultural and functional significance of artifacts and lifestyles are investigated with the help of information gained from the palaeoenvironment, experimental technology, and ethnography. Alternate years.

AROL 214 The Human Story II: The New Stone Age or Neolithic Period (tenth to fourth millennium BC) 3.0; 3 cr.

A course on the gradual domestication of plants and animals, leading to food production, and the development of socio-cultural systems with increasing differentiation of activities. Neolithic village communities are investigated for evidence of new technologies and arts and crafts, including exotic raw materials and luxury goods. Alternate years.

AROL 215 The Near East in the Bronze Age I (Chalcolithic and Early Bronze Age) 3.0; 3 cr.

This course focuses on the emergence of complex societies in the Near East during the fourth to third millennia BC. Key issues are the transition from a village-based to an incipient urban society, the development of social stratification, craft specialization, and international trade. Alternate years.

AROL 216 The Near East in the Bronze Age II (The Middle and Late Bronze Age) 3.0; 3 cr.

This course focuses on the development of complex urban societies in the Near East during the second millennium BC. Key issues are the development of urban communities and incipient territorial states, their incorporation into larger empires, the development of palace economies, international trade, and political relations, and the breakdown of the Bronze Age system. Alternate years.

AROL 217 Phoenicia and the Phoenicians 3.0; 3 cr.

An investigation of the archaeology of the Levantine coast between 1200 and 300 BC, with special emphasis on recently excavated Iron Age sites in Lebanon. This course examines the organization of the Phoenician city-states and their material culture. Alternate years.

AROL 218 The Phoenician Expansion in the Mediterranean 3.0; 3 cr.

A study of the Phoenician, mainly Tyrian and Sidonian, expansion in the Mediterranean, its causes, and the means by which it was achieved. This course also examines the material culture of the first millennium BC Phoenician settlements in Cyprus, North Africa, Italy, and Spain as well as cultural and economic interaction with local populations. Occasionally.

AROL 219 Ancient Mesopotamia: Sumer and Akkad 3.0; 3 cr.

A study of the major political, cultural, and technological achievements of Mesopotamian civilization from the fourth millennium BC to the fall of the Ur III Dynasty. Specific archaeological sites are chosen to illustrate the material culture of the successive historical periods from Late Uruk to Neo-Sumerian times. Occasionally.

AROL 220 Ancient Mesopotamia: Assyria and Babylonia 3.0; 3 cr.

A study of the major political, cultural, and technological achievements of Mesopotamian civilization from the second millennium BC to the fall of the Neo-Babylonian Empire. Specific archaeological sites are chosen to illustrate the material culture of the successive historical periods from the Old Babylonian/Old Assyrian period to Neo-Babylonian times. Occasionally.

AROL 221 Archaeology of the Greek World I 3.0; 3 cr. (each)

A course on the Greek Bronze and Dark Ages, covering the archaeology of Minoan Crete, the Cyclades, Helladic and Mycenaean Greece, and the development of the early Greek city-states. Alternate years.

AROL 222 Archaeology of the Greek World II 3.0; 3 cr.

A course on Archaic and Classical Greece that explores the history and archaeology of Greece, Western Asia Minor, and the Greek colonies in Southern Italy, and Sicily, from the eighth to the fourth centuries BC. Alternate years.

AROL 223 Archaeology of the Hellenistic World 3.0; 3 cr.

A course on the history and archaeology of the empire of Alexander the Great and his successors, in Greece, Asia Minor, the Near East, Iran, and beyond from the fourth to first centuries BC. This course covers the spread of Greek culture and institutions, and their interaction with local cultures. Alternate years.

AROL 224 Introduction to the Roman World 3.0; 3 cr.

An introduction to society and culture of the Roman Empire. The focus of this course is on Rome and the provinces, imperial history, everyday life, and material culture between the second century BC and the fourth century AD, with special emphasis on the first and second centuries, when the Roman Empire was at its height. Alternate years.

AROL 225 The Roman and Byzantine Near East 3.0; 3 cr.

A study of the history and material culture of the Near East, from the first century BC to the seventh century AD, including archaeological sites, religion, art, and architecture. The emphasis is on local traditions and responses to Roman rule. Alternate years.

AROL 226 The World of the Philistines, Israelites, and Aramaeans 3.0; 3 cr.

An investigation of the material culture of Syria and Palestine from 1200–300 BC, with special emphasis on the origin and early settlement of Philistines, Israelites, and Aramaeans, the formation of their states, and the processes of urbanization. Alternate years.

AROL 227 The Archaeology of Anatolia I: From the Neolithic to the Middle Bronze Age (10,000—1600 BC) 3.0; 3 cr.

The course covers the archaeology of Anatolia (modern Turkey) from the beginning of the Neolithic (ca. 10,000 BC) until the end of the Middle Bronze Age (ca. 1600 BC), with a special focus on key concepts such as the process of neolithization, the emergence of elites and craft specialists in the Early Bronze Age, and the development of international trade relations in the Middle Bronze Age. Alternate years.

AROL 228 The Archaeology of Anatolia II: The Hittites (1600-1200 BC) 3.0; 3 cr.

This course deals with the archaeology of Anatolia in the second millennium B.C. ca. 1600 to ca. 1200 BC. It discusses the rise and development of the Hittite empire, its material culture and the reasons of its collapse around 1200 BC. Special focus is on the emergence and decline of complex state societies and on the interconnection of Anatolia with the Ancient Near East. Alternate years

AROL 230 Water in a Changing World 3.0; 3 cr.

This course provides a brief introduction to the science of water, both from a geological/hydrological/environmental and from an archaeological/historical perspective. The course explores how societies in the past and in the present dealt or deal with water management issues. The course aims to provide students with the opportunity to explore water related issues with supported science and historical evidence. This course was previously offered as AROL 235AH. Students cannot receive credit for both GEOL 208 and AROL 230. Annually.

AROL 231 Ancient Near Eastern Religions 3.0; 3 cr.

A study of ancient Mesopotamian, Canaanite, and biblical religious texts with emphasis on creation myths, divine beings, death and the afterlife, cults and rituals. This course also includes a complementary investigation of archaeological evidence for religious beliefs and practices. Occasionally.

AROL 232 Animals in Archaeology 3.0; 3 cr.

This course examines the relationship between humans and animals from the Palaeolithic to the end of the Roman Period. The course answers questions such as: 1) Why, when and how did humans use animals? 2) How did animals influence and change the social and economic structures of past human societies? Important concepts such as the domestication of animals, the secondary products revolution, and the development of specialized ways of subsistence such as pastoralism and nomadism will be discussed. Occasionally.

AROL 233/234 (A, B, C...) Fieldwork in Archaeology 3.0; 3 cr. (each)

A course entailing participation in archaeological fieldwork to acquire practical experience of methods and techniques used in area surveys, excavation, building recording, post-excavation analysis, or ethnographic data collection related to archaeological fieldwork. Restricted to majors and minors in Archaeology. May be repeated for credit upon approval of the department. Annually.

AROL 235/236 Special Topics in Archaeology 3.0; 3 cr. (each)

A course on the archaeology of a particular area, region (e.g., Anatolia, the Arabian Peninsula, Egypt, Iran, etc.) or subject. Such courses are offered by resident or visiting specialists in their respective fields. May be repeated for credit. Occasionally.

AROL 237 Plants and People in the Past 3.0; 3 cr.

This course investigates the dynamic and co-dependent relationship between people and plants in the past, from the Palaeolithic to the Roman Period, based on archaeological evidence primarily from ancient Egypt, Africa and the Near East. The course will address topics relating to agriculture and land management, the economic value of plants, plant food processing technologies, nutrition and diet, production of furniture and textiles, the relationships between plants and animals in agricultural systems, and the cultural or symbolic significance of plants.

AROL 238 Origins and Growth of Agriculture 3.0; 3 cr.

This course will introduce students to the origins of agriculture in the Fertile Crescent. It focusses on the cultivation and domestication of cereals, based on archaeobotanical data from exactions at Paleolithic and Neolithic sites in the Eastern Mediterranean and Northern Euphrates regions, looking at the causes and effects of the gradual shift from gathering wild plants, to the appearance of genetically altered “domestic” cereals, and formal agricultural systems between c.25,000-6,000 years ago.

AROL 240 Introduction to Ancient Egypt 3.0; 3 cr.

This course will introduce students to the history, archaeology, art, architecture, and texts of Ancient Egypt from the Palaeolithic to the end of the New Kingdom. It discusses the origins of civilization along the Nile and rise of Egypt as a powerful nation in the region, focusing on the social and cultural developments experienced by the people of ancient Egypt.

AROL 241 Daily Life in Ancient Egypt 3.0; 3 cr.

This course will introduce students to aspects of daily life in Ancient Egypt during the pharaonic period. Students will be introduced to, and learn to assess the relative values of the rich variety of evidence for everyday activities in ancient Egypt, including private and royal funerary and religious art, archaeological evidence from settlements, tombs, and temples, and textual evidence covering administration, medicine, legal issues, religion, and personal matters.

AROL 242 Ancient Egyptian Towns 3.0; 3 cr.

This course takes an in-depth look at the rich archaeological remains of villages, towns and cities in Egypt, from Prehistory to the Roman Period. Students will be presented with a series of case studies of different sites across Egypt, based upon the most up-to-date results from excavations, looking at different types of settlements and the life within those towns and villages. The course will show the analysis of architectural remains, and the study of material culture (ancient garbage), reveal a wealth of information about the nature and structure of ancient societies – with methods that can be easily applied to help us better understand our place in our own modern world.

AROL 263 Islamic Cities, 600-1500 3.0; 3 cr.

An introductory survey of the development and diversity of cities in the Islamic world from the seventh century until the beginning of the sixteenth century as understood by historians and archaeologists. With some reliance on conceptual writing on urbanism, students will investigate diverse textual and material sources on the origins, forms, and functions of cities within the social, economic, and political contexts of the pre-modern Islamic world. Equivalent to HIST 263. Alternate years.

AROL 291/292 Senior Seminar 3.0; 3 cr.

A seminar on research methods in archaeology. Subjects include the study and identification of material culture and theoretical frameworks, or explanation in archaeology. Students are expected to research specific topics, present the results for discussion at workshop sessions, and submit their final analysis in research papers. Alternate years.

AROL 293 Ancient Texts I 3.0; 3 cr.

An introduction to West Semitic epigraphy, including the origin of the alphabet and development of alphabetic scripts as well as the presentation and comparative study of the various Semitic dialects. Occasionally.

AROL 294 Ancient Texts II 3.0; 3 cr.

Readings in a chosen ancient Semitic language (Aramaic or Phoenician). The course focuses on the grammar as well as on the transliteration of chosen texts from their original Semitic script, their translation, and their interpretation. May be repeated for credit under different topics. Occasionally.

39 Credits in History

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (Min. 6)	Understanding the World, Quantitative Reasoning (9:3/6+3/6)	Community-Engaged Learning (3)

Lecture Courses (9+39+6 +6+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values Nine archaeology courses (27 cr.) from the following: AROL 201, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 231, 232, 235, 236, 238, 240, 241 and 263	Two courses (6) (The academic advisor will recommend particular courses in these disciplines)	Two courses (6) (The academic advisor will recommend particular courses in these disciplines One course(3) in computer literacy	Required course (3)
Field Work (3)		Required archaeology course: AROL 233(3), or 234(3)			
Laboratory (3)				Computer Lab (3)	
Research Project (6)		Required history courses: HIST 286(3), 287(3)			

Minor in Marine Sciences and Culture

Students choosing to minor in the multidisciplinary Marine Sciences and Culture (MSCU) program must complete MSCU 201, MSCU 202, and MSCU 203, along with two electives chosen from any of the following: MSCU 204, MSCU 211, AROL 211, 213, 214, 215, 216, 217, 218, 221, 222, 223, 224, 225, 226, BIOL 246, 255, 266, or GEOL 201, GEOL 210, GEOL 214, and GEOL 222.

Course Descriptions

MSCU 201 Coastal and Marine Environments: Introductory Course 3.0; 3 cr.

Coastal environments and coastal systems provide a basis to explore human interaction with the sea in antiquity. This course explores how archaeologists go about investigating and recording these past activities, and introduces students to a multi-disciplinary approach that combines oceanography and archaeology to shed light on maritime history.

MSCU 202 Marine Techniques, Prospecting, and Mapping 3.0; 3 cr.

From echo sounders to bathymetry and photogrammetry, this course explores the variety of techniques and technologies that are used to investigate and document the seabed. Students will gain an understanding of the technical methodology used by oceanographers and geologists to explore maritime environments.

MSCU 203 Summer Fieldwork Course 3.0; 3 cr.
The field school, during which students will undertake fieldwork in the Mediterranean Sea, offers a range of experiences, from coastal survey and the deployment and analysis of remote sensing geophysical techniques and data, through to diver survey and the documentation of archaeological remains on the seabed.

MSCU 204 Coastal and Marine Environments: Maritime Cultural Heritage 3.0; 3 cr.
This course addresses the range of threats, whether natural or anthropic, that presently target maritime cultural heritage assets. It presents a comprehensive overview of international and national legislation related to the protection and management of the maritime cultural heritage. It also covers the application of ethnography to the maritime archaeological enquiry and reflects on how maritime communities, past and present, are an integral part of the socio-cultural heritage of a country.

MSCU 211 A history of Maritime Economics 3 cr.
The suggested course investigates maritime economies of the Mediterranean region from the Neolithic to the Roman Period based on the principles of maritime archaeology and marine sciences with a particular focus on the eastern Mediterranean such as production and distribution of goods through maritime transportation, port management, and port systems, maritime commercial networks, the exploitation of marine resources, and the relationship between ports and hinterland within the defined period of study.

Department of Mathematics

Chairperson:	Bertrand, Florian J.
Professor Emeritus:	Muwafi, Amin
Professors:	Abi-Khuzam, Faruk F.; Abu-Khuzam, Hazar M.; Khuri-Makdisi, Kamal F.; Nassif, Nabil R.; Raji, Wissam V.; Shayya, Bassam H.
Associate Professors:	Alhakim, Abbas M.; Bertrand, Florian J.; Della Sala, Giuseppe A.; El Khoury, Sabine S.; Tlas, Tamer M.
Assistant Professors:	Andrist, Rafael B.; Monni, Stefano; Moufawad, Sophie M.; Roy, Tristan Cyrus; Sabra, Ahmad A.; Taati, Siamak
Lecturers:	Mroue, Fatima K.; Yamani, Hossam A.
Instructors:	Ashkar, Alice N.; Bou Eid, Michella J.; Fleihan, Najwa S.; Itani-Hatab, Maha S.; Khachadourian, Zadour A.; Nassif, Rana G.; Rahhal, Lina A.; Tannous, Joumana A.

The Department of Mathematics offers programs leading to the degrees of Bachelor of Science (BS) and Bachelor of Arts (BA) in Mathematics, Applied Mathematics, and Statistics. It also offers programs leading to the degree of Master of Science (MS) in Mathematics.

Mission Statement

The Department of Mathematics subscribes to the view that "Mathematics as an expression of the Human mind reflects the active will, the contemplative reason, and the desire for aesthetic perfection." Through the different fields of Algebra, Analysis, Geometry, Number Theory, Statistics, and Applied Mathematics, the department aims to train students in quantitative reasoning, in dealing with abstraction, in enhancing their sense of formalism, in tackling mathematical problems, and in writing clear and rigorous proofs. The training will help the student acquire a sound balance between abstract generality and colorful individuality, and between the qualitative and quantitative aspects of Mathematics. It also will help the student master the theory through a clear comprehension of the theoretical aspects without losing sight of applications. Graduates of the Mathematics Department should be well placed to work in various professional areas of Education, Finance, Information Technology, or for pursuing graduate studies in Mathematics or a related area.

BA or BS in Mathematics

The department requires 9 credits in courses numbered 200 or above in the sciences for the BS degree, and at least 9 credits in courses numbered 200 or above in the arts Cultures and Histories or Societies and Individuals for the BA degree. In both cases, it is recommended that at least 6 of these 9 credits be in disciplines that use quantitative methods and be chosen in conjunction with the student's faculty advisor. In addition, the departmental requirements are as follows:

MATH 201, MATH 210, MATH 214, MATH 219, MATH 223, MATH 227, MATH 233, MATH 241, and at least one of MATH 220 or MATH 242, and 12 more credits chosen from MATH 202 and mathematics courses numbered 213 or above. In addition, students must take CMPS 201 or 203, which is a first course in programming. Students should note that MATH 211 and MATH 212 do not count towards the major course requirements for the BS and BA in Mathematics. For pure mathematics major, MATH 211 and/or MATH 212 may be taken as free electives.

A transfer student who has done well in MATH 218 can count it toward the mathematics major instead of MATH 219, subject to departmental approval. In such a case, the department will usually require the student to take MATH 220.

Students wishing to pursue graduate study in mathematics are strongly urged to take MATH 220, MATH 242, and MATH 213 or MATH 215. They may also want to consider taking one or more graduate course in their senior year. Students interested in high school teaching are encouraged to include MATH 202, MATH 213, MATH 251, and MATH 261 among their courses.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in Mathematics

A minor in mathematics requires 18 credits which include MATH 201, MATH 210, MATH 218 or MATH 219, and 9 more credits in mathematics courses numbered MATH 202, MATH 211 or above, or statistics courses numbered STAT 230 or above.

Note: A student can opt for a minor in mathematics or a minor in applied mathematics, but not both.

BA or BS in Applied Mathematics

A student opting for the program in Applied Mathematics can earn either a BA or a BS degree. The science requirements for the BS are fulfilled by at least 2 science courses (or 6 science credits) chosen in departments in the FAS; the arts requirements for the BA are fulfilled by 2 courses (6 arts credits) chosen in departments in the FAS. The Mathematics requirement is the same for both degrees and consists of 39 credits in Mathematics courses as follows:

MATH 201, MATH 202, MATH 210, MATH 212, MATH 218 or MATH 219, MATH 223, STAT 233, MATH 251, MATH 281, at least one of MATH 224 and MATH 227, and at least 9 additional credits numbered 211 and above. These additional credits must include at least two of the following three areas:

- Analysis and Geometry: MATH 213, MATH 214, MATH 215, MATH 224, MATH 225, MATH 227
- Discrete Math and Algebra: MATH 211, MATH 220, MATH 241, MATH 242, MATH 261
- Probability and Statistics: STAT 231, STAT 234 or higher

In addition, the student must take CMPS 201 or 203, which is a first course in programming. Moreover, 9 credits must be chosen in one applied discipline or track from the following list:

- Computer Science: CMPS 202, CMPS 214, CMPS 215, CMPS 220, CMPS 231, CMPS 261, CMPS 262
- Economics: ECON 212, ECON 214, ECON 215, ECON 217, ECON 218, ECON 227, ECON 228, ECON 239, ECON 243
- Natural Sciences: PHYS 210, PHYS 211, PHYS 212, PHYS 214, PHYS 217, PHYS 220, PHYS 235, PHYS 236, CHEM 201, CHEM 217, CHEM 218, CHEM 233
- Engineering: CIVE 210, CIVE 310, CIVE 311, CIVE 411, CIVE 610, EECE 210, EECE 290, EECE 330, EECE 340, EECE 442, EECE 490, EECE 491, EECE 641, EECE 693, INDE 301, INDE 302, MECH 201, MECH 230, MECH 310, MECH 314, MECH 320, MECH 332, MECH 412, MECH 414
- Statistics and Applications: STAT 231, STAT 234, STAT 235, STAT 236 or EPHD 213, STAT 237, STAT 238, STAT 239, EPHD 203, CMPS 262, EECE 490, EECE 693
- Actuarial Science: MATH 272, MATH 273, MATH 274

Some of the above Tracks can be further subdivided as listed below. Students can use the following classification as a guideline for choosing their 3 track courses.

- Econometrics: ECON 214, ECON 215, ECON 217
- Macroeconomics: ECON 212, ECON227, ECON 228
- Mathematical Economics: ECON 217, ECON 239, ECON 243
- Mechanics: CIVE 210, MECH 201, MECH 230, MECH 320, MECH 332
- Fluid Mechanics and Thermodynamics: MECH 310, MECH 314, MECH 412, MECH 414
- Signal Processing: EECE 210, EECE 290, EECE 340, EECE 442, EECE 491, EECE 641
- Operations Research: INDE 301, INDE 302, INDE 303 or STAT 238
- Structures: CIVE 210, CIVE 310, CIVE 311, CIVE 411, CIVE 610
- Machine Learning: STAT 239, EECE 490, EECE 693

- Statistical Techniques: STAT 231, STAT 234, STAT 235, STAT 236, STAT 237
- Statistics and Probability: STAT 231, STAT 234, STAT 238, STAT 23
- Statistics and Data Science: STAT 231, STAT 234, STAT 239, CMPS 262
- Statistics and Health Sciences: STAT 231, STAT 234, STAT 236, EPHD 203, EPHD 213

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in Applied Mathematics

A minor in Applied Mathematics requires 18 credits which include MATH 201, MATH 210, either MATH 218 or MATH 219, and 9 more credits in mathematics courses numbered MATH 202, MATH 211 or above, or statistics courses numbered STAT 230 or above.

Note: A student can opt for a minor in mathematics or a minor in applied mathematics, but not both.

BA or BS in Statistics

The department requires 6 credits in courses numbered 200 or above in the natural sciences for the BS degree, and at least 9 credits in courses numbered 200 or above in the arts Cultures and Histories or Societies and Individuals for the BA degree. In both cases, it is recommended that at least 6 of these 9 credits be in disciplines that use quantitative methods and be chosen in conjunction with the student's faculty advisor. The Quantitative Thought requirements are the same for both degrees and consists of 45 credits as follows:

- In statistics: STAT 231, STAT 233, STAT 234, STAT 235, STAT 239, and at least one of STAT 237 or STAT 238
- In mathematics: MATH 201, MATH 210, MATH 218 or MATH 219, MATH 251
- In computer science: CMPS 201 or CMPS 203, CMPS 244
- 9 credits must be chosen from the following list of courses:
    - Statistics and Data Science: STAT 236, STAT 237 or STAT 238, STAT 333, STAT 338, STAT 348
    - Mathematics: MATH 211, MATH 281, MATH 351
    - Computer Science: CMPS 262

Moreover, an additional 9 credits must be chosen from the following list of technical elective courses from applied disciplines or mathematics:

- **Computer Science**: CMPS 202, CMPS 261, CMPS 364, CMPS 365
- **Engineering**: INDE 301, INDE 302, EECE 330, EECE 490, EECE 641, EECE 693
- **OSB**: BUSS 200, MNGT 222, DCSN 200, DCSN 216, DCSN 220
- **Mathematics**: MATH 211, MATH 220, MATH 223, MATH 224, MATH 225, MATH 227, MATH 241, MATH 261, MATH 272, MATH 273, MATH 274, MATH 281, MATH 306, MATH 351

Students planning to pursue higher education in statistics are advised to take their technical electives in advanced mathematics courses, such as MATH 223 and MATH 227.

Students interested in Actuarial Science are advised to take their technical electives as MATH 272, MATH 273, and MATH 274. Note that, students planning to pursue a career as an Actuary have to pass a sequence of professional exams and complete VEE credits (Validation for Educational Experience). Thus, they are also advised to take the following courses within their degree requirements: ECON 211, ECON 212; and the following additional courses above the required 90 credits: BUSS 211, ACTN 210, FINA 210, FINA 220.

Students interested in Data Science are advised to take their technical electives as EECE 490 and EECE 693 and at least one course from: CMPS 202 or EECE 330, CMPS 261, EECE 641, BUSS 200, MNGT 222, DCSN 200, DCSN 216. They are also advised to take STAT 236 and STAT 237 within their degree requirements.

It is to be noted that STAT 201, STAT 203, STAT 210, and STAT 230 are mainly service courses. STAT 201 is essentially equivalent to EDUC 227, and STAT 210 is essentially equivalent to ECON 213. Students can get credit for only one of the following: STAT 201, STAT 203, STAT 210, STAT 230, STAT 233, EDUC 227, ECON 213.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Minor in Statistics

A minor in statistics can be pursued via one of two options:

- Option 1: MATH 201, MATH 218 or MATH 219, STAT 231, STAT 233, STAT 234 and STAT 235.
- Option 2: MATH 201, MATH 218 or MATH 219, STAT 230, STAT 234, STAT 235 and one additional advanced course in statistical sciences to be selected with the approval of the department chair. A list of recommended courses includes: STAT 236 or above, EPHD 320, EPHD 321, EECE 603, EECE 641, EECE 644, EECE 667, EECE 693, INDE 303, and INDE 430.

Course Descriptions

MATH 100 College Algebra 3.0; 3 cr.
Mathematical notations and basic notions; properties of real numbers; solving linear, quadratic, and absolute equations and inequalities; solving system of linear equations; properties of functions and their graphs; straight lines and parabolas and their equations; polynomial operations. Not open to students with prior credit in MATH 101 (or its equivalent). MATH 101 may be taken for credit after a student has passed MATH 100. Every term.

MATH 101 Calculus and Analytic Geometry I 3.1; 3 cr.
Limits, continuity, differentiation with application to curve plotting; Rolle's theorem; integration with application to area, distance, volume, arc-length; fundamental theorem of calculus, transcendental functions. MATH 101 may be taken for credit after a student has passed MATH 203. MATH 203 may not be taken for credit after a student has passed MATH 101. Based on placement. Every term.

MATH 101 I MATH 101 Intensive 0.0; 0 cr.
Mathematical notation and basic notions; properties of real numbers; factoring polynomials; linear and quadratic equations; fractions; inequalities; absolute value equations; angles and trigonometric functions. Based on placement. Co-requisite: MATH 101. Every Term.

MATH 102 Calculus and Analytic Geometry II 3.1; 3 cr.
Techniques of integration, improper integrals, polar coordinates, conic sections, analytic geometry in space, parametric equations, and vector functions and their derivatives. Prerequisite: MATH 101. Every term.

MATH 201 Calculus and Analytic Geometry III 3.1; 3 cr.
Sequences and series, Taylor approximation, Multivariable functions, partial derivatives, multiple integrals, cylindrical and spherical coordinates, and integration along curves. Prerequisite: MATH 102. Every term.

MATH 202 Differential Equations 3.1; 3 cr.
Integration of vector fields along curves and on surfaces, Green's theorem, Stokes's theorem, divergence theorem; first-order differential equations, linear differential equations, series solutions, Bessel's and Legendre's functions, the Laplace transform, and systems of differential equations. Prerequisite: MATH 201. Every term.

MATH 203 Mathematics for Social Sciences I 3.0; 3 cr.
Mathematical notations and basic notions; properties of real numbers; factoring polynomials; functions and their graphs; straight lines and parabolas and their equations; Gaussian elimination; exponential and logarithmic functions; limits and continuity; basic differential calculus. Not open to students with prior credit in MATH 101 (or its equivalent) or MATH 201. MATH 101 may be taken for credit after a student has passed MATH 203. MATH 203 may not be taken for credit after a student has passed MATH 101. Every term.

MATH 204 Mathematics for Social Sciences II 3.0; 3 cr.
Matrix operations, inverses and determinants; elementary combinatorics; introduction to probability; random variables; binomial, normal and Poisson distributions; basic integral calculus; introduction to differential equations; partial derivatives and extremal points of multivariable functions. Prerequisite: MATH 101 or MATH 203. Not open to students majoring in economics. Every term.

MATH 210 Introduction to Analysis 3.0; 3 cr.
The real numbers, completeness, sequences, some basic topology of the real line, compact sets, Heine-Borel theorem, continuous functions, intermediate value theorem, uniform continuity, extreme values, differentiation, mean-value theorem, Taylor's theorem, Riemann integration, sequences and series of functions. Prerequisite: MATH 201. Every term.

MATH 211 Discrete Mathematics 3.1; 3 cr.
Logical reasoning, sets, relations and functions; mathematical induction, counting, and simple finite probability theory; analysis of algorithms, complexity; recurrence relations and difference equations; truth tables and switching circuits; graphs and trees; strings and languages. MATH 211 does not count towards the major course requirements in pure mathematics. Pure mathematics majors may take MATH 211 as a general elective. This course is equivalent to CMPS 211. Every term.

MATH 212 Introductory Partial Differential Equations 3.0; 3 cr.
Partial differential equations as mathematical models in science. Method of characteristics and first-order quasilinear PDEs. Transport and wave equations, D'Alembert formula. Linear evolution equation and their eigensolutions eigensolutions. Fourier series: pointwise convergence, Gibbs phenomena, uniform convergence of sequences and series of functions and of Fourier series, Parseval formula. Application of Fourier series in solving second and higher-order linear PDEs on bounded domains (Heat systems, Laplace and wave equations). Method of separation of variables and Sturm-Liouville systems. Energy methods to study uniqueness, and equilibrium solutions. Fourier transform, inversion formula, and application to solving partial differential equations. MATH 212 does not count towards the major course requirements in pure mathematics. Pure mathematics majors may take MATH 212 as a general elective. Prerequisite: MATH 202. Every term.

MATH 213 Higher Geometry 3.0; 3 cr.
Topics chosen from isometries of Euclidean space, inversion, elements of differential geometry, the Frenet frame, curvature, torsion, the pseudo-sphere, hyperbolic geometry, and affine and projective geometry. Biennially.

MATH 214 Topology I 3.0; 3 cr.
Topological spaces, continuous functions, separation axioms, compactness, connectedness, metrizable spaces, product spaces, quotient topology. Prerequisite: MATH 210. Annually.

MATH 215 Introduction to Differential Geometry 3.0; 3 cr.
Parameterized curves and the Frenet-Serret frame, fundamental theorem for curves, isoperimetric inequality, regular surfaces, Gauss map and the fundamental forms, curvature, geodesics and parallel transport, Gauss-Bonnet theorem. Prerequisites: MATH 201 and MATH 218/219, or consent of instructor. Biennially.

MATH 216 Topology II 3.0; 3 cr.
A senior level course covering more advanced topics in topology. Prerequisite: Consent of instructor. Occasionally.

MATH 218 Elementary Linear Algebra with Applications 3.0; 3 cr.
An introduction to linear algebra at a less theoretical level than MATH 219. Systems of linear equations and Gaussian elimination, vectors in Rn, matrices, determinants, vector spaces, subspaces and dimension, orthogonal projection and least-squares approximation, eigenvalues, eigenvectors, and selected applications. Students cannot receive credit for both MATH 219 and MATH 218. Every term.

MATH 219 Linear Algebra I 3.0; 3 cr.
A rigorous introduction to linear algebra, with emphasis on proof and conceptual reasoning. Vector spaces, linear transformations and their matrix representation, linear independence, bases and dimension, rank-nullity, systems of linear equations, brief discussion of inner products, projections, orthonormal bases, change of basis, determinants, eigenvalues, eigenvectors, and spectral theorem. Students cannot receive credit for both MATH 219 and MATH 218. Every term.

MATH 220 Linear Algebra II 3.0; 3 cr.
A deeper study of determinants, inner product spaces, and eigenvalue theory. Adjoints and the spectral theorem, primary decomposition, quotient spaces, diagonalization, triangularization, rational and Jordan forms, connection with modules over a PID, dual spaces, bilinear forms, and tensors. Prerequisite: MATH 241 or consent of instructor. Biennially.

MATH 223 Advanced Calculus 3.0; 3 cr.
Metric spaces, normed vector spaces, the derivative as a linear transformation, chain rule, vector versions of mean-value theorem, Taylor's formula, inverse and implicit function theorems, Riemann integration in Rn, differential forms, the general Stokes's theorem, and notions of differential geometry. Prerequisites: MATH 210, and MATH 218 or MATH 219. Annually.

MATH 224 Fourier Analysis and Applications 3.0; 3 cr.
Fourier series, applications of Fourier series to the heat and wave equations, the Fourier transform on Rn, applications of the Fourier transform to the wave and heat equations on Rn, Shannon's sampling formula, the Radon transform, applications of the Radon transform to medical imaging, and the discrete (or fast) Fourier transform. Prerequisites: MATH 210, and MATH 218 or MATH 219. Annually.

MATH 225 Wavelets and Applications 3.0; 3 cr.
Discrete Fourier transform, fast Fourier transform, wavelets on the integers, applications to signal and image processing. Prerequisite: MATH 224. Occasionally.

MATH 227 Introduction to Complex Analysis 3.0; 3 cr.
Complex numbers, analytic functions, integration in the complex plane, Cauchy's integral theorem, Taylor series, Laurent series, singularities, residues, and contour integration. Prerequisites: MATH 210 or (MATH 201 and consent of instructor). Annually.

MATH 233 Advanced Probability and Random Variables 3.0; 3 cr.
Same description as STAT 233. Annually.

MATH 234 Introduction to Statistical Inference 3.0; 3 cr.
Same description as STAT 234. Annually.

MATH 238 Applied Probability Models 3.0; 3 cr.
Same description as STAT 238. Annually.

MATH 241 Introduction to Abstract Algebra 3.0; 3 cr.
Groups, subgroups, homomorphisms, normal subgroups and quotient groups, permutation groups, orbits and stabilizers, statement of Sylow theorems, rings, ideals, homomorphisms and quotient rings, and Euclidean and principal ideal domains. Prerequisite: MATH 219 or MATH 218 with a good understanding of proof, or consent of instructor. Annually.

MATH 242 Topics in Algebra 3.0; 3 cr.
Topics chosen from fields and Galois theory, advanced group theory, ring theory, modules over a PID, and other topics as determined by the instructor. Prerequisite: MATH 241. Biennially.

MATH 251 Numerical Computing 3.1; 3 cr.
Computer number representations and round-off errors; Basic techniques in numerical analysis: root finding; Gauss elimination and PLU decomposition; polynomial and spline interpolation; differentiation and integration, Richardson extrapolation; solving initial value problems for ordinary differential equations and systems of differential equations. Implementations and analysis of algorithms are stressed. Projects using MATLAB or similar tools are assigned. Prerequisites: CMPS 201 or 203 or EECE 230 or EECE 231, and MATH 201. Prerequisite or Co-requisite: MATH 218 or MATH 219. This course is equivalent to CMPS 251. Every term.

MATH 261 Number Theory 3.0; 3 cr.
Prime factorization, the Euclidean algorithm, congruences, quadratic reciprocity, some Diophantine equations, binary quadratic forms, and continued fractions. Prerequisite: MATH 219 or consent of instructor. Annually.

MATH 271 Set Theory 3.0; 3 cr.
Operations on sets and families of sets, ordered sets, transfinite induction, axiom of choice and equivalent forms, and ordinal and cardinal numbers. Occasionally

MATH 272 Mathematical Interest Theory 3.0; 3 cr.
This course develops a fundamental understanding of the concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows. Specific topics to be covered include: measurement of simple and compound interest, accumulated and present value, annuities, yield rates, amortization schedules, sinking funds, bonds, securities and related funds. It also includes material on financial derivatives. This course covers most of the syllabus of the SOA/CAS exam FM/2. Prerequisite: MATH 201. Annually.

MATH 273 Actuarial Mathematics I 3.0; 3 cr.
Same description as STAT 273. Annually.

MATH 274 Actuarial Mathematics II 3.0; 3 cr.
Same description as STAT 274. Annually.

MATH 281 Numerical Linear Algebra 3.0; 3 cr.
Basic Linear Algebra Subprograms (BLAS Operations of order 1, 2 and 3). Norms of vectors and matrices. Gram-Schmidt orthogonalization. Eigenvalues and Schur's decompositions. Singular value decomposition and pseudo-inverse of a rectangular matrix. Gauss transforms and PLU decomposition. Cholesky decomposition for symmetric positive definite matrices. Householder transforms and QR decomposition. Application to finding solutions to least square and linear regression problems. Iterative (indirect) methods to solve linear systems of equations: Jacobi, Gauss-Seidel, successive over-relaxation, gradient methods. Basic algorithms for computing eigenvalues of square matrices. This course is equivalent to CMPS 254. Prerequisites: MATH 218 or MATH 219. Prerequisite or Co-requisite: Math 251. Annually.

MATH 293 Senior Tutorial Courses 3.0; 3 cr.
Prerequisite: Senior standing.

BA in Mathematics: 39 Credits in Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (6)**	**Major requirements + Quantitative Reasoning (42)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+6 +42+6+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required courses (6)	Required mathematics courses (27): MATH 201, 210, 214, 219, 223, 227, 233, 241, and at least one of 220 or 242. Required mathematics electives (12): MATH 202, and/or mathematics courses numbered 213 and above. Required programming course (3): CMPS 201 or 203	Required Community-engaged learning course (3) Required Societies and Individuals courses (6)

BS in Mathematics: 39 Credits in Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (6)**	**Major requirements + Quantitative Reasoning (42)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+9 +42+6+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required courses (9)	Required mathematics courses (27): MATH 201, 210, 214, 219, 223, 227, 233, 241, and at least one of 220 or 242 Required mathematics electives (12): MATH 202, and/or mathematics courses numbered 213 and above. Required programming course (3): CMPS 201 or 203	Required Community-engaged learning course (3) Required Societies and Individuals courses (6)

BA in Applied Mathematics: 39 Credits in Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (3)**	**Major requirements + Quantitative Reasoning (42)**	**Applied Tracks (9)**	**Community-Engaged Learning (3), Societies and Individuals (6)**
Lecture Courses (9+12+3 +42+9 +3+6)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required courses (3)	Required Applied Mathematics courses (30): MATH 201, 202, 210, 212, 218 or 219, 223, 233, 251, 281, and at least one of 224 or 227. Required Mathematics electives (9): MATH courses numbered 211 and above. These credits must include at least two of the following three areas: >>Analysis and Geometry >>Discrete Math and Algebra >>Probability and Statistics Required Computer Science course (3): CMPS 201 or 203	9 credits chosen in one of the following applied disciplines or tracks: Computer Science Economics Natural Sciences Engineering Actuarial Sciences Statistics and Applications	Required Community-engaged learning course (3) 6 credits in Societies and Individuals. Must include one Economics course (3): ECON 211

BS in Applied Mathematics: 39 Credits in Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (6)**	**Major requirements + Quantitative Reasoning (42)**	**Applied Tracks (9)**	**Community-Engaged Learning (3), Societies and Individuals (6)**
Lecture Courses (9+12+6 +42+9 +3+6)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required courses (6)	Required Applied Mathe-matics courses (30): MATH 201, 202, 210, 212, 218 or 219, 223, 233, 251, 281, and at least one of 224/227. Required Mathematics electives (9): MATH courses numbered 211 and above. These credits must include at least two of the following three are-as: >>Analysis and Geometry >>Discrete Math and Al-gebra >>Probability and Statis-tics Required Computer Sci-ence course (3): CMPS 201 or 203	9 credits chosen in one of the following applied disciplines or tracks: Computer Science Economics Natural Sciences Engineering Actuarial Sciences Statistics and Applications	Required Commu-nity-enga- ged learn-ing course (3) 6 credits in Societies and Individ-uals. Must include one Economics course (3): ECON 211

Course Descriptions

STAT 201 Elementary Statistics for the Social Sciences 3.0; 3 cr.
Data organization and frequency distributions; measures of central tendency and dispersion; probability and random variables; binomial and normal distributions; estimation, and hypothesis testing. Open only to arts students whose mathematical preparation does not allow them to take STAT 210. Students who take STAT 201 will not receive credit for STAT 203, STAT 210, STAT 230, STAT 233, or ECON 213. Every term.

STAT 203 Statistics for Gender Studies 3.0; 3 cr.
This course is tailored for students interested in gender studies. The course will primarily use gender data for examples and case studies. Topics include: Populations, samples, and sampling error; types of data, frequency distributions, and graphical displays of data; empirical definition of probability and probability distributions; conditional probability, independence, random variables, binomial, normal, and t distributions; hypothesis testing; linear regression and correlation; chi squared test; and analysis of variance. This course can also serve as a course in general research methods. Students who take STAT 203 will not receive credit for STAT 201, STAT 210, STAT 230, STAT 233, or ECON 213. Every term.

STAT 210 Elementary Statistics for the Sciences 3.0; 3 cr.
Populations, samples, and sampling error; types of data, frequency distributions, and graphical displays of data; measures of central tendency and dispersion; probability and probability distributions; conditional probability, independence, Bayes' rule, and counting rules; discrete and continuous distributions, random variables, binomial, Poisson, normal, and t distributions; point and interval estimation and hypothesis testing; chi squared tests and One way Analysis of variance, linear regression and correlation. Computer packages may be used to illustrate methods. Students who successfully finish STAT 210 will not receive credit for STAT 201, STAT 203, STAT 230, STAT 233, or ECON 213. Every term.

STAT 230 Introduction to Probability and Statistics 3.1; 3 cr.
Display of data; probability models; independence and conditioning; methods of counting; discrete and continuous random variables and their individual and joint distributions; mixture of distributions; expectation of random variables; variance, covariance and correlation; Chebyshev's inequality; law of large numbers; central limit theorem; point and interval estimation; hypothesis testing. Prerequisite: MATH 201. Students who successfully finish STAT 230 will not receive credit for STAT 201, STAT 203, STAT 210, STAT 233, or ECON 213. Every term.

STAT 231 Introductory Statistical Computing 3.0; 3 cr.
This course introduces the principles of statistical thinking as well as the main problems of statistics with a computational emphasis and perspective. The course begins with a primer on the R statistical environment, and the problems of pseudorandom number generation of both uniform and non-uniform random variates. It then proceeds to develop the main statistical ideas of sampling, inference (point and interval estimation, hypothesis testing) and concludes with simple linear regression as a first example of modeling. Methods are illustrated with R. Annually.

STAT 233 Advanced Probability and Random Variables 3.0; 3 cr.
Axiomatic definition of probability, random variables, univariate and multivariate probability density functions and cumulative distribution functions; expectation; moment generating function; conditional distribution; families of discrete and continuous random variables; distribution of functions of random variables; stochastic convergence and convergence of distribution functions; the law of large numbers and the central limit theorem. Prerequisite: MATH 201. Students who successfully finish STAT 233 will not receive credit for STAT 201, STAT 203, STAT 210, STAT 230, or ECON 213. Annually.

STAT 234 Statistical Inference I - Parametric Methods 3.0; 3 cr.

Convergence in probability, in distribution, in mean. Review of the central limit theorem and the weak law of large numbers. Point estimation. Method of moments. Maximum likelihood. Fisher information. Information bound. Properties of maximum likelihood estimation. Newton-Raphson and EM algorithms. Sufficiency. Exponential families. Blackwell Rao Theorem. The bootstrap method. Confidence intervals. Hypothesis Testing. Errors. Optimality for tests. Neyman–Pearson tests and optimal tests for one-sided hypotheses. Generalized likelihood ratio tests. Elements of Bayesian estimation and decision theory. Prerequisites: STAT 233, or STAT 230 with consent of instructor. Annually.

STAT 235 Applied Regression Analysis 3.0; 3 cr.

Simple Linear Regression. Multiple Regression. Main Effects and Their Interpretation. Complex Regressors. Testing and Analysis of Variance. Weighted Least Squares. Variance Stabilizing Transformations. The Delta Method. Bootstrap. Cross Validation. Regression Diagnostics. Variable Selection. Penalized Regression. Logistic Regression, Poisson Regression. Prerequisites: MATH 218 or MATH 219; STAT 234, or STAT 230 with the consent of the instructor. Annually.

STAT 236 Sampling Techniques 3.0; 3 cr.

This course teaches various methods and analyses for sampling from finite populations, which are essential for conducting statistical surveys in social, government and health statistics. It covers various schemes of sampling including simple random sampling, systematic and cluster sampling, stratified sampling, multi-stage sampling, ratio and regression sampling, double sampling and the problem of non-response. Estimation of parameters and properties of estimates are discussed. In particular, the Horwitz-Thompson estimator and the generalized Horwitz-Thompson estimator and probability-proportional-to-size (PPS) sampling are studied under each sampling scheme. Prerequisite: STAT 234. Biennially.

STAT 237 Statistical Inference II – Nonparametric Methods 3.0; 3 cr.

Methods of analyzing data when a parametric assumption is adopted. The course begins with classical methods of estimation and testing based on order statistics (such as quantile estimation). The course continues with testing based on ranks (including the sign test, Wilcoxon signed-rank test, Mann-Whitney two sample test, Kruskall-Wallis test) and testing based on the empirical distribution function (including the Kolmogorov-Smirnov test of goodness of fit). The notion of asymptotic relative efficiency is carefully studied and applied to some of the tests. The course also covers the modern concepts of density estimation in one and higher dimensions (histogram and kernel estimation), selection of optimal kernel and optimal bandwidth. Prerequisite: STAT 234 or consent of instructor. Biennially.

STAT 238 Applied Probability Models 3.0; 3 cr.

Conditional probability and expectation; discrete and continuous time Markov chains; Chapman-Kolmogorov difference and differential equations; limiting probabilities; branching, Poisson, and birth and death processes; distribution of arrival times; queuing theory. Prerequisites: MATH 218 or MATH 219; and STAT 233, or STAT 230 with consent of instructor. Annually.

STAT 239 Statistical Learning 3.0; 3 cr.

Introduction to supervised learning. Loss functions and population risk. Estimates of risk. Resampling methods (cross-validation and the bootstrap). k-nearest neighbors. Linear and polynomial regression, logistic regression and linear discriminant analysis. Model selection and regularization methods (ridge regression and lasso). Non-linear models and generalized additive models. Tree-based methods, random forests and boosting. Support-vector machines. Feedforward and convolutional neural networks. Prerequisites: MATH 218 or MATH 219; STAT 234 or STAT 230 with consent of the instructor. Annually.

STAT 273 Actuarial Mathematics I 3.0, 3 cr.

This course covers models for single life contingencies, present-value random variables. It provides an introduction to survival models, force of mortality, mortality tables, life annuities, calculation of premium, policy values for various cash flows. This course covers portions of the SOA Exam FAM. Prerequisites: MATH 202, STAT 233 or STAT 230 with consent of instructor, and MATH 272 or consent of the instructor. Annually.

STAT 274 Actuarial Mathematics II 3.0, 3 cr.

Multiple life contingencies and multiple state models with the underlying theory of Markov chains, multiple decrement models and construction of multiple decrement tables, introduction to the mathematics of pension, valuation of benefits and reserves (with and without expenses). This course covers portions of the SOA Exam FAM. Prerequisite: MATH 202, STAT 233 or STAT 230 with consent of instructor, and MATH 272 or consent of the instructor. Annually.

BA in Statistics: 39 Credits in Statistics/Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic(9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (3)**	**Major requirements + Quantitative Reasoning (45)**	**Technical Electives (9)**	**Community-Engaged Learning (3), Societies and Individuals (6)**
Lecture Courses (9+12 +3+45+ 9+3+6)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required course (3)	Required mathematics courses (12): MATH 201, 210, 218 or 219, 251 Required statistics courses and data science (18): STAT 231, 233, 234, 235, 239 and at least one of 237 or 238 Required computer science courses (6): CMPS 201 or 203, CMPS 244 Electives MATH/ STAT/ CMPS (9): STAT 236, 237 or 238, 333, 338, 348, MATH 211, 281, 351, CMPS 262	9 credits from the following list: Computer Science: CMPS 202, 261, 391, 392 Engineering: INDE 301, 302, EECE 330, 490, 641, 693 OSB: BUSS 200, MNGT 222, DCSN 200, 216, 220 Mathematics: MATH 211, 220, 223, 224, 225, 227, 241, 261, 272, 273, 274, 281, 306, 351	Required Community-engaged learning course (3) Required Societies and Individuals courses (6)

BS in Statistics: 39 Credits in Statistics/Mathematics

Modes of Analysis	**Understanding Communication - English and Arabic(9)**	**Cultures and Histories (9), Human Values (3)**	**Understanding the World (3)**	**Major requirements + Quantitative Reasoning (45)**	**Technical Electives (9)**	**Community-Engaged Learning (3), Societies and Individuals (6)**
Lecture Courses (9+12 +6+45+ 9+3+6)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required course (3)	Required mathematics courses (12): MATH 201, 210, 218 or 219, 251 Required statistics and data science courses (18): STAT 231, 233, 234, 235, 239 and at least one of 237 or 238 Required computer sciences courses (6): CMPS 201 or 203, CMPS 244 Electives MATH/ STAT/ CMPS (9): STAT 236, 237 or 238, 333, 338, 348, MATH 211, 281, 351, CMPS 262	9 credits from the following list: Computer Science: CMPS 202, 261, 391, 392 Engineering: INDE 301, 302, EECE 330, 490, 641, 693 OSB: BUSS 200, MNGT 222, DCSN 200, 216, 220 Mathematics: MATH 211, 220, 223, 224, 225, 227, 241, 261, 272, 273, 274, 281, 306, 351	Required Community-engaged learning course (3) Required Societies and Individuals courses (6)

Department of Philosophy

Chairperson:	Gannagé, Emma
Professors:	Brassier, Ray; Haydar, Bashshar H.
Associate Professors:	Bashour, Bana M.; Gannagé, Emma; Johns, Christopher; Muller, Hans D.
Assistant Professors:	Mohammadian, Mousa; Turan, Caner
Lecturers:	Agha, Saleh J.; Amm, Charbel; Baasiri, Mahmoud; Barakat, Karim; Chehayeb, Fidaa; Hasan, Hani; Talhouk, Omar
Instructors:	Hariri, Muhannad; Kasab, Jana; Nisr, Farah Sandra; Sabra, Zeinab; Samaha, Raid; Wahab, Karam

The Department of Philosophy offers programs leading to the degrees of Bachelor of Arts and Master of Arts in Philosophy. Requirements for transfer to the department include approval by the department and a grade of C+ or more in any two Cultures and Histories courses (excluding the communication skills requirements in Arabic and English).

Mission Statement

The undergraduate program in Philosophy provides students with a knowledge of key historical and contemporary philosophers and philosophical problems, together with a range of responses to those problems. They promote respect for clarity, truth, critical reflection and rational argument. They promote independence of thought rooted in a fair-minded understanding of opposing views. They strive to equip students with the knowledge and skills needed to navigate relevant portions of the contemporary philosophical terrain; competence at critical analysis; and the ability to write about abstract issues in a clear, nuanced and compelling manner. Both programs also seek to impart an awareness of the application of philosophical thought to other academic disciplines or to matters of public interest, encouraging students to apply their philosophical skills more widely.

BA in Philosophy

Students majoring in philosophy are required to take a total of at least 36 credits of philosophy courses, which must include PHIL 211, PHIL 218, one of PHIL 205, 206, 209 or 210, two of PHIL 213, PHIL 214, and PHIL 225, and at least two of the seminar courses, which are numbered PHIL 250-262. One of those courses must be a Writing in the Disciplines course. Selected courses between PHIL 250 and PHIL 262 will be offered as Writing in the Disciplines courses. Students should also choose, under the supervision of the department, a balanced program of systematic and historical courses. In fulfillment of university requirements, majors must also take the following:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities.

Students choosing a minor in philosophy are required to take a total of 15 credits in philosophy, including at least two of PHIL 211, 213, 214, 225.

Course Descriptions

PHIL 101 Applied Philosophy 3.0; 3 cr.
A course that deals with philosophical questions which have practical import; it aims to introduce students to the philosophical mode of analysis. Every term.

PHIL 102 Philosophical Classics 3.0; 3 cr.
An introduction to the thought of some major figures in the history of philosophy. Every term.

PHIL 201 Introduction to Philosophy 3.0; 3 cr.
An introduction to philosophy and its methods through an analysis of traditional issues in ethics, epistemology, metaphysics, and the philosophy of religion. Every term.

PHIL 205 Bio-Medical Ethics 3.0; 3 cr.
A philosophical examination of a number of ethical topics in the field of biology and medicine, such as abortion, physician-assisted suicide, eugenics, genetic engineering, allocation of medical resources, experimentation on animals and humans, and so on. Annually.

PHIL 206 Business Ethics 3.0; 3 cr.
A philosophical examination of a number of ethical topics arising in the areas of business and management, such as fraud and corruption, product safety, insider trading, honesty in advertising, discriminatory hiring practices, and so on. Occasionally.

PHIL 208 Topics in Applied Ethics (A, B, C, D, E...) 3.0; 3 cr.
A philosophical examination of the ethics of a particular field of ethical application, such as technology, food, war, engineering, psychology, etc. The course will focus on one such area, varied according to instructor and section. Annually.

PHIL 209 Environmental Ethics 3.0; 3 cr.
An attempt to identify and discuss the major ethical and philosophical aspects of issues related to the environment and to determine the environment-related responsibilities and obligations incurred by people at the individual and collective levels. Annually.

PHIL 210 Ethics 3.0; 3 cr.
An introduction to some of the major normative ethical theories based on the study of the original writings of selected philosophers, including a section on applied ethics. Every term.

PHIL 211 Introduction to Logic 3.0; 3 cr.
A first introduction to formal and informal logic, including argument analysis, informal fallacies, natural deduction methods in propositional and first-order predicate logic. Every term.

PHIL 212 Philosophical Logic 3.0; 3 cr.
An introduction to basic concepts and tools which, in addition to being of interest by themselves, also inform various philosophical discussions and are taken for granted in different areas of contemporary philosophy. Occasionally.

PHIL 213 History of Ancient and Medieval Philosophy 3.0; 3 cr.
A survey of ancient and medieval philosophy from the pre-Socratics to Aquinas. Annually.

PHIL 214 History of Modern Philosophy 3.0; 3 cr.
A survey of early modern philosophy, from Descartes to Kant. Annually.

PHIL 215 Nineteenth Century Philosophy 3.0; 3 cr.
An introductory survey of post-Kantian philosophy, with emphasis on Fichte, Schelling, Hegel, Schopenhauer, Kierkegaard, and Nietzsche. Alternate years.

PHIL 216 Political Philosophy 3.0; 3 cr.
An examination of the main issues of political philosophy, such as political obligation, justice, political rights, and other issues. Annually.

PHIL 217 Aesthetics 3.0; 3 cr.
An examination of the central problems and issues that arise in the interpretation, analysis, and evaluation of works of art. Alternate years.

PHIL 218 Metaphysics and Epistemology 3.0; 3 cr.
An investigation of the most fundamental concepts involved in our thoughts about the world, including the nature of truth, knowledge, causality, substance, space, and time. Annually.

PHIL 219 Existentialism 3.0; 3 cr.
An introduction to existentialist philosophy within the context of nineteenth-century and twentieth-century philosophy. Alternate years.

PHIL 220 Symbolic Logic 3.0; 3 cr.
A study of the axiomatization and the meta-theory of classical propositional and predicate logic, first-order theories, as well as related philosophical issues. Prerequisite: PHIL 211. Occasionally.

PHIL 221 Philosophy of Mind 3.0; 3 cr.
An introductory examination of contemporary accounts of the nature of the mental and of psychological explanation. Annually.

PHIL 222 Philosophy of Science 3.0; 3 cr.
An introduction to the philosophical problems and issues that arise in the attempt to understand the nature of science. Alternate years.

PHIL 223 Philosophy of Language 3.0; 3 cr.
An introductory examination of various contemporary accounts of the nature of language and meaning. Alternate years.

PHIL 224 Philosophy of Religion 3.0; 3 cr.
An in-depth survey of the main philosophical questions connected to religion, including questions about religion as a feature of human experience, as well as questions connected to the nature of God, evil, free will, and so on. Alternate years.

PHIL 225 History of Moral Philosophy 3.0; 3 cr.
A survey of some major historical traditions in moral philosophy, including at least one figure from ancient or medieval philosophy, and at least one figure from modern philosophy. Alternate years.

PHIL 226 Ethical Theory 3.0; 3 cr.
An examination of some theories about the moral status of actions or character, or about the overall nature of morality itself. Alternate years.

PHIL 227 Marx and Philosophy 3.0; 3 cr.
This course examines the philosophical foundations of Marx's critique of capitalism. It focuses on the fundamental concepts of Marx's critical theory: alienation, practice, labor, value, production, commodity, class and contradiction. Alternate years.

PHIL 230 Philosophy of Plato 3.0; 3 cr.
An introduction to some of Plato's major dialogues. Alternate years.

PHIL 231 Philosophy of Aristotle 3.0; 3 cr.
An introductory examination of the physics, metaphysics, logic, ethics, and politics of Aristotle. Alternate years.

PHIL 232 Islamic Philosophy 3.0; 3 cr.
An examination of the philosophical and religious thought of the major philosophers of Islam. Offered either in Arabic or in English. Alternate years.

PHIL 249 Philosophy of Feminism 3.0; 3 cr.
An examination of philosophical issues relating to gender relations and the foundations of feminist theory; issues addressed primarily involve the ethical or epistemological content of feminist theory. Alternate years.

PHIL 250 Special Topics in Logic 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 251 Special Topics in Ethics 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 252 Special Topics in Political Philosophy 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 253 Special Topics in Aesthetics 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 254 Special Topics in Metaphysics 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 255 Special Topics in Epistemology 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 256 Special Topics in the Philosophy of Science 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 257 Special Topics in the Philosophy of Language 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 258 Special Topics in the Philosophy of Mind 3.0; 3 cr.
May be repeated for credit. Occasionally.

PHIL 260/261 Special Topics in the History of Philosophy 3.0; 3 cr.
Occasionally.

PHIL 262/263 Special Topics in Contemporary Philosophy 3.0; 3 cr.
Occasionally.

PHIL 271/272 Directed Courses in Philosophy 3-6 cr.
Prerequisite: Consent of instructor. Offered on demand.

24 + 12 Credits in Philosophy

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (Min. 6)	Sciences, Math, and Technology (Unspecified), Understanding the World, Quantitative Reasoning (9:3/6+3/6)	Community-Engaged Learning (3)
Lecture Courses (9+12+36 +6+9+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values philosophy courses (15): PHIL 211(3), 218(3) one course from the following: 205(3), 206(3), 209(3), 210(3) two courses from the following: 213(3), 214(3) 225(3) 8 elective courses from the following lecture and/or seminar courses (24): the following lecture 201(3), 205(3) 206(3), 208(3), 209(3), 210(3), 213(3), 214(3), 215(3), 216(3), 217(3), 218(3), 219(3), 220(3), 221(3), 222(3), 223(3), 224(3), 225(3), 226(3), 227(3), 230(3), 231(3), 232(3), 249(3) Elective philosophy courses: PHIL 250(3), 251(3), 252(3), 253(3), 254(3), 255(3), 256(3), 257(3), 258(3), 259(3), 260(3), 261(3), 262(3), 263(3)	Electives (6)	Electives (9): a course in computer literacy is recommended Philosophy majors can satisfy this requirement with any Quantitative Reasoning course (including PHIL 220) except for PHIL 211	Requirement course (3)

Seminar (33)					
Labor-atory (0)				Computer Lab (3)	
Research Project (93)		PHIL 210, 213–224, 230–232, 249–263			

Department of Physics

Chairperson:	Kazan, Michel J.
Professor Emeritus:	Mavromatis, Harry A.
Professors:	Antar, Ghassan Y.; Chamseddine, Ali H.; Isber, Samih T.; Kazan, Michel J.; Klushin, Leonid I.; Sabra, Wafic A.; Tabbal, Malek D.; Touma, Jihad R.
Assistant Professors:	Haidar, Mohamad J.; Najem, Sara A.
Lecturers:	Al-Sayegh, Amara A.; Harajli, Zainab; Malaeb, Ola; Rahbany, Nancy; Saad, Cynthia R.

BS in Physics

Mission Statement

The program leading to the Bachelor of Science emphasizes the fundamental concepts and principles of physics and their roles in a variety of disciplines with a liberal arts setting. The educational focus of the Physics Department is to provide the students with high-quality instruction in theoretical and experimental physics. Consequently, theoretical courses, together with computer modeling experience and a comprehensive set of laboratory experiments, introduce the students to various methods of inquiry and research in physics. The emphasis is not only on subject instruction, but also on the development of communication and teamwork skills, as well as critical and analytical thinking. The program is designed to graduate well-rounded, free-thinking individuals with inquisitive minds who are well prepared for further study in basic and applied research and are capable of pursuing professional careers in a variety of fields.

The Department of Physics offers courses at the undergraduate level leading to a bachelor's degree in physics.

The requirements for a BS in Physics are 90 credits for students entering at the sophomore level.

Degree Requirements

The degree requirements are divided into the General Education requirements, set by the university in accordance with its mission statement as a Liberal Art institution, and the Physics requirements set by the Physics Department.

The General Education requirements include:

- 9 credits in Understanding Communication divided into 3 credits in Arabic and 6 credits in English
- 9 credits in Cultures and Histories
- 3 credits in Human Values. At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA.
- 3 credits in Community Engaged Learning
- 6 credits in Societies and Individuals
- 3 credits in one Understanding the World course must be from outside the major and approved as a General Education course.
- At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

The Physics requirements include:

- 39 credits in Physics divided into 27 credits of required Physics courses, 6 credits elective Physics courses, and 6 credits of required Physics Lab courses (the total number is 40 credits if PHYS 228/228L are chosen as an elective)
- 9 credits in Quantitative Reasoning including 6 credits in Math (MATH 201 and 202) and 3 credits in CMPS 201 or EECE 230
- 9 credits of free electives

The program for the Physics major includes the following required courses: PHYS 212, PHYS 214, PHYS 216, PHYS 217, PHYS 221L, PHYS 220, PHYS 222, PHYS 235, PHYS 236, PHYS 257L, PHYS 299A, and PHYS 299B. Moreover, two elective courses must be selected from PHYS 218, PHYS 223, PHYS 225, 226, PHYS 228/228L, PHYS 231, PHYS 232, PHYS 249, or any other elective offered in PHYS. Also required are the following courses in mathematics: MATH 201, MATH 202, and CMPS 201 or EECE 230.

Freshman students who intend to major in Physics are required to complete PHYS 101 and PHYS 101L with a minimum cumulative average of 2.3 and to complete MATH 101 and MATH 102 (or their equivalent) with a minimum cumulative average of 2.3. More details can be found under the Freshman Courses section of this catalogue.

Students who wish to transfer to physics must obtain a cumulative average of at least 2.3 in the physics courses normally taken in the sophomore year and a cumulative average of at least 2.3 in MATH 201 and 202 before they are allowed to proceed to junior level courses.

Physics majors whose physics average falls below 2.3 or whose cumulative average in MATH 201 and 202 is below 2.3 after three terms in the major will be dropped from the Department.

The minor in physics requires 18 credits including PHYS 212, 221L and one of the following three courses (PHYS 210, PHYS 211 or PHYS 214), plus 9 credits selected from PHYS 217, PHYS 220, PHYS 226, PHYS 235, PHYS 236 or a special topic course.

PHYS 101, PHYS 101L, PHYS 210, PHYS 210L, PHYS 211, PHYS 211L, and PHYS 212 are introductory courses for students of chemistry or engineering.

PHYS 103, PHYS 103L, PHYS 204, PHYS 204L, PHYS 205 and PHYS 205L are introductory courses for students in nursing, public health, biology, petroleum geosciences, and for stu-

dents wishing to enter the medical school but are not physics or chemistry majors.

PHYS 204, PHYS 204L, PHYS 205 and PHYS 205L are not equivalent totally or in part to the following: PHYS 210, PHYS 210L, PHYS 211, PHYS 211L or PHYS 212. Students shall receive credit for courses in only one of the preceding two sets.

Course Descriptions

PHYS 101 Introductory Physics I 4.0; 4 cr.
Measurements, motion in one dimension, vectors, motion in two dimensions, Newton's laws with applications, work and energy, circular motion, linear momentum and collisions, rotation and angular momentum, oscillations, gravity, and elements of fluid mechanics. Pre- or corequisite: MATH 101. Students shall receive credit for only one of PHYS 101 or PHYS 103. Annually.

PHYS 101L Introductory Physics Laboratory I 0.2; 1 cr.
Error analysis, measuring devices, speed and acceleration, measurement of gravitational acceleration, forces, friction, circular motion, conservation of momentum, conservation of energy, ballistic pendulum, rotation, and simple harmonic motion. Pre- or corequisite: PHYS 101. Annually.

PHYS 103 Physics for the Life Sciences 3.0; 3 cr.
Units and dimensions, scalars and vectors, kinematics in one and two dimensions, dynamics, work and energy, collisions, gravitation, and rotational motion. Students shall receive credit for only one of PHYS 101 or PHYS 103. Every term.

PHYS 103L Physics for the Life Sciences Laboratory 0.2; 1 cr.
Error analysis, measurements, position, speed and acceleration, ballistic pendulum static and dynamic forces, Atwood's machine, Linear Air Track I, collision, centripetal force and rotational inertia. Pre- or corequisite: PHYS 103. Annually.

PHYS 200 Understanding the Universe 3.0; 3 cr.
An introductory course in astronomy. Basic astronomical tools, properties of the earth, solar system, sun, electromagnetic radiation, properties and evolution of stars, and the Milky Way galaxy. The course is intended for students in the social sciences and the humanities. Every term.

PHYS 204 Classical Physics for Life Sciences 3.0; 3 cr.
Solids and fluids, thermal physics and processes, heat and heat engines, the laws of thermodynamics, gas dynamics, vibrations and wave phenomena, sound, reflection and refraction of light, mirrors and lenses, wave optics and optical instruments. Prerequisite: PHYS 103 (or equivalent). Annually.

PHYS 204L Classical Physics for Life Sciences Laboratory 0.3; 1 cr.
Error analysis, Bernoulli's Law, surface tension, coefficient of viscosity, thermal expansion, Boyle's law, heat engine, mechanical equivalent of heat, waves on a stretched string, standing waves in air columns, geometrical optics I: reflection and refraction, geometrical optics II: mirrors and lenses, interference and diffraction. Pre- or corequisite: PHYS 204. Annually.
PHYS 205 Modern Physics for Life Sciences 3.0; 3 cr.
Part I: Electric field, electric potential Gauss's law, capacitance, electric current and circuits and Ohm's law. Magnetic field, Ampere's law, electromagnetic induction, electromagnetism applied to biological systems. Part II: Introduction to relativity, atoms and atomic structure, nuclei, elementary particles and radioactivity. Prerequisite: PHYS 103 (or equivalent). Annually.

PHYS 205L Modern Physics for Life Sciences Laboratory 0.3; 1 cr.
Error analysis, capacitance and dielectric constants, basic oscilloscope operations, Wheatstone bridge, RC and RL circuits, measurements of magnetic induction fields, measurement of the charge to mass ratio of electrons, RC and RLC-circuits, Ohm's law, Planck's constant, atomic spectroscopy, transformers Pre- or corequisite: PHYS 205. Annually.

PHYS 206 Applied Physics for Life Sciences 3.1; 3 cr.
This course aims at providing students with the application of physical principles to medicine and healthcare sectors in developing new diagnostic tools, medical techniques, and treatment methods. Physics 206 is the second part of a non-calculus introductory course in physics designed primarily for students in the life sciences. The course stresses on how the laws of physics are correlated and explain some human body functions in particular fluid mechanics of blood and air, hearing and acoustic of the ear, vision optics, electrical signaling. Physics 206 will also shed light on modern medical diagnostic tools that have developed during the past century including X-rays, electric signaling EKG, ultrasound scans and doppler ultrasound, and magnetic resonance imaging. Prerequisite: PHYS 103 (or equivalent). Students who take PHYS 206 cannot receive credit for PHYS 204 and/or PHYS 205.

PHYS 206L Applied Physics for Life Sciences Laboratory 0.3; 1 cr.
Physics 206L is one credit 3 hour/week laboratory course designed primarily for students in the life sciences and it is premedical course. The experiments deal with fluids, sound waves, electricity and magnetism as well as modern physics. Pre- or corequisite: PHYS 206.

PHYS 210 Introductory Physics II 3.1; 3 cr.
Review of classical mechanics, fluid statics, fluid dynamics, temperature, heat and first law of thermodynamics, kinetic theory of gases, heat engines, entropy and second law of thermodynamics, general properties of waves, sound waves and resonances, light and optics, interference, diffraction, and polarization. Pre- or corequisite: MATH 201. Every term.

PHYS 210L Introductory Physics Laboratory II 0.3; 1 cr.
Error analysis, Atwood's Machine and motion down an incline, conservation of Mechanical energy, surface tension and viscosity, thermal expansion of solids, mechanical equivalent of heat, standing waves on a stretched string, standing waves in air columns, interference and diffraction, the spectrometer, Michelson interferometer. Pre- or corequisite: PHYS 210. Every term.

PHYS 211 Electricity and Magnetism 3.0; 3 cr.
Electrostatics, current, resistance, Ohm's law, Kirchhoff's laws, RC circuits, magnetic field, Ampere's law, Biot-Savart law, Faraday's law, LR circuit, RLC circuits, and a qualitative discussion of Maxwell's equations. Pre- or corequisite: MATH 201. Every term.

PHYS 211L Electricity and Magnetism Laboratory 0.3; 1 cr.
Error analysis, capacitance and dielectric constant measurements, electrical circuits and Wheatstone bridge, measurement of the force between two parallel current-carrying conductors, measurement of magnetic induction fields, basic oscilloscope operations, RL, RC, and RLC circuits, measurement of the e/m ratio of electrons, transformers, Ohm's Law and resistivity. Pre- or corequisite: PHYS 211. Every term.

PHYS 212 Modern Physics 3.0; 3 cr.
Special theory of relativity, introductory quantum mechanics, atomic physics, nuclear physics, and introduction to elementary particles and cosmology. Pre- or corequisite: MATH 201. Students cannot receive credit for both PHYS 212 and CHEM 218. Every term.

PHYS 214 Introduction to Vibrations and Waves 3.0, 3 cr.
This course aims to introduce students to the physical and mathematical properties shared by wave phenomena across scales and states of matter. It begins with the vibrations of a single particle, whether free or forced, with due consideration for resonances. It then moves on to collective vibrations of coupled systems of particles, with particular emphasis on normal modes of vibrations. Proper wave-like behavior will then appear in the continuous limit of the particle description and its properties (including reflection, transmission, refraction, polarization, interference, and diffraction to list a few). In support of the analytic (as opposed to descriptive) approach to the subject, advanced mathematical techniques (to do with ordinary differential equations, linear algebra, and Fourier analysis) will be introduced as and when needed. Annually.

PHYS 216 Mathematical Methods for Physics 3.0; 3 cr.
Vector analysis, tensors, linear operators, Eigenvalue problems, determinants and matrices, Sturm-Liouville problems, special functions, Fourier series and transforms, complex analysis. Prerequisite: MATH 202. Annually.

PHYS 217 Mechanics 3.0; 3 cr.
Kinematics of particles motion, Newtonian formulation of mechanics, integration of Newtonian equations of motion, Lagrangian formulation of mechanics, Hamilton dynamics, central forces, linear oscillations, nonlinear oscillations and chaos, collisions, non-inertial systems, coupled oscillations, and motion of rigid bodies. Prerequisite: MATH 202. Annually.

PHYS 218 Non-linear Dynamics 3.0; 3 cr.
The course explores nonlinearity and chaos in physical phenomena. Applications are drawn from classical and celestial mechanics, fluid mechanics and structural dynamics, nonlinear electronics, lasers, and coupled oscillators. The approach is thoroughly geometrical focusing on the phase space structure of dynamical systems, and progressing through systems of increasing dimension and complexity, from equilibria, their linear stability analysis, and bifurcations, to periodic solutions and their bifurcations, to the emergence and characterization of chaos, and universality within it. We will appeal to both analytical and computational methods, calling on illustrative hands-on experiments when appropriate. The course requires senior standing of physics majors, and is open, with instructor permission, to non-physics majors who have completed MATH 201, MATH 202, and PHYS 216 (or equivalent).

PHYS 220 Electromagnetic Theory 3.0; 3 cr.
Electrostatics: electric potential, Gauss' law, Poisson's and Laplace's equations, boundary conditions, electric currents, Faraday's law, Lenz's law, mutual inductance. Maxwell's equations and propagation of electromagnetic waves. Prerequisite: MATH 202. Annually.

PHYS 221L Junior Physics Laboratory 0.6, 3 cr.
This course is intended to help students acquire basic practical skills that are used in experimental physics. The course introduces students to some of the basic equipment that are used in this discipline. Experiments will cover a range of phenomena, including, electricity and magnetism, mechanics, optics, waves and modern physics. Prerequisite: Junior standing. Annually.

PHYS 222 Computational Physics 3.0; 3 cr.
Basics of numerical analysis: Numerical solutions of algebraic and transcendental equations, methods for solving systems of linear and differential equations and scholastic methods. Applications: planetary motion, simple models of stars, nonlinear dynamics and chaos, potentials and fields, waves, random systems, computational fluid dynamics, statistical mechanics (phase transitions, Ising model), molecular dynamics, and quantum mechanics. Prerequisites: CMPS 201 or EECE 230, MATH 201 and MATH 202. Annually.

PHYS 223 Physical Optics 3.0; 3 cr.
Wave theory of light, Maxwell's equations, superposition and polarization, interference, interferometers, diffraction, coherence, lasers, and holography. Annually.

PHYS 225 Introduction to Astronomy and Astrophysics 3.0; 3 cr.
Observation and instruments, photometry and magnitudes, radiation mechanisms, celestial mechanics, stellar spectra and structure, stellar evolution, Milky Way, galaxies, cosmology. Pre- or corequisites: MATH 201, MATH 202. Junior Standing. Annually.

PHYS 226 Solid State Physics 3.0; 3 cr.
Electrons in one-dimensional periodic lattice, vibrations in one-dimensional periodic lattice, geometrical description of crystals, free-electron theory in metals, excitons, plasmons, polarons, lattice dynamics, semi-conductors, magnetic ordering, superconductivity, and electron gas in a magnetic field. Prerequisites: PHYS 235 and PHYS 236. Annually.

PHYS 228 Electronics 3.0; 3 cr.
DC linear circuits, capacitors, inductors and transients, periodic waveforms, diodes, power supplies, operational amplifier, logic gates, timers, multiplexers, flip-flops, and counting circuits. Students cannot receive credit for this course unless they pass PHYS 228L. Annually.

PHYS 228L Electronics Laboratory 0.3; 1 cr.
DC measurements, periodic waveforms, power supplies, transients, frequency and period measurements, operational amplifiers, and some digital circuits. Pre- or corequisite: PHYS 228. Every term.

PHYS 231 Special Topics 3.0; 3 cr.
May be repeated for credit. Prerequisite: Consent of department.

PHYS 232 Special Topics 3.0; 3 cr.
May be repeated for credit. Prerequisite: Consent of department.

PHYS 235 Statistical Physics 3.1; 3 cr.
Boltzmann distribution, Gibbs distribution, thermal radiation, heat and work, kinetic theory of gases, entropy and temperature, statistical mechanics of semiconductors, kinetics of chemical reactions, and phase transitions. Prerequisite: Senior standing. Annually.

PHYS 236 Quantum Mechanics 3.0; 3 cr.
Fundamental concepts: Bras, Kets, matrix representation of operators, change of basis; quantum dynamics: time evolution of quantum mechanical systems, spin; translational and rotational symmetry: Schrödinger equation in one and three dimensions; spherical symmetric systems: three-dimensional oscillator, hydrogen atom; theory of angular momentum: rotation operator, addition of angular momenta; time-independent perturbation theory, Zeeman effect, Stark effect, spin-orbit coupling, time-dependent perturbation theory, variational methods. Prerequisites: PHYS 212 and PHYS 216. Annually.

PHYS 237 Introduction to Plasma Physics 3.0; 3 cr.
Basic description of plasma: occurrence in nature and laboratory; basic plasma characteristics, single particle motion in uniform, non-uniform and time-varying E and B fields. The fluid description and magnetohydrodynamic equations. Electrostatic, hydrodromagnetic and magnetosonic waves. Diffusion in weakly and fully ionized plasmas. Hydromagnetic equilibrium; classification of instabilities. Kinetic effects using the Vlasov and Fokker-Planck equations and Landau damping. Pre- and corequisites: PHYS 217 and PHYS 220. Annually.

PHYS 248 Undergraduate Seminar 1.0; 1 cr.
Prerequisite: Senior standing. Annually.

PHYS 249 Elementary Particle Physics 3.0; 3 cr.
The standard model of elementary particles and their interactions represent the core content of the course. Topics to be discussed include, but are not limited to, relativistic kinematics, the Dirac equation, internal and space-time symmetries, the quark model, gauge theories and the basic description of the electromagnetic, weak and strong interactions and their Feynman calculus, spontaneous breaking of symmetries and the Higgs mechanism. Prerequisites: PHYS 236 and/or senior standing. Annually.

PHYS 257L Advanced Laboratory 0.6; 3 cr.
Students perform a selection of six to eight experiments from the following list: transient and steady states of SH-oscillator, coupled oscillators, Frank–Hertz experiment, Planck constant, Currie temperature, magnetic susceptibility, Millikan's drop oil experiment, Hall effect, Faraday rotation, Johnson noise, atomic spectroscopy, Zeeman effect, Paramagnetic resonance, pulsed nuclear magnetic resonance, X-ray diffraction, Brownian motion and optical pumping. Prerequisite: PHYS 221L. Annually.

PHYS 299A Physics in Applications 1.0; 1 cr.
It is the first course in a series of two courses (PHYS 299A and PHYS 299B), taken in consecutive semesters. This is a capstone course required for Physics Majors and taken in two consecutive semesters. It includes lectures grouped in modules, a seminar, and a project. The objective is to integrate students' knowledge of the basic theoretical courses by exploring applications of Electromagnetic Theory, Quantum Mechanics, and Statistical Physics. The course material may reflect research interests of faculty members and is coordinated with experiments constituting the Senior Lab course and with the Computational Physics projects to emphasize the dynamics between theory, experiments, and computational work. The seminar is based on faculty presentations of original seminal papers pertaining to the course material, and project presentations by the students. The project could range from a computational exploration of a problem to designing a new experiment for a Junior or Senior Lab, or to designing a demonstration for the basic Physics courses. Every term.

PHYS 299B Physics in Applications 2.0; 2 cr.
It is a continuation of PHYS 299A. This is a capstone course required for Physics Majors and taken in two consecutive semesters. It includes lectures grouped in modules, a seminar, and a project. The objective is to integrate students' knowledge of the basic theoretical courses by exploring applications of Electromagnetic Theory, Quantum Mechanics, and Statistical Physics. The course material may reflect research interests of faculty members and is coordinated with experiments constituting the Senior Lab course and with the Computational Physics projects to emphasize the dynamics between theory, experiments, and computational work. The seminar is based on faculty presentations of original seminal papers pertaining to the course material, and project presentations by the students. The project could range from a computational exploration of a problem to designing a new experiment for a Junior or Senior Lab, or to designing a demonstration for the basic Physics courses. Prerequisite: PHYS 299A. Every term.

39 Credits in Physics

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (Min. 6)	Understanding the World (39), Quantitative Reasoning (6)	Community-Engaged Learning (3)
Lecture Courses (9+12+6 +33+3+ 12+9+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Two required courses	Nine required courses: PHYS 212, 214, 216, 217, 220, 222, 235, 236, PHYS 299A, PHYS 299B (27) Two elective physics from PHYS 218, 223, 225, 226, (228 + 228L),231, 232, 237, 249, or other selected topics (6) One Understanding the World from outside the major (3) Four free electives courses (12) from inside or outside the department Three required: MATH 201, 202, and CMPS 201, or EECE 230 (9)	Requirement course (3)
Laboratory (6)				Required Physics Labs: PHYS 221L(3), 257L(3) (6)	
Research Project				The following courses may include a research project: PHYS 222, 226, 231, 232, 235, 236, 249	

Department of Political Studies and Public Administration (PSPA)

Chairperson:	Geukjian, Ohannes
Professor:	Khashan, Hilal
Associate Professors:	Frangie, Samer; Geukjian, Ohannes; Haddad, Tania; Khodr, Hiba; Makdisi, Karim; Tell, Tariq
Associate Professor of Practice:	Bahout, Joseph
Assistant Professors:	Kosmatopoulos, Nikolas; Mouawad, Jamil
Distinguished Practitioner of Public Policy:	Nahhas, Charbel
Senior Lecturer:	Bayrakdarian, Nora
Lecturers:	Akoum, Waleed; Al Maleh, Rand; Awada, Ghada; Doueihy, Michel; Kachar, Simon; Muhanna, Zeina; Sfeir, Antoine; Shaar, Rima
Instructors:	Ajamian, Melissa; Hankir, Samer; Shibli, Rabih; Yacoubian, Vera

BA in Political Studies

BA in Public Administration

The Department of Political Studies and Public Administration (PSPA) offers two major programs: one leading to the degree of Bachelor of Arts in Political Studies and one leading to the degree of Bachelor of Arts in Public Administration. Students wishing to transfer to PSPA must secure and maintain the approval of the department and must satisfy the conditions detailed below. Acceptance to the department is subject to the availability of places.

Mission Statements

The mission of the BA program in Political Studies at AUB is to provide students with an understanding of the political ideas, institutions and processes that inform, shape, and regulate domestic and international politics. The core curriculum is designed to engage students in the critical analysis and assessment of the political world, and help them acquire the intellectual, practical and moral skills that are necessary for their development as future academics, civil servants, and responsible citizens. The program is committed to serving the university's liberal arts model of higher education, and provides students with the intellectual means to understand and reflect on major political issues that define their individual and communal life.

The mission of the BA program in Public Administration is to educate students, and help them develop knowledge, skills and abilities in the discipline of public administration. This includes teaching students to become innovative leaders by developing their managerial and analytic skills, thereby preparing them for professional success. The program is designed to provide students with in-depth knowledge and training geared towards the building of a generalist, academic, professional, and ethical background, and to enhance students' decision-making, analytical and interpersonal skills. We aim to increase our students' understanding of the political, constitutional, legal, economic, social, cultural, and organizational environments within which they will work.

Graduation Requirements

University Requirements

Language requirements: 6 credits of English and 3 credits of Arabic.

General Education requirements: Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits). At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Major Courses: 39 credits of PSPA courses, both for PS and PA majors.

Students majoring in Political Studies are required to complete 39 credits in the department, which must include PSPA 201, PSPA 202, PSPA 203, PSPA 210, PSPA 211, PSPA 213, and either PSPA 253 or PSPA 256. Six additional Political Studies courses, including one senior seminar, are required. These six courses can be selected from PSPA 256-214, PSPA 286, PSPA 288, PSPA 293-290, and PSPA 299. Students are expected to choose, after consultation with their advisor, four courses that count as free electives. Students majoring in Public Administration are required to complete 39 credits in the department, which must include PSPA 201, PSPA 202, PSPA 203, PSPA 212, PSPA 273, PSPA 276, and PSPA 277. Six additional courses are required. Four courses should be taken in one of the sub-fields (Public Management or Public Policy) and the remaining two courses in the other sub-field. The Public Management courses are PSPA 222, PSPA 257, PSPA 258, PSPA 259, PSPA 272, PSPA 275, PSPA 278, PSPA 287, PSPA 289, PSPA 297 and PSPA 299. The Public Policy courses are PSPA 260, PSPA 261, PSPA 262, PSPA 263, PSPA 287, PSPA 289, PSPA 298, and PSPA 299. One of these courses should be a senior seminar (PSPA 297 or PSPA 298). PA majors are also required to take the following courses outside the department which are one economics course from the General Elective list, one course related to information technology (CMPS 206 or CMPS 209), one course related to statistical analysis (STAT 201, STAT 210, EDUC 227 or PSYC 213) and either SOAN 201 or PSYC 201. Students are expected to choose, after consultation with their advisor, three courses that count as free electives. All PSPA majors are recommended to complete PSPA 201, PSPA 202, and PSPA 203 by the end of their second term in the program. All PSPA majors must take ENGL 203 and ENGL 204 by the end of their third term in the program. PSPA majors whose PSPA average falls below 2.3 will be dropped from the program.

Transfer of Major

Transfer of Major within the Faculty of Arts and Sciences: Transfers to the PSPA major require a grade of C+ in PSPA 201 and PSPA 202 plus a minimum combined grade average of 2.3 in ENGL 203 and ENGL 204.

Transfer from one Faculty to Another within the University: Students who wish to transfer from one faculty to another must complete the application for transfer form available on AUBsis. Students must apply within the deadlines specified in the university calendar.

Minor in PSPA

Minors for PSPA Majors

Political Studies majors choosing to minor in Public Administration are required to take a minimum of 15 credits. The requirements are PSPA 212 plus four upper-level courses from the following list: PSPA 222, PSPA 257, PSPA 258, PSPA 259, PSPA 272, PSPA 273, PSPA 275, PSPA 277, PSPA 278, PSPA 289, PSPA 297, PSPA 299. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Political Studies majors choosing to minor in Public Policy are required to take a minimum of 15 credits. The requirements are PSPA 260 and PSPA 276 plus three upper-level courses from the following list: PSPA 223, PSPA 225, PSPA 238, PSPA 250, PSPA 251, PSPA 252, PSPA 259, PSPA 261, PSPA 262, PSPA 263, PSPA 277, PSPA 278, PSPA 297 or PSPA 298. No more than 9 credits may be used to satisfy a requirement for another major or minor.

PSPA students choosing to minor in Civil Society, Citizenship and the Nonprofit sector are required to take a minimum of 15 credits. The requirements PSPA 222 and PSPA 272 and three electives from the following list of courses: PSPA 202, PSPA 203, PSPA 233, PSPA 235, PSPA 254, PSPA 257, PSPA 260, PSPA 263, PSPA 289G, PSPA 299, ECON 232, ECON 237, MCOM 217, MCOM 252, SOAN 225, SOAN 226, SOAN 240, and SOAN 245.SOAN 245. No more than 12 credits can be taken from the same department. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Political Studies majors choosing to minor in International Law are required to take a minimum of 15 credits. The requirements are PSPA 225, and four upper-level courses from the following list: PSPA 223, PSPA 226, PSPA 228, PSPA 232, PSPA 233, PSPA 235, PSPA 239, PSPA 288 (if related to the minor's emphasis and approved by the PSPA Department), PSPA 293B, 293C, 293F, PSPA 299 (if approved by the PSPA Department) and SOAN 245. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Political Studies majors choosing to minor in International Law are required to take a minimum of 15 credits. The requirements are PSPA 225, and four upper-level courses from the following list: PSPA 223, PSPA 226, PSPA 228, PSPA 232, PSPA 233, PSPA 235, PSPA 239, PSPA 288 (if related to the minor's emphasis and approved by the PSPA Department), PSPA 293B, 293C, 293F, PSPA 299 (if approved by the PSPA Department) and SOAN 245. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Public Administration majors choosing to minor in Political Studies are required to take a minimum of 15 credits. The requirements are one of the following: PSPA 210, PSPA 211 or PSPA 213; and any four upper-level courses from the following list: PSPA 214-256, PSPA 286, PSPA 288, PSPA 290-293, and PSPA 299. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Minors for Non-PSPA Majors

Non-PSPA majors choosing to minor in Political Studies are required to take a minimum of 15 credits. The requirements are PSPA 201, one of the following: PSPA 210, PSPA 211 or PSPA 213, and any three upper-level courses from the following list: PSPA 214-256, PSPA 286, PSPA 288, PSPA 290-293, and PSPA 299. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Non-PSPA majors choosing to minor in Public Administration are required to take a minimum of 15 credits. The requirements are PSPA 202 and PSPA 212 plus three upper-level courses from the following list: PSPA 222, PSPA 257, PSPA 258, PSPA 259, PSPA 272, PSPA 273, PSPA 275, PSPA 277, PSPA 278, PSPA 297, PSPA 289, PSPA 298, PSPA 299. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Non-PSPA majors choosing to minor in Public Policy are required to take a minimum of 15 credits. The requirements are PSPA 202, PSPA 260 and PSPA 276 plus two upper-level courses from the following list: PSPA 223, PSPA 225, PSPA 238, PSPA 250, PSPA 251, PSPA 252, PSPA 259, PSPA 261, PSPA 262, PSPA 263, PSPA 277, PSPA 278, PSPA 297 or PSPA 298. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Non-PS majors choosing to minor in International Law are required to take a minimum of 15 credits. The requirements are: PSPA 213 and PSPA 225, plus three upper-level courses from the following list: PSPA 223, PSPA 226, PSPA 228, PSPA 232, PSPA 233, PSPA 235, PSPA 239, PSPA 288 (if related to the minor's emphasis and approved by the PSPA Department), PSPA 293B, 293C, 293F, PSPA 299 (if approved by the PSPA Department) and SOAN 245. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Non- PSPA students choosing to minor in Civil Society, Citizenship and the Nonprofit sector are required to take a minimum of 15 credits. The requirements are: PSPA 222 and PSPA 272 and three elective courses from the following list of courses: PSPA 202, PSPA 203, PSPA 233, PSPA 235, PSPA 254, PSPA 257, PSPA 260, PSPA 263, PSPA 289G, PSPA 299, ECON 232, ECON 237, MCOM 217, MCOM 252, SOAN 225, SOAN 226, SOAN 240, and SOAN 245. No more than 12 credits can be taken from the same department. No more than 9 credits may be used to satisfy a requirement for another major or minor.

Course Descriptions

PSPA 101 Issues in Contemporary Politics 3.0; 3 cr.
A course that examines the global context of politics, focusing on the changing world order in the twentieth century. Special attention is given to themes like democratization, civil society, ethnic conflict, human rights, and globalization. Every term.

PSPA 201 Introduction to Political Science 3.0; 3 cr.
An introduction to the study of politics with emphasis on the basic concepts, ideas, and issues relating to the process of government in the modern state. Every term.

PSPA 202 Introduction to Public Administration 3.0; 3 cr.
A course on the nature of public administration. Basic concepts, processes, and approaches in the field of public administration are introduced so that the student develops an appreciation for the role of public administration in modern society. Every term.

PSPA 203 Research Methods 3.0; 3 cr.
A course that focuses on the problems involved in asking and answering questions about political science and public administration. This course presents the various analytical frameworks and methodological tools used for this purpose with emphasis on empirical approach, data collection, and analysis. Students cannot receive credit for both SOAN 210 and PSPA 203. Every term.

PSPA 210 Introduction to Political Thought 3.0; 3 cr.
An introduction to the main Western and Islamic traditions in political philosophy and political theory.

PSPA 211 Introduction to Comparative Politics 3.0; 3 cr.
A survey of concepts and issues in comparative politics. This course acquaints the student with basic theoretical frameworks for the study and analysis of political phenomena, and establishes criteria for comparing political systems. This course also closely examines the application of these concepts, frameworks, and criteria in selected countries. Every term.

PSPA 212 Contemporary Trends in Public Administration and Management 3.0; 3 cr.
A course that deals with the contemporary transformation of the public sector and its relationship with government and society. This course evaluates managerialism in the public sector, privatization, and entrepreneurial government. Every term.

PSPA 213 Introduction to International Politics 3.0; 3 cr.
A survey of the basic forces and factors determining relations among states, with special emphasis on the international system, foreign policy, national power, the restraints on determinants of state action, contemporary problems and major issues faced by states, and the patterns of interaction that prevail among states. Every term.

PSPA 214 Early and Mediaeval Islamic Thought 3.0; 3 cr.
The course is an introduction to early and classical Islamic political thought. It focuses on the history, origins, developments and objectives of Islamic political history, theology, jurisprudence and politics as they relate to the state, society, and relations with non-Muslims. The course analyzes the essential concepts and events that make the political core doctrines of Islam: a political system, a political theology and ideology, and a theory of international relations. Comparisons and contrasts between different Islamic schools are to be explored. Occasionally.

PSPA 215 Modern Islamic Thought 3.0; 3 cr.
The course is a survey that focuses on major political and ideological issues in the modern world of Islam and deals analytically with the major doctrines, movements, and trends that have been developed during the 19th and 20th centuries. The course starts with the discussion of the ideological and political doctrines of Islamic reformers, then moves to discuss the rise of Islamic movements and their ideologies. Issues like Islamic government, state, religion, revolution, nationalism, and relations with the West are to be discussed. Annually.

PSPA 216 Western Political Thought from Antiquity to the Renaissance 3.0; 3 cr.
A survey of the main Western traditions, philosophies, and themes in political thought from Greek Antiquity to the Renaissance. The course will combine an in-depth analysis of the main philosophical concepts of the past that are still relevant to contemporary political thought and politics, with a historical analysis of the intellectual, social, and political context in which they emerged and for which they were constructed. Special focus will be given to the Greek polis and the emergence of a discourse on democracy, the relationship between politics and ethics, the search for good government and the just society, and the shift to early Realism in the context of the emergence of the modern state in Europe. Occasionally.

PSPA 217 Modern and Postmodern Western Political Thought 3.0; 3 cr.
A survey of the main Western traditions, philosophies, and themes in political thought from early European Modernity and the Enlightenment to the contemporary era, including Postmodern philosophies. The course will combine an in-depth analysis of the modern and postmodern paradigms in political philosophy, with a historical analysis of the intellectual, social and political context that led to the critique of the modern nation-state, nationalism, and democracy, and the search for new normative orders. Annually.

PSPA 218 Social Theories 3.0; 3 cr.
A survey of the main social theories that have contributed to an empirical understanding of the political at different levels of analysis and from different conceptual frameworks. The course will emphasize an interdisciplinary approach, through a comparison of theories produced in different disciplines (political science, sociology, anthropology, political psychology, economics) that focuses on different objects of study (the state, the community, social classes, the individual). Annually.

PSPA 219 Arab Political Thought and Ideologies 3.0; 3 cr.
The aim of the course is to explore various intellectual and political debates in the modern Arab world. The course will provide an overview of the development of modern Arab political thought and will present some of the main political, intellectual, and academic debates in this domain. Topics covered in this course include Arab nationalism, Marxism and Liberalism, modernity and tradition, secularism and Islam, Orientalism and the West, and other topics. Annually.

PSPA 220 Globalization and Culture 3.0; 3 cr.
This course offers a critical exploration of the cultural dynamics of globalization and the politics of the globalization of culture. It also addresses the spread of (and reaction to) American popular culture abroad and the impact of globalization on American culture and identity. Occasionally.

PSPA 221 Theories and History of the State 3.0; 3 cr.
The aim of the course is to explore "the state" as a political construct and to provide a comparative survey of experiences of state-building in the Middle East (including Lebanon). Topics covered include the history of state formation, state-society relations, authoritarianism and democratization, the impact of globalization on the state, and related issues. Occasionally.

PSPA 222 Democracy, Civic Engagement and Leadership 3.0; 3 cr.
The course will introduce students to the principles and processes of civic engagement and leadership within democratic and democratizing systems of governance, and will help them understand the theoretical and practical issues related to the practice of participatory democracy from a comparative perspective. The discussion of the main features of the democratic system will be complemented with an extensive review of specific cases that are relevant to understand the problems that face civic engagement and leadership in different socio-political and cultural contexts. Annually.

PSPA 223 Constitutional Law 3.0; 3 cr.
A course that examines the constitutions and the development of constitutional mechanisms and practices in selected countries, with a focus on the Lebanese constitutional system. Constitutional mechanisms in general and institutional variables are discussed as well as their impact on public policy, democracy, and political stability. Every term.

PSPA 225 Public International Law I 3.0; 3 cr.
A course introducing the basics of public international law, including its origins, purpose, sources, subjects, and response to international wrongful acts. It explores case studies to illustrate key points. The aim of this course is to build students' understanding of the modern international legal order and its most important principles, and to contextualize its relationship with international politics. Annually.

PSPA 226 Public International Law II 3.0; 3 cr.
A course that, building upon PSPA 225's introduction, deals in more depth with some of the most important fields of public international law such as diplomatic relations, the law of the

sea, the regulation of the use of force, international humanitarian law, human rights, international justice or the development of international criminal law. This course makes extensive use of recent case studies and entails an important research component as it deals with some of the most significant developments and debates in contemporary international law. Prerequisite: PSPA 225. Occasionally.

PSPA 228 International Security 3.0; 3 cr.
A course analyzing major issues in international security, including arms control, disarmament, terrorism and environmental degradation in both theory and practice. It covers both traditional and non-traditional security perspectives. Occasionally.

PSPA 229 Water Politics and Policy 3.0; 3 cr.
Water is the key to life, and yet it is a resource that is exploited unevenly across and within states. This course examines key issues of water conflict, cooperation, security and development in both international and domestic spheres. Occasionally.

PSPA 231 Palestinian and Israeli Politics 3.0; 3 cr.
A survey of Palestinian and Israeli politics—political systems, institutions, parties, and processes of governance—in the historical context of the partition of Palestine, the proclamation of the state of Israel, and the establishment of the Palestinian Authority. The course will cover contemporary issues pertaining to the functioning of both systems, to their relationship at the political, economic, (para)military, and territorial levels, as well as the impact of local, regional, and international negotiations on the future political and legal development of the region. Occasionally.

PSPA 232 Conflict and Conflict Regulation 3.0; 3 cr.
A course that contextualizes and explores domestic, regional, and international conflicts as well as the mechanisms for their management or resolution. It focuses on such issues as the linkages between internal and external sources of conflict, the contested nature of conflict resolution concepts, peacemaking, and peace-building. Every term.

PSPA 233 International and Regional Organizations 3.0; 3 cr.
This course explores the theories, institutional structures, political processes, role and impact of international and regional organizations within the larger context of world politics. Every term.

PSPA 234 Transnational Politics 3.0; 3 cr.
This course explores issues of global governance beyond the traditional intergovernmental framework. It focuses on the increasingly visible role of non-state actors (social movements, NGOs, global media, transnational corporations) and transnational politics in shaping contemporary global politics. The course investigates whether the process of contemporary globalization has given rise to global civil society. Annually.

PSPA 235 Human Rights and International Politics 3.0; 3 cr.
A course that examines the development and relevance of institutions and instruments concerned with human rights, and then considers problems of human rights issues in selected countries and their impact on regional and global actors. Every term.

PSPA 236 The Arab-Israeli Conflict 3.0; 3 cr.
A survey of the conflict over Palestine since the 19th century up to the contemporary period. This course focuses on the origins and evolution of the Arab-Israeli conflict both in its regional and international dimensions, covering topics such as the colonial roots, the formation of the state of Israel, the PLO, the 1967 war up to the second Intifada. Every term.

PSPA 237 The Modern Middle East in International Politics 3.0; 3 cr.
This course examines the place of the "Middle Eastern" system of states in the international system and in relation to US foreign policy towards the region. It covers the legacies of Western colonialism, Arab nationalism, the Cold War and the continuing intervention of external powers (especially the US), the geopolitics of oil, and the rising influence of Islamist movements and non-state actors. Annually.

PSPA 238 International Political Economy: From Imperialism to Globalization 3.0; 3 cr.
This course examines the development of the modern world economic system through an analysis of its main characteristics and an overview of the theories relevant to its understanding. Issues covered in this course include imperialism, colonialism, the international market, globalization, the influences of the world economic system on states and the North-South divide. Annually.

PSPA 239 International Environmental Politics 3.0; 3 cr.
This course serves as an introduction to the field of international environmental politics, exploring the relationship between global political forces and environmental change. A central goal is to critically analyze how environmental problems are framed and solutions found. The course examines the rise of environmentalism in both the North and the South; the emergence of liberal and radical environmental discourse; and the formulation, negotiation and implementation of international environmental regimes and sustainable development policies. Relevant case studies include the international trade in hazardous waste and endangered species; the politics of whaling, ecotourism, GMOs, and climate change; the management of biodiversity, fisheries, ocean and forest regimes; and the relationship between environment and security. Annually.

PSPA 250 Politics of Emerging Countries 3.0; 3 cr.
A survey of politics in key emerging economies such as the BRIC states (Brazil, Russia, India, and China) and others including South Africa and Mexico. The course examines the role of these emerging economies in world politics and their policy-making structures. Annually.

PSPA 251 Politics and Government: United States of America 3.0; 3 cr.
A survey of the main features of the American political system, including the foreign policy making process. Annually.

PSPA 252 European Politics 3.0; 3 cr.
A course that examines contemporary European politics with an emphasis on the European Union, its governance structure, and external relations (particularly toward the Middle East). Occasionally.

PSPA 253 Politics and Government: Middle East 3.0; 3 cr.
A survey of political institutions and processes in the Middle East, with an emphasis on social and political development, the policy-making process and international affairs. Annually.

PSPA 254 Political Development and Social Change 3.0; 3 cr.
A survey of major issues and controversies in political development, theories of social change, and their relevance to developing countries. Topics covered by this course include modernization, state-building, democratization, revolutions, conflicts, authoritarianism, social movements and civil society. Occasionally.

PSPA 255 Islamic Political Institutions 3.0; 3 cr.
A survey that introduces the manner in which Islamic Shari'a was introduced into the political life of the nation-states in the Middle East. It focuses on the causes for its inclusion or exclusion in the constitutions, political institutions and processes, and courts in the Middle East, with

an emphasis on legislative process, personal status code, criminal code, as well as social and political development, and their impact on policy-making processes and international relations. Occasionally.

PSPA 256 Politics in Lebanon 3.0; 3 cr.
An overview of Lebanese politics in Mount Lebanon from the mid-nineteenth century to the formation of the Republic of Lebanon. This course deals with the origins, evolution, and workings of the confessional system with emphasis on the period after independence, from the civil war to the present. In addition, it focuses on the main political and social movements that marked Lebanese politics. Every term.

PSPA 257 Regional and Local Administration 3.0; 3 cr.
A course that deals with the legal aspects, organization, and theories of regional and local administration. This course examines issues of centralization-decentralization, central-regional-local government relations, and balanced development at the national level. Annually.

PSPA 258 Comparative Public Administration 3.0; 3 cr.
An introduction to the governmental, administrative, and political systems of both developed and underdeveloped countries with a focus on political systems and their manifestation in administrative systems. The objectives of this course center upon comparing and contrasting issues and concerns central to public administration systems within a selected set of countries worldwide. To attain these objectives the course will explore an array of interrelated questions and issues such as governance in contemporary societies, including administrative reforms, privatization, 'empowerment', the impact of globalization on state administrative structures and policies, devolution, and other concerns relevant to public sector administrators. Annually.

PSPA 259 Public Administration in Lebanon 3.0; 3 cr.
A course that examines the legal aspects, environment, scope, structure, and problems of public administration in Lebanon, with special emphasis on administrative reforms and their institutional products. Annually.

PSPA 260 Introduction to Policy Analysis 3.0; 3 cr.
This is an introductory course to policy analysis. Students should be familiar with the basic concepts and terminology of public policy and public administration. This course provides students with both essential and more advanced methods used in public policy analysis. It covers important components of the process of policy analysis such as identifying data sources and weighing the utility of data; establishing criteria for analyzing policies; assessing policy alternatives; choosing among policies; monitoring policy implementation; and evaluating policies. Prerequisite: PSPA 276 Annually.

PSPA 261 Applied Research Methods in Public Policy 3.0; 3 cr.
This course covers the fundamentals of research design in the social sciences in general. It introduces students to the several quantitative methods utilized in the field of public policy in addition to the use of computer resources in policy analysis. Students are assumed to have prior basic knowledge of the scientific methodologies. Prerequisite: PSPA 276 Annually.

PSPA 262 Political and Agency Management Aspects of Public Policy 3.0; 3 cr.
The purpose of this course is to introduce students to the different organizational and political factors that are involved in the policy-making process. This course is interdisciplinary in nature. It draws upon different theoretical frameworks and empirical scholarly works from several disciplines, and includes case studies. The course focuses on organizational, communicative, and controlling techniques and relevant core competencies for the analysis and solution of problems. Prerequisite: PSPA 276 Annually.

PSPA 263 Public Policy and the Legal Framework 3.0; 3 cr.
This course introduces students to the legal framework of policy formulation and policy implementation. The students will become familiar with legal materials related to the different aspects of the public policy-making process. In addition, the course focuses on the relationships among the lawmaking agencies on the one hand and their relation to the policy-making entities. Specific case studies are included to explore these relationships. Prerequisite: PSPA 276 Annually.

PSPA 264 Public Policy and Activism 3.0; 3 cr.
This course focuses on the role of activists in bringing about policy change and the impact of the different types of activism on public policy. This course provides a realistic brief introduction to how public policy is made. It examines how people (voters, activists, elites, lobbyists, politicians, bureaucrats, and judges), organizations (interest groups, firms, unions, foundations, think tanks, political parties, and the media) and political institutions (Congress, the presidency, the bureaucracy, and the judiciary) interact to create and implement public policy. It further explores how one specific group made out of activists whether employed outside or inside the public sector, can shape policy agendas and influence decisions. Students will not only gain exposure to the theory and literature on policy formulation and the actors involved but also on the politics of policymaking. It covers policy activism and policy advocacy initiatives at local, regional, national, and international scales. It analyzes the relationship between selected social/political movements, advocacy groups and different forms of activism, that are considered legitimate actors, and the policy process and outcome.

PSPA 270 State Institutions and Civic Activism: Organization and Mobilization 3.0; 3 cr.
This course is focused on examining the nexus of relationships and trajectories of influence between collective action groups and state institutions. The course analyzes various forms of collective action and the role of state institutions in shaping different modes of mobilization. The course focuses on enabling students to think critically about strategies and approaches to social movements and political protest by incorporating an understanding of state structures and power dynamics. The course uses experiential learning methods and interdisciplinary theories to help students reflect on real-life case studies inspired from the context of the Middle East and North Africa region.

PSPA 272 The Non-Profit Sector: Formation, Leadership and Governance 3.0; 3 cr.
This course focuses on the economic, social, and legal foundations of the nonprofit sector. The ways in which nonprofit organizations relate to the public and private sectors and the diversity and scope of the nonprofit sector are examined with primary focus on the functions performed by nonprofit organizations and on various patterns of community actions taken in different societies. Annually.

PSPA 273 Human Resources and Personnel Administration 3.0; 3 cr.
A course that examines theories, practice, and problems relating to human resources and personnel administration. This course focuses on key aspects of human resources, planning, and their implications on public policy. Annually.

PSPA 274 Public Administration and Non-State Actors 3.0; 3 cr.
This course explores the various ways in which non-state actors engage with the state. It focuses on the internal dynamics of local relationships between the government and non state actors and offers insights into the interactions between them. It will review the opportunities and constraints of different types of non-state actors (e.g. NGOs, trade unions, employer groups, multinational corporations, thinks tanks; regulatory bodies; rating agencies) within different levels of governance and organizations.

PSPA 275 Organization and Management 3.0; 3 cr.
A survey of the concepts, principles, and techniques of organization and management with special emphasis on questions of applicability. In this course students will develop attitudes and acquire skills that should enable them to administer organizations effectively and efficiently. Students cannot receive credit for both MNGT 215 and PSPA 275. Annually.

PSPA 276 Public Policy 3.0; 3 cr.
A course that analyzes the nature, scope, and performance of public policy. This course examines the different approaches and models of public policy as well as the actors, instruments, and problems involved; the course draws on specific case studies. Annually.

PSPA 277 Public Budgeting 3.0; 3 cr.
A survey of the principles and problems of financial organization and management in the public service with emphasis on fiscal planning, formulation and execution of the budget, financial accountability, control, and other aspects related to the role of the budget in development. Annually.

PSPA 278 Administrative Ethics and Controls 3.0; 3 cr.
This course addresses the moral challenges facing leaders in the public sector. It analyzes the formal and informal means aiming at promoting responsiveness and responsibility in Public Administration. It examines the values and virtues important to sustain ethical leadership, as well as strategies to build strong institutional cultures and support ethical practices in institutions. Students will learn how to identify moral issues in public life and public management. Occasionally.

PSPA 286 Tutorial in Political Studies 3.0; 3 cr. (each)
This course is designed to allow Political Studies students to pursue a course of directed study with PSPA faculty members. It may consist of independent research, original creative compositions, or directed reading, and includes the presentation of a report or thesis. Students who are beginning their senior year may petition the department for course approval. Occasionally.

PSPA 287 Tutorial in Public Administration 3.0; 3 cr. (each)
This course is designed to allow PA students to pursue a course of directed study with PSPA faculty members. It may consist of independent research, original creative compositions, or directed reading, and includes the presentation of a report or thesis. Students who are beginning their senior year may petition the department for course approval. Occasionally.

PSPA 288 Special Topics in Political Studies 3.0; 3 cr. (each)
May be repeated for credit. Special Topics courses do not count as a Senior Seminar. Every term.

PSPA 289 Special Topics in Public Administration 3.0; 3 cr. (each)
May be repeated for credit. Special Topics courses do not count as a Senior Seminar. Every term.

PSPA 290 Senior Seminar in Social and Political Thought 3.0; 3 cr. (each)
May be repeated for credit. Every term.

PSPA 291 Senior Seminar in Middle Eastern Politics 3.0; 3 cr. (each)
May be repeated for credit. Every term.

PSPA 292 Senior Seminar in Comparative Politics 3.0; 3 cr. (each)
May be repeated for credit. Every term.

PSPA 293 Senior Seminar in International Politics 3.0; 3 cr. (each)
May be repeated for credit. Every term.

PSPA 297 Senior Seminar in Organization Theory 3.0; 3 cr.
This senior seminar provides an examination of the development, theoretical structure, major concerns, areas of emphasis and debates in the field of organization theory, from its origins to the present. It takes an interdisciplinary approach and covers the body of empirical findings relevant to organization and management theory, practices and prescriptions. It puts emphasis on those ongoing findings and elements of theory that impact the contemporary study, research, and philosophy in the field of public administration. Annually.

PSPA 298 Senior Seminar in Public Policy and Administration 3.0; 3 cr.
This course focuses on particular public policy issues. It explores the major debates, both theoretical and applied that frame contemporary discussions about public policy. The seminar addresses several topics such as Human Rights policy, Poverty policy, Environmental policy, and Political advocacy. Prerequisite: PSPA 276. Annually.

PSPA 299 Internship Program 3.0; 3 cr.
A course that explores politics and public administration through a variety of work experiences, both governmental and nongovernmental. Students are expected to perform work for academic credit under the guidance of a full-time PSPA faculty member. As part of their course requirements, students will regularly meet with the faculty member sponsoring the course and submit written reports based on their experiences during the internship. Strongly motivated junior and senior students with a highly relevant internship may petition the department for internship approval. Students must enroll in the internship program the term they complete the internship. Annually.

Major in Political Studies: 39 Credits in Political Studies

Modes of Analysis	Understanding Communication - English and Arabic (9)	Cultures and Histories (9), Human Values (3)	Societies and Individuals (39+6)	Understanding the World (39), Quantitative Reasoning (9:3/6+3/6)	Community-Engaged Learning (3)

Lecture Courses (9+12+6 +36+12+9)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Two approved Societies and Individuals courses Seven required PSPA courses: PSPA 201(3), 202(3), 203(3), 210(3), 211(3), 213(3) and either 253(3) or 256(3) (21 credits) Five required PSPA courses: PSPA 214(3), 215(3), 216(3), 217(3), 218(3), 219(3), 220(3), 221(3), 222(3), 223(3), 225(3), 226(3), 228(3), 229(3), 231(3), 232(3), 233(3), 234(3), 235(3), 236(3), 237(3), 238(3), 239(3), 250(3), 251(3), 252(3) 253(3), 254(3), 255(3), 256(3), 286(3), 288(3), 299(3) 288(3) 15 credits	One approved quantitative reasoning general education courses (3 credits) Two approved understating the world general education courses (6 credits)	Requirement course (3)
Senior Seminar (3)			One approved PS Senior Seminar:PSPA 290(3), 291(3), 292(3), or 293(3) (3credits)		
Free Electives	Four approved courses that are numbered 200 and above (12 credits)				

Major in Public Administration: 39 Credits in Public Administration

Modes of Analysis	**Understanding Communication - English and Arabic (9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (39+6)**	**Understanding the World (39), Quantitative Reasoning (9:3/6+3/6)**	**Courses outside the major (3)**	**Community-Engaged Learning (3)**
Lecture Courses (9+12+6 +39+9+ 3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	One required economics course from the approved General Education list (3), and either SOAN 201(3) or PSYC 202(3) (6 credits) Seven required PSPA courses: PSPA 201(3), 202(3), 203(3), 212(3), 273(3), 276(3) and 277(3) (21 credits). Five required PSPA courses in either: Public Management: Three courses from PSPA 222(3), 257(3), 258(3), 259(3), 272(3), 275(3), 278(3); and two courses from PSPA 260(3), 261(3), 262(3), 263(3), 287 (3), 289 (3) (15 credits); or	Two approved Understan- ding the World General Education courses (6 credits) One course related to information technology: CMPS 206(3) or CMPS 209(3) (3 credits).	One course related to statistical analysis: STAT 201(3), STAT 210(3), EDUC 227(3), or PSYC 213(3) (3 credits).	Requirement course (3)

			Public Policy: Three courses from PSPA 260(3), 261(3), 262(3), 263(3) and two courses from PSPA 222(3), 257(3), 258(3), 259(3), 272(3), 275(3), 278(3), 287(3), 289(3) (15 credits).			
Senior Seminar (3)			One approved PA Senior Seminar: PSPA 297(3) or 298(3) (3 credits).			
Free Electives	Four approved courses that are numbered 200 and above (12 credits)					

Department of Psychology

Chairperson:	Dietrich, Arne
Professor:	Dietrich, Arne
Assistant:	Agopian, Sarine; Ayoub, Mona; Badaan, Vivienne; Bosqui, Tania; Ismail, Ghena; Saadeh, Sabine
Lecturers:	Awaida, May A.K.; Fisher, Jennifer; Ouweidat, Hala
Instructors:	Bassil, Margaret; Majzoub, Hana
Professor Emeritus:	Kazarian, Shahe

The Department of Psychology offers programs leading to a BA degree in psychology and to an MA degree in psychology.

BA in Psychology

Mission Statement

The discipline of psychology is dedicated to increasing the scientific understanding of behavior and mental processes at the intrapersonal, interpersonal and group level, and to the application of that understanding to enhance the functioning of individuals, groups, and society. In line with this mission, the undergraduate program in Psychology has a threefold mission: to advance and transmit knowledge related to the nature of psychological processes and functioning, to provide a strong foundation in the basic knowledge and skills necessary for research in psychology, and to sensitize students to the applications of psychology in the wider community. This mission embodies the main elements of AUB's mission, which are to foster freedom of thought, respect for diversity, critical thinking, personal integrity, and civic engagement.

Requirements for a BA degree in Psychology

Admission to the Psychology program requires a grade of B or more in PSYC 101 or PSYC 201, a minimum grade of B in ENGL 204, and an overall average above 3.0 for transfers. Meeting the minimum requirements for joining the Psychology Department does not guarantee acceptance. Transfer to Psychology from other departments within the university is academically competitive and requires departmental approval. Students admitted as sophomores directly into the program must score a B in PSYC 201 and ENGL 204 as well as maintain a minimum average of 2.3 in their psychology courses by the end of their third regular term at AUB. Students seeking to be readmitted to the program after being dropped must meet transfer requirements. For purposes of meeting departmental admission requirements, students are not permitted to take PSYC 101 or PSYC 201 more than twice. While completing PSYC 101 qualifies a student to meet one of the admission requirements to the major, 100 level courses will not be counted towards a major requirement. Prospective majors who obtain a grade below D in PSYC 101 or PSYC 201 will not be permitted to take the course a second time for the purpose of meeting the departmental admission requirements. Requirements for majors

include PSYC 101 or PSYC 201, PSYC 280, PSYC 282, PSYC 284, and PSYC 288. In addition to these required courses, the student must select nine courses from the following categories: Category 1 (3 out of 5 are required, but all can be taken for credit)(9): PSYC 210(3), PSYC 212(3), PSYC 214(3), PSYC 215(3), and PSYC 216(3); Category 2 (3 out of 5 are required, but all can be taken for credit)(9): PSYC 220(3), PSYC 222(3), PSYC 224(3), PSYC 226(3), and PSYC 229(3); Category 3 (the remainder are 9): PSYC 230(3), PSYC 232(3), PSYC 234(3), PSYC 235(3), PSYC 236(3), PSYC 237(3), PSYC 238(3), PSYC 239(3), PSYC 240(3), PSYC 290(3), and any course in Category 1 and 2 that has not already been chosen.

In addition to these required courses, the student must complete 3 credits in Quantitative Thought numbered 200 or above. Also required are 6 credits in Natural Sciences. A biology course is recommended.

The requirements for a BA degree in Psychology are 90 credits for students entering the department at the sophomore level, including 42 credits in the major. The distribution of university requirements is as follows:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits). Also note that the Societies and Individuals must be an approved General Education course from outside the major.

A minor in psychology requires 15 credits: PSYC 201, PSYC 280, and three electives from PSYC 210–240. A minimum cumulative average of 2.7 is required.

A cognitive science minor (suspended as of Fall 2020-21) requires 18 credits: PSYC 237 is required. PSYC 237 cannot be counted as a psychology course for the purpose of this requirement. The remaining 15 credits must be chosen from the following courses: BIOL 240, 243, 244, CMPS 201, 211, 261, 262, EDUC 215, 221, ENGL 227, 228, 232, 284, 294, PHIL 211, 220, 221, 222, 223, 257 or 258 (but not both), PSYC 210, 222, 224, 226, 229, 280, on condition that the 15 credits chosen span at least three disciplines. A student may choose a special topics course not listed above (e.g., 290 course codes), provided the topic is within the purview of cognitive science, upon approval of the course coordinator. For single major students, only 3 credits of the 15 credits taken for the minor may count toward the major.

For double major students, 6 credits taken for the minor may count toward the majors, with no more than 3 credits per major. Students are encouraged to take PSYC 237 early in the minor.

Course Descriptions

PSYC 101 Freshman Introduction to Psychological Science 3.0; 3 cr.

A survey of the principles and concepts of modern psychological science. Emphasis is placed on critically examining empirical research investigating human behavior and mental processes. Students who take this course cannot get credit for PSYC 201. Every term.

PSYC 201 Introduction to Psychological Science 3.0; 3 cr.
A survey of the principles and findings of modern psychological science. Emphasis is placed on critically examining empirical research investigating human behavior and mental processes. Students who receive credit for PSYC 101 cannot receive credit for PSYC 201. Every term.

PSYC 210 Lifespan Developmental Psychology 3.0; 3 cr.
A course on psychological development from the prenatal period to late adulthood. Students who receive credit for EDUC 225 cannot receive credit for PSYC 210. Prerequisite: PSYC 201 or PSYC 101. Every term.

PSYC 212 Social Psychology 3.0; 3 cr.
A course on the scientific study of how individuals think, feel, and behave in regard to other people, and how individuals' thoughts, feelings, and behaviors are affected by other people. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 214 Adult Abnormal Psychology 3.0; 3 cr.
An introduction to the research, history, and theories of abnormal behavior in adults and a critical examination of the definition, classification, prevalence, etiology and treatment of adult abnormal behavior. Topics covered include anxiety, post-traumatic stress, depression, mania, borderline personality, substance abuse, schizophrenia, and sexual abnormalities. Prerequisite: PSYC 201 or PSYC 101. Every term.

PSYC 215 Child Abnormal Psychology 3.0; 3 cr.
An introduction to the psychological disorders of childhood and adolescence, including attention deficit hyperactivity disorder, conduct disorders, autism, mood and anxiety disorders. The course begins with an understanding of abnormal behavior and proceeds to cover symptomatology, the major theories of causality, and treatment interventions. Prerequisite: PSYC 201 or PSYC 101.Every term.

PSYC 216 Personality Psychology 3.0; 3 cr.
An introduction to the research, theories, and measurement of personality with a critical examination of the influence of personality on behavior. The course surveys biological, psychodynamic, trait, humanistic, behavioral, social learning, and cognitive perspectives to the understanding of human personality and their application to individuals and organizations. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 220 Psychology of Learning and Behavior 3.0; 3 cr.
A course on the principles of learning and behavior. The psychology of learning, or behavioral psychology, introduces students to the psychology of learning and behavior analysis by examining the classical and operant (instrumental) conditioning paradigms from an experimental perspective. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 222 Behavioral Neuroscience 3.0; 3 cr.
An introduction to the neural basis of the mind and behavior. The course surveys the structure and organization of the human brain and examines how complex behavior and mental processes arise from it. Prerequisite: PSYC 201 or PSYC 101. Registration for PSYC 222 is not open to Biology students who may register for the cross-listed course, BIOL 243. Annually.

PSYC 224 Sensation and Perception 3.0; 3 cr.
A course on how humans sense and perceive the environment. Topics covered include the anatomy and physiology of the sensory systems, types of stimuli affecting sensory systems, higher perceptual processing, and current knowledge and theories of our perceptual abilities. The course also emphasizes the relationships between perceptual processes and other higher cognitive functions. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 226 Cognitive Psychology 3.0; 3 cr.
An introduction to human cognitive processes, including perception, attention, memory, language, imagery, categorization, problem solving, reasoning and decision-making. These cognitive processes are examined with regard to human brain functioning. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 229 Cognitive Neuroscience 3.0; 3 cr.
An advanced course on the underlying neural mechanisms of higher mental function. Topics include brain systems implementing memory, language, decision-making, control of action, social cognition, emotions, creativity, cultural evolution, consciousness, cognitive control and brain-computer interfaces. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 230 Clinical Psychology 3.0; 3 cr.
An introduction to the history and development of the science and practice of clinical psychology with a critical examination of training models, approaches to clinical problems, methods of assessment, choice of empirically validated interventions, prevention strategies and career opportunities. The course surveys clinical and research activities (assessment, therapy, and consultation), settings (clinical, hospital, school, court, and private practice), and professional issues (roles, ethics, and laws). Prerequisite: PSYC 214 or PSYC 215. Annually.

PSYC 232 Health Psychology 3.0; 3 cr.
An introduction to the field of health psychology with a critical examination of the biopsychosocial model of health and the ecological model of health outcomes. The course explores the impact of five systems on individual health outcomes: the individual (including physiology), the family/ community, physical and social environments, healthcare systems and health policy. A variety of infectious diseases and chronic illnesses will be used to illustrate the roles of these systems in explaining health. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 234 Positive Psychology 3.0; 3 cr.
An introduction to the history and development of the scientific study of positive experiences, positive traits, and positive institutions with a critical examination of the field's theoretical and philosophical assumptions, methods of assessment, and applications to promote personal growth and fulfillment. The course surveys such topics as personal strengths, optimism, resilience, gratitude, forgiveness, humor, love, sexual intimacy, emotional intelligence, happiness, life satisfaction, and the ability to create positive environments. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 235 Political Psychology 3.0; 3 cr.
This course draws on the social psychological literature of intergroup relations, introducing the students to individual and group-based approaches to the study of intergroup relations, as well as political psychological research in the Arab world. Pre-requisite: PSYC 101/201. Annually.

PSYC 236 Culture and Psychology 3.0; 3 cr.
The course aims to sensitize students to the importance of culture in psychological processes, and focuses on indigenous, cultural, and cross-cultural psychological theories and findings. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 237 Introduction to Cognitive Science 3.0; 3 cr.
An introduction to the interdisciplinary study of cognitive science which involves research about the workings of the mind from the fields of psychology, linguistics, philosophy, education, computer science, neuroscience, anthropology, engineering, and others. The course aims to provide students with an appreciation for the range of disciplinary perspectives and methods, and the applications of cognitive science to everyday life. Annually.

PSYC 238 Applied Behavior Analysis 3.0; 3 cr.
An introduction to Applied Behavior Analysis (ABA) or Behavior Modification, which is concerned with evidence-based applications of behavioral principles to a wide range of socially and clinically important problems. Prerequisite: PSYC 201 or PSYC 101. Occasionally.

PSYC 239 Psychology of Trauma 3.0; 3 cr.
An introductory course aimed to examine the experience and impact of trauma on children and adults. The theories of trauma will be reviewed including the developmental, cognitive, and neuroscience models of trauma and memory. The course will also cover the cultural and socio¬political considerations of trauma as well as evidence-based treatments and post-traumatic growth. Pre- or co-requisite: PSYC 214 or PSYC 215. Occasionally.

PSYC 240 Special Topics in Psychology 3.0; 3 cr.
A course that provides a general overview of an area of psychology that is not normally covered by the department's offerings. Prerequisite: PSYC 201 or PSYC 101. Annually.

PSYC 280 History and Systems of Psychology 3.0; 3 cr.
A course that examines the philosophical foundations of psychology. There is special emphasis on the historical development of scientific conceptions of human behavior and mental processes in the context of contemporary psychological systems. Prerequisite: PSYC 201 or PSYC 101. Every term.

PSYC 282 Research Design in Psychology 3.0; 3 cr.
This course is the first part of the required research sequence for students majoring in psychology. It provides students with a solid foundation in the basic quantitative research methods and design, addresses ethical issues and validity in psychological research, and introduces students to statistical analyses that will be needed for PSYC 284, PSYC 290, and other research-related courses. Prerequisite: PSYC 201 or PSYC 101. For Psychology majors only. Every term.

PSYC 284 Statistical Analyses in Psychology 3.0; 3 cr.
This course is the second part of the required research sequence for students majoring in psychology. It introduces the student to univariate, bivariate and multivariate statistical analyses in psychological research and combines lectures and computer Lab sessions. Prerequisites: STAT 201 or STAT 203 or STAT 210 or STAT 231 and PSYC 282. Every term.

PSYC 288 Undergraduate Seminar in Psychology 3.0; 3 cr.
A review of significant research in major areas in psychology. Prerequisites: PSYC 282 and senior standing. Prerequisite: PSYC 284. Every term.

PSYC 290 Undergraduate Research Project in Psychology 3.0; 3 cr.
This course requires students to plan, conduct, and write up a full empirical study. The course is meant to build upon and further develop the research and data analysis skills acquired in the required research sequence courses. Prerequisites: PSYC 282 and PSYC 284 or consent of department. A minimum grade of B in both PSYC 282 and PSYC 284 is required. Annually.

PSYC 298 Directed Study in Psychology 3–6 cr.
A tutorial course offered to psychology students with an average of A- or above in their major at the beginning of their senior year. This tutorial consists of independent research, original creative compositions, or directed reading, and includes the presentation of a report or thesis on the work. Students with averages lower than 3.7 may be admitted to directed study at the discretion of the department. Offered on request.

42 Credits in PSYC

Modes of Analysis	**Understanding Communication - English and Arabic(9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (42)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Societies and Individuals outside the major (3)**	**Community-Engaged Learning (3),**

Lecture Courses (9+12 +42+6+ 3+3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required PSYC courses (15): PSYC 101(3) or PSYC 201(3), 280(3), 282(3), 284(3), 288(3) and nine courses from the following three categories (24): Category 1 (3 out of 5 are required (9): PSYC 210(3), 212(3), 214(3), 215(3), 216(3); Category 2 (3 out of 5 are required (9): 220(3), 222(3), 224(3), 226(3), 228(3and PSYC 229 (3); Category 3 (three electives) (6): PSYC 230(3), 232(3), 234(3), 236(3), 240(3), and 290(3), and courses in Category 1 and 2 not already chosen.	Two Understanding the World courses (3) numbered 200 and above. (A BIOL course is recommended.) Required: STAT 201 or STAT 203 or STAT 210 or STAT 231	Required: (3)	Required course (3)

Seminar (3)			Required (3): PSYC 288(3)			
Labor-atory (6)			Required (3): PSYC 282(3), 284(3)			
Rese-arch Project (3)			Required (3): PSYC 212(3), 214(3), 216(3), 226(3), 220(3), 232(3), 240(3), 282(3), 284(3), 290(3)			

Department of Sociology, Anthropology, and Media Studies

Chairperson:	Atwood, Blake
Director of Media Studies:	Burris, Greg
Professors:	Hanafi, Sari; Scheid, Kirsten
Associate Professors:	Atwood, Blake; Burris, Greg; Wick, Livia
Assistant Professors:	Carney, Josh; Farah, May; Kassir, Alexandra; Kosmatopoulos, Nikolas; Majed, Rima; Mourad, Sara; Perdigon, Sylvain; Saleh, Elizabeth; Sukarieh, Rana; Tarraf, Zeina
Lecturers:	Barakat, Rabie; Fathallah, Zeina; Hamdar, Sarah
Instructors:	Azar,George; Ghanem, Samar; Rassi, Rima; Sarouijian, Narod
Part-time Instructors	Agha, Dina; Boustany, Nora

BA in Sociology and Anthropology

Mission Statement

This combined BA degree is designed for students with interests in both sociology and anthropology. It offers a multi-disciplinary curriculum based on the social sciences and the humanities. It prepares students to understand and engage with the social and cultural worlds we inhabit. The joint specialization in Anthropology and Sociology allows students to observe and investigate life in diverse societies while acquiring training in social and cultural theories and methods. It explores what it means to be a person in the Arab region and around the world by examining the ways people organize activities, social structures, institutions and belief systems. Courses will develop students' critical perspective on religion, family, class, medicine, art, displacement, war, social movements, human rights, gender, media, sexuality and colonialism. The BA prepares students to work in areas such as non-governmental and governmental organizations, think tanks, development agencies, research institutes and business and to pursue graduate work or teach in the social sciences and humanities.

Admission

Admission to the sociology-anthropology program requires a minimum grade of C+ in ENGL 203 and ENGL 204, and a grade of C+ or more in one of the following: SOAN 101, SOAN 103, SOAN 201, or SOAN 203. If admission to SOAN is based on SOAN 101 or SOAN 103, any additional SOAN or any social science course is required.

Requirements

The requirements for a BA in Sociology-Anthropology are 90 credits for students entering the department at the sophomore level and 120 for those entering as freshmen, including 39 credits in the major. Required courses include: SOAN 101 or SOAN 103 or SOAN 201 or SOAN 203, and SOAN 210 or SOAN 216, and SOAN 212, SOAN 213, SOAN 237, a SOAN seminar (SOAN 240-290), and 21 additional SOAN credit hours (SOAN 200 and above). The distribution of university requirements is as follows:

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Diploma in Development Studies

The Diploma in Development Studies offers a variety of disciplinary and thematic approaches to development-related issues from a critical perspective rooted in the Global South. The diploma academically prepares students for careers in the development, humanitarian and aid sectors, as well as for careers in research centers or the policy world. It also prepares students for graduate or post-graduate studies in the field of development studies (or other related social science disciplines).

Coursework

The Diploma in Development Studies requires eight courses, including six courses from predetermined subject areas and two elective courses. Please note that the diploma is at the undergraduate level. For graduate level courses to be taken, students must be of senior standing, not on probation, and must secure the consent of the department.

Required Courses

A total of 24 credits (eight courses) are required for the diploma.

1. SOAN 219 Introduction to Development Studies
2. SOAN 210 Research Methods
3. Globalization, Inequality and Development. Pick one of the following (or equivalent as approved by the adviser): SOAN 223 Social Inequality: Conflict and Consensus, ECON 237 Economic Development I, PSPA 238 International Political Economy: From Imperialism to Globalization,

PPIA 306 Political Economy

4. Labor, Migration and Development. Pick one of the following (or equivalent as approved by the adviser): SOAN 290AX Economy and Society, SOAN 323AE Making and Unmaking Markets, ECON 222 Labor Economic
5. Humanitarianism, Forced Migration and Development. Pick one of the following (or equivalent as approved by the adviser): SOAN 242 Seminar in Globalization and Migration, SOAN 245 Seminar in Transitional Justice, SOAN 318 Human Migration
6. Gender and Development. Pick one of the following (or equivalent as approved by the adviser): SOAN 225 Gender and Culture, SOAN 290(TBA): Gender and Development
7. Two electives chosen with the approval of the adviser

Admission Requirements

For Non-AUB: New students should obtain an application from the Office of Admissions and apply as new students. Applications are reviewed by the department and, when accepted, students are classified as special students working for a diploma. Completion of the bachelor's degree is a requirement for admission of new students to the development studies diploma, in addition to proof of efficiency in English. Relevant work experience is favorable.

For AUB students: AUB students working for their bachelor's degree at AUB have to apply to the department directly after completion of their sophomore year with an overall average higher than 3.3.

Course Descriptions

SOAN 101 Freshman Sociology 3.0; 3 cr.
An introduction to the principles and concepts of sociology to prepare students for majoring in sociology. Students who take this course cannot receive credit for SOAN 201. Every term.

SOAN 103 Reading Other Cultures 3.0; 3 cr.
An introduction to the study of other cultures drawing on film, ethnographic case studies, and topical debates. This course presents basic concepts in the comparative study of culture, methods of observing and interpreting other cultures, a sense of how knowledge about other cultures is constructed, and tools to develop a critical awareness of one's own cultural traditions. Note that this course is classified as a humanities, not a social science, course. Students may take it to fulfill the humanities requirement of their freshman year but not in fulfillment of the freshman social sciences requirement. Students may receive credit for both SOAN 103 and SOAN 203. Every term.

SOAN 201 Introduction to Sociology 3.0; 3 cr.
An introduction to the study of social phenomena. Basic concepts, principles, and methods common to the study of society are employed for the analysis of structure and change in society. This course includes the structure and origin of some basic human institutions such as family, kinship, religion, and language. A student who has received credit for SOAN 101 cannot receive credit for SOAN 201. Students may receive credit for both SOAN 201 and SOAN 203. Every term.

SOAN 203 Introduction to Anthropology 3.0; 3 cr.
An introduction to socio-cultural anthropology. Anthropology offers comparative perspectives on the ways people live in the world. In doing so, it challenges some of our commonly

held assumptions about what is natural and universal. The course will explore anthropology's approaches, concepts and methods emphasizing case studies from different settings. Students may receive credit for both SOAN 201 and SOAN 203. Every term.

SOAN 210 Research Methods 3.0; 3 cr.
A survey of the basic techniques and designs of social research, including both quantitative and qualitative methods, the relationship between micro and macro approaches to society, and the interplay between theory and research. Alternate years.

SOAN 211 Analysis of Social Data 3.0; 3 cr.
A survey of basic statistical techniques and other methods of quantitative analysis used in analyzing social data. Students participate in the analysis of research data by applying various analytical techniques using computer packages. They will also interpret research findings and write a research report. Annually.

SOAN 212 History and Theory in Anthropology 3.0; 3 cr.
A survey of some of the major theoretical perspectives and critical issues of classical and contemporary anthropological theory. Special focus is placed on the intellectual history of the discipline, an analysis of the contexts in which it developed and tools to recognize and critically evaluate different perspectives on culture and society. Annually.

SOAN 213 Sociological Theory 3.0; 3 cr.
A survey of some of the major theoretical perspectives and critical issues of classical and contemporary sociological theory. Special focus is placed on four interrelated dimensions: 1) the nature of sociological theory and its intellectual sources, 2) its classic tradition, particularly the legacies of Marx, Durkheim, and Weber, 3) an exploration of salient contemporary perspectives, 4) the emergence of new theories and/or directions, such as post-modernity and global sociology. Alternate years.

SOAN 215 Anthropology of America 3.0; 3 cr.
A critical examination of conceptions of "mainstream" or "dominant" American culture. Using ethnographic case material, the course explores cultural systems and social structures in the contemporary United States, offering an introduction to anthropological approaches to the study of complex societies. Alternate years.

SOAN 216 Hands-On Anthropology 3.0; 3 cr.
An introduction to the techniques, theories, and debates concerning ethnographic fieldwork. What do anthropologists actually do and what is unique about anthropological research? This course explores the politics and ethics of research, kinds of observation, effective interviewing strategies, note-taking, ways of 'coding' or indexing information, data analysis, and approaches to writing. Alternate years.

SOAN 217 Anthropology of the Body 3.0; 3 cr.
An examination of cultural and historical variations in perceptions and experiences of the human body. The course focuses on the ways the human body is culturally constructed and socially experienced, through case studies of labor, sport, health, illness, sexuality, gender, display, and religious ritual. Annually.

SOAN 218 Anthropology of Medicine and Science 3.0; 3 cr.
This course explores science and medicine from a cross-cultural and historical perspective. Students examine how scientific and medical practices are imbued with and shaped by social meanings and politics. They explore how the institutions of science and medicine construct truth, reality, nature, disease, health, body and mind, and how they connect with markets and other institutions. Occasionally.

SOAN 219 Introduction to Development Studies 3cr.
This course aims to introduce students to one of the most widespread but also contested aspects of policy-making today. Development has become a universal catchword - widely used (and abused) by politicians and policy experts to explain (in some version to construct) the economic and cultural gap between “developed” and “underdeveloped” countries. In academic circles, Development Studies emerged as a multidisciplinary field in order to engage with this process, concerning itself with understanding development as a long run historical process of social and/or ecological transformation; as a normative vision, description or measure of the state of being of a desirable society or global order; and as an often critical analysis of efforts at improvement undertaken by a variety of “developmental agencies” ranging from governments through social movements and civil society actors to international organizations. Occasionally.

SOAN 220 City and Society 3.0; 3 cr.
An introduction to some of the leading conceptual and methodological perspectives for the study of transformations in human settlements. The course explores issues associated with the evolution of cities, their spatial and cultural features, and the social production of informal space and the gendering of space. Changing trends and patterns in Third World urbanization are explored with special focus on the Arab World, global, and post-modern cities. Alternate years.

SOAN 221 Political Anthropology 3.0; 3 cr.
This course explores the everyday practices of the larger structures that create and perpetuate power. It emphasizes students’ awareness of the state apparatus, non-state political systems and modes of political exclusion that shape the experience of power locally and trans-nationally. It uses prominent schools of thought, among them Marxism, feminism, Foucauldian and post-colonial theories to provoke critical analyses of power in our own lives. Alternate years.

SOAN 222 Family and Kinship 3.0; 3 cr.
The course examines, from a comparative perspective, different forms of family and kinship organization, their relation to production and systems of exchange. Special focus is placed on processes of initiation and reproduction, and cultural expression of relatedness. Alternate years.

SOAN 223 Social Inequality: Conflict and Consensus 3.0; 3 cr.
The course explores theories of social inequality. It addresses issues such as class, status, and gender inequalities and points to sources of conflict and consensus. Arguments for and against equality are canvassed. Alternate years.

SOAN 224 Sexuality and Society 3.0; 3 cr.
The course provides a comparative conceptual framework to explore the changing nature of sexuality in society. Special focus is placed on the social construction of sexual identities, sex and the body, the place of desire and the changing form of romantic love, erotica and pornography, the commodification of intimacy, sexual ethics and sexual prolifics in a globalized world. The course also focuses on the dynamics of male-female relations in Arab society. Alternate years.

SOAN 225 Gender and Culture 3.0; 3 cr.
An examination of gender holistically and cross-culturally from a social-anthropological perspective. This course examines how meanings of sex variation are constructed and gender is performed by individuals and groups in different societies. It studies the roles of women and men in ritual, in economic and political systems, and in other social arenas. Annually.

SOAN 226 Religion and Society 3.0; 3 cr.
A course that examines the relationship between society and religion, including both formal institutions and informal processes, which deal with the supernatural. This course studies the origin and development of ritual and religious functions for both the individual and society. Alternate years.

SOAN 227 Cultural Boundaries and Identities 3.0; 3 cr.
Cultural Boundaries and Identities.

SOAN 228/MCOM 203 Arab Media and Society 3.0; 3 cr.
An in-depth examination of the political, social, economic, and technological effects of old and new Arab media systems on modern Arab society, with an emphasis on Lebanon and the Arab East region. It focuses on probing the development and current state of print, broadcast and new media systems in the region. Annually.

SOAN 229/MCOM 202 Communication Theory 3.0, 3 cr.
An overview of the ways in which mass communication has been viewed by social scientists and by practitioners, with a focus on the range of issues studied and questions raised, and the schools, approaches, and trends in the field. Annually.

SOAN 230 Political Sociology 3.0, 3 cr.
This course will provide an overview of the main theories and approaches in political sociology, and it will cover some of the key concepts in the field. It will start with a general introduction to political sociology and its relevance. This will be followed by a survey of the main classical schools of thought including pluralism, elite theories, Marxism, and corporatism. The course will then explore more contemporary theories in political sociology including authors such as Foucault, Gramsci, Arendt, Baumann or Skocpol. Following this general introduction, the course will then tackle major concepts and attempt to examine them through relevant case studies. These concepts will include: civil society, political organization, capitalism and neoliberalism, globalization, nation and nationalism, gender and sexuality, race, ethnicity and sectarianism, identity politics, contentious politics, social movements, revolution and violence. Occasionally

SOAN 232 Conflict Analysis and Resolution 3.0; 3 cr.
An overview of the field of conflict analysis and resolution. This course covers the history of conflict studies, theories of conflict, and methods of dispute resolution. Annually.

SOAN 236 Semiotic Anthropology: An Introduction to Signs in Society 3.0; 3 cr.
An introduction to semiotic anthropology as a method for analyzing how language and other sign systems contribute to shape everyday interactions, social institutions and the various ways in which humans inhabit the world. Students will approach works by major authors who sought to theorize the structure of signs and sign systems, and learn to recognize the various modes of anthropological interpretation that these works inspired. Case studies will demonstrate how the toolbox of semiotic anthropology can be brought to bear on a range of topics, including gender and sexuality, the social formation of subjectivity, the emergence of political collectives, religion and modernity, and human-nonhuman interactions. Alternate years.

SOAN 237 Arab Culture and Society 3.0; 3 cr.
A study of contemporary Arab society: its complexity, diversity, and internal dynamics. This course considers social structures, social groups, cultural patterns, and processes and agents of social and cultural change, and examines current debates on major issues in Arab culture and society. Listed as SOAN 214 prior to Fall term 2012-13. Prerequisite: Junior or senior status or consent of the instructor. Every term.

SOAN 238 Special Topics (Humanities) 3.0; 3 cr.
A course that provides a general overview of an area in the humanistic social sciences that is not normally covered by the department's offerings. Note that this course is classified as a Cultures and Histories, not as a Societies and Individuals, course.

SOAN 239 Special Topics (Social Sciences) 3.0; 3 cr.
A course that provides a general overview of an area in anthropology or sociology that is not normally covered by the department's offerings. Occasionally.

SOAN 240 Seminar in Human Rights and Cultural Differences 3.0; 3 cr.
A seminar that provides students with an introduction to the history, concepts, institutions, and applications of human rights. Although drawn mainly from a Western perspective, applications are canvassed from the Middle East as well. Discussions cover philosophical foundations of human rights law; discrimination, xenophobia, and racism; civil, political, social, and economic rights; women's rights; children's rights; rights of minorities and indigenous people; and migrant workers' rights. Alternate years.

SOAN 242 Seminar in Globalization and Migration 3.0; 3 cr.
An introduction to a range of issues related to theories of migration with particular emphasis on the peculiarities of contemporary globalization. Theoretical considerations include assumptions and case studies from sociology, economics, political economy, and anthropology. Concepts such as network theory, transnationalism, and the international division of labor are used to illuminate issues such as citizenship and identity, refugees, forced migration, nationalism, and ethnicity as they relate to the migratory experience. Alternate years.

SOAN 243/MCOM 260 Seminar in Media Studies 3.0; 3 cr.
An undergraduate seminar on the role of communication in society. The content areas may change. May be repeated for credit. Annually.
SOAN 245 Seminar in Transitional Justice 3.0; 3 cr.
The seminar is an exploration of the strategies and courses of action societies confront as they consider legacies of past human rights abuses or atrocities. It examines the ways in which states and the international community attempt to achieve justice in periods of political

transition. Some of the leading theories and applied dimensions will be critically assessed in the light of the operation of international and domestic criminal justice, historical and administrative justice. Annually.

SOAN 250 Seminar in Art and Culture 3.0; 3 cr.
A cross-cultural exploration of art as an idea, an object, a history, and a way of interacting with the world. How is art a universal category? This course applies anthropological theories to the study of art and art theories to the study of human society. Particular attention is paid to local resources and archives. Occasionally.

SOAN 251 Seminar in Anthropological Thought 3.0; 3 cr.
An investigation of the major theories guiding anthropological thinking today, through a historically contextualizing overview. This course introduces students to a range of theoretical propositions concerning such topics as agency, structure, subjectivity, power, and the politics of representation by reading primary texts from landmark figures in sociocultural anthropology. Occasionally.

SOAN 252 Seminar in Controversies: Ethics and Epistemology 3.0; 3 cr.
An investigation of the cases that have shaken the discipline of anthropology and/or sociology. This course uses some issues including cannibalism and espionage to enter into some of the core concerns in the study of humans. What have been the ethical controversies moving our discipline? What are the epistemological questions raised by the controversies? Occasionally.

SOAN 253 Political Sociology in the Arab World 3.0; 3 cr.
This course tackles the question of power and society in the contemporary Arab world. It attempts to understand the political sociology of these societies through a focus on critical thinking and case studies. The course starts with a general introduction to the field of political sociology and its application in the Arab region. It then moves to exploring the concept of "orientalism" and its critique. This is followed by a discussion on researching Arab societies and some of the major problems faced or created by researchers. The rest of the course tackles some of the most pertinent debates in the Arab world today including: the role of civil society, the importance of organization, social classes and inequality, gender and politics, nationalism, sectarianism, political Islam, the Arab uprisings, the role of youth, and war and violence. Occasionally.

SOAN 290 Special Topics Seminar 3.0; 3 cr.
SOAN faculty or visiting professors and recognized scholars might be invited to offer seminars to explore relevant dimensions of their research in progress. Occasionally.

SOAN 299 Directed Study 3–6 cr.
A tutorial course offered to SOAN students with an average of 3.7 or above in their major at the beginning of their senior year. This tutorial consists of independent research, original creative compositions, or directed reading, and includes the presentation of a report or thesis on the work. Students with averages lower than 3.7 may be admitted to directed study at the discretion of the department. Occasionally.

39 Credits in SOAN

Modes of Analysis	**Understanding Communication - English and Arabic(9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 39+6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Societies and Individuals outside the major (3)**	**Community-Engaged Learning (3),**
Lecture Courses (9+12 +39+6+ 3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required 15 SOAN 101(3), 103(3), 201(3), 203(3),210(3), 216(3), 212(3), 213(3), 237(3) Electives (21) from SOAN 200-299	Required 6 Understanding the world courses. Required 3 credits SOAN 211	Required 3 credits	Required course (3)
Seminar (3)			Required (3) from SOAN 240(3)-SOAN 290			

BA in Media and Communication

Mission Statement

The BA in Media and Communication offers students an interdisciplinary curriculum based in both the liberal arts and social sciences, and prepares students to engage with the complexity of contemporary media. The program offers a regional and global perspective, focusing on the role of media in Arab society. Students learn systematic and critical modes of inquiry into the nature, processes and consequences of media in both historical and emerging contexts. Students also develop relevant practical skills, coupled with critical, ethical and political perspectives on contemporary social and cultural landscapes.

Admission

Students wishing to major in Media and Communication are accepted provisionally until they have achieved an average of 3.0 or more in MCOM 201 and MCOM 202 (within their first three semesters), and an average of 3.0 or more in ENGL 203 and ENGL 204. Students admitted as media and communication majors must maintain an average of 2.3 or more in their first three terms in major courses in order to remain in the program.

Transfer to Media and Communication from other departments within FAS is competitive and requires approval of the Media Studies Program. Students will be considered for transfer to Media and Communication if they obtain a minimum cumulative average of 3.0 in MCOM 201 and one List A Elective (of the student's choice), a minimum cumulative average of 2.3 in all MCOM courses taken, a minimum grade of B in ENGL 203, and a minimum cumulative average of 3.0 in ENGL 203 and ENGL 204 (if ENGL 204 is taken).

Requirements

The requirements for a BA degree in Media and Communication are 90 credits for students entering the department at the sophomore level, including 43 credits in the major, and at least 36 credits of General Education courses, as required by the university.

Requirements for the BA program are MCOM 201, MCOM 202, MCOM 203, MCOM 204, MCOM 260, and MCOM 296, 15 credits of any List A elective (MCOM205, 206, 215-239, 261-292, 294 (0 credit), 299), and 9 credits of any List B elective (MCOM 240-259, MCOM 293, or ARAB 223).

In addition, students must take CMPS 207, SOAN 237 and either MCOM 210, PSPA 203, STAT 203, or any research methods class approved by the advisor. MCOM students cannot receive credits for more than one of the following courses: MCOM 210, PSPA 203, STAT 203.

University General Education Requirements

The General Education requirements are Understanding Communication - English (6 credits), Understanding Communication - Arabic (3 credits), Cultures and Histories (9 credits), Human Values (3 credits), Societies and Individuals (6 credits), Understanding the World and Quantitative Reasoning (9 credits with at least 3 credits from each), and Community Engaged Learning (3 credits).

At least one of the courses from Cultures and Histories or Human Values should be from the History of Ideas: CHLA. At least one course from your degree requirements (except Understanding Communication) should cover the theme of Social Inequalities (3 credits).

Course Descriptions

MCOM 201 Introduction to Media Studies 3.0; 3 cr.
An introduction to the field of media studies, its concepts and theories, and the various modern media industries and professions in today's world. The course aims to help students become better informed about career options in this field and more discerning media consumers. Pre or corequisite: ENGL 203. Annually.

MCOM 202 Communication Theory 3.0; 3 cr.
An overview of the ways in which mass communication has been viewed by social scientists and by practitioners, with a focus on the range of issues studied and questions raised, and the schools, approaches, and trends in the field. Pre or corequisite: ENGL 203. Annually.

MCOM 203 Arab Media and Society 3.0; 3 cr.
An in-depth examination of the political, social, economic, and technological effects of old and new Arab media systems on modern Arab society, with an emphasis on Lebanon and the Arab East region. It focuses on probing the development and current state of print, broadcast and new media systems in the region. Pre or corequisite: ENGL 203. Annually.

MCOM 204 From Telegraph to Twitter(X): Media History 3.0; 3 cr.
This course situates the history of communication – from the telegraph to today's social media – as more than a history of technology, and discusses the complexity with which the social world is constructed. Both technology and history enter into conversation, opening up points of critical engagement of modern understandings of the world. Pre or corequisite: ENGL 203. Annually.

MCOM 205 Interpersonal Communication & Folk Media 3.0; 3 cr.
This course examines the interpersonal communication process with a focus on the folk (oral) media as traditional face to face communication media. The course involves an interdisciplinary investigation of relationships between Arab daily life and folk media, roles of formulating folk culture in theatre and films, and popular music and its audience. Pre or corequisite: ENGL 203. Occasionally.

MCOM 206 Introduction to Cinema 3.0; 3cr.
This course is designed to introduce students to the study of cinema. Three major areas of study will be emphasized: cinema history, film analysis, and global industries. Students are required to attend two lectures a week as well as weekly film screenings. Pre or corequisite: ENGL203. Annually.

MCOM 210 Research Methods in Media Studies 3.0; 3 cr.
An introduction to the design and implementation of research methodology in media studies. It covers formulating research problems, reviewing scientific literature, designing instruments, and utilizing data collection and analysis techniques, both quantitative and qualitative. Students participate in actual research projects and apply various techniques of data collection and analysis to interpret research findings. Pre or corequisite: ENGL 203. Occasionally.

MCOM 215 Media Law and Ethics 3.0; 3 cr.
A survey of Lebanese, Arab and International media laws and regulations, and their application within the realms of journalism, public relations, advertising, digital media, and entertainment, with an exploration of ethical guidelines, moral values, and social responsibilities of media scholars, practitioners and educators. Pre or corequisite: ENGL 203. Occasionally.

MCOM 216 Public Opinion 3.0; 3 cr.
A general study of the nature of public opinion, and the interplay between psychological and socio-cultural processes in the formation and dissemination of public opinion. An attempt is also made to explore the impact of public opinion on media and socio-cultural change. Measurements of public opinion are also explored. Pre or corequisite: ENGL 203. Occasionally.

MCOM 217 Political Communication Campaigns 3.0; 3 cr.
This course introduces students to the subfield of political communication, covering its main theories, research methods, and modern applications and strategies. Students gain theoretical and working knowledge of political campaign operations, political press offices, the roles of a political press secretary, media advisor, and communication director, and the technologies used in modern political campaigns. Pre or corequisite: ENGL 203. Occasionally.

MCOM 218 Media Activism for Social Change 3.0; 3 cr.
An introduction to the theories and strategies of media use for non-violent activism and advocacy campaigns and social movements, with a focus on principles of civic activism in the era of digital media convergence. The course balances theory and skills by examining case studies of media activism from around the world and using digital media tools with a stress on digital tools and civic activism principles to develop social and political change campaigns for civil society groups. Pre or corequisite: ENGL 203. Occasionally.

MCOM 219 (A....Z) Media Depictions of Society 3.0; 3 cr.
This course examines the role of the media in constructing our social reality through an examination of media practices, both historically and in the present. Different themes and foci will be explored, with an eye to covering the politics of culture and identity as they shape and intersect with today's globalized media. Pre/co-requisite: ENGL 203. May be repeated for credit. Occasionally.

MCOM 220 Popular Culture 3.0; 3 cr.
From the mid-20th century until the present moment, popular cultural productions and consumer products have become ubiquitous worldwide. While globalized chains of production and distribution account for the availability of these cultural products, we ask what is the significance of their popularity? What are the histories of these commodities, and what tensions do they reconcile or expose in the cultures from which they emerge? And, indeed, what precisely is popular culture, anyways? Pre or corequisite: ENGL 203. Occasionally.

MCOM 221 War and Media 3.0; 3 cr.
This seminar asks 'what is a visual culture of war?" as it expands across an array of media platforms, technologies, and aesthetic conventions. Through a careful examination of key readings and visual representations, we will work to build a more precise theoretical and analytical language for understanding war not simply as an "event" or set material effects on the battlefield and home front, but as a discursive production mediated through a number of often intersecting media sites and institutions. Pre or corequisite: ENGL 203. Occasionally.

MCOM 222 Introduction to Visual Culture 3.0; 3 cr.
This course examines the role images play in society. Students will explore key historical and contemporary issues, and critical perspectives on the relations of power and desire that structure practices of looking. Students will become familiar with methods of comparing different media forms, social arenas, and cultural contexts. Students will also pursue a research-intensive final project that welcomes image-making as part of the research/writing process. Pre/co-requisite: ENGL 203. Annually.

MCOM 223 On Television 3.0; 3 cr.
Students are exposed to the study of television as a distinctive approach to the study of the media landscape. The class will explore television's political and economic structures, cultural form, and social function in a range of national, regional, and global contexts. Pre/co-requisite: ENGL 203. Occasionally.

MCOM 224 (A....Z) World Cinemas 3.0; 3 cr.
In this undergraduate seminar, students will examine film cultures in various national and transnational settings. Through close readings of current scholarly literature, weekly film screenings, and seminar discussions, students will interrogate the relationship between culture and politics and explore such contested topics as identity, memory and trauma, power and resistance, and spectacle and surveillance. Pre/co-requisite: ENGL 203. May be repeated for credit. Occasionally.

MCOM 225 Photojournalism Then and Now 3.0; 3 cr.
This course covers the history of Photojournalism and its place within the wider field of photography and society at large. Students will learn of the related fields of Documentary Photography and Street Photography, and will explore early and modern masters, the social and political impact of their work and varied methodologies. Pre or corequisite: ENGL 203 Occasionally.

MCOM 226 Journalism and Society 3.0, 3 cr.
This course examines the various forms and phases of transition that have framed the evolution of journalism and the relationship between these transitions and social, political, economic and technological factors, with a focus on the current digital age. The course traces the trajectory of the industry's transformations in addition to the challenges and debates - both academic and societal - that have emerged in parallel to this trajectory. This comprises introductory issues relevant to the basic definition of journalism as well as more contemporary topics pertaining to the challenges of market-oriented digital production, media activism and political restraint, media trends and identity formation, the birth and evolution of new media platforms and applications, and the proliferation of digital entrepreneurship. Pre or corequisite: ENGL 203. Annually.

MCOM 227 Media and the Environment 3.0; 3cr
This course examines media's role in shaping the built and natural environments around us. It draws on developments in environmental communication and critical media infrastructure studies to consider media both as modes of communication and as technologies with material forms. The course explores the genres and communication strategies used by activists, artists, and media producers to articulate the environment and its problems. Prerequisite: Pre/co-requisite: ENGL 203. Occasionally.

MCOM 228 Introduction to Digital Media 3.0; 3cr.
In this course, students will learn how to navigate an ever-changing media reality beginning with digital media's origins and exploring its various life-moment. Pre or corequisite: ENGL203. Annually.

MCOM 229 Sex, Gender & Media in the Middle East 3.0; 3 cr.
In examining how discourses of gender and sexuality have shaped the ways in which the "Middle East" has come to be imagined, this seminar will cover key debates that have, in turn, shaped academic knowledge production on gender in the region, The course also examines media's central role in the production and circulation of discourses and counter-discourses on the status of women and sexual minorities, as well as men and masculinities, in the Middle East. Pre/co-requisite: ENG 203. Occasionally.

MCOM 234 Labor, Media, and Gender 3.0; 3 cr.
Examining theories of labor, creative economy, and media industries, this course explores the various entanglements between labor, media, and gender. It examines why certain kinds of creative labor—from filmmakers to social media influencer—have become gendered and to what end. The course also studies how media industries have understood and represented gendered labor. Rather than view media work as a static entity, it determines how industrial shifts, technological developments, and economic reforms have shaped creative labor. Pre/co-requisite: ENG 203. Occasionally.

MCOM 240 News Reporting and Writing 3.0; 3 cr.
An introduction to the reporting and writing of various news stories based on reliable information gathered through interviewing, research, and observation. Formats include basic newspaper and magazine articles, online news, press releases, and other journalistic formats, with emphasis on accuracy, concise presentation, meeting deadlines, and objective and ethical reporting. The course covers news styles, an expanded news vocabulary, sentence structure, story organization and clean writing. Prerequisite: ENGL 203. Every term.

MCOM 244(A....Z) Specialized News Reporting and Writing 3.0; 3 cr.
The course explores specialized reporting and writing techniques, including feature stories, opinion columns, profiles, in-depth series, and narrative journalism. It aims to enable students to report and write effectively across news genres and to master transferable communication skills useful beyond the journalism profession. Each term the course covers some specialized and emerging journalism themes, including investigative reporting, data journalism, covering conflict, and violence, technology journalism, non-fiction narrative, and others. May be repeated for credit. Pre or corequisite: ENGL 203. Occasionally.

MCOM 245 Broadcast Media 2.2; 3 cr.
This course provides students with both concepts and practical skills related to broadcast media with a focus on news reporting and documentary film production. It requires students to critically reflect on how broadcast news and documentary reporting shapes our world view and political beliefs and actions. The course covers fundamental skills of television news and documentary film production: shooting, interviewing, writing, editing and producing news stories and documentary films, with the aim of providing students the opportunity to learn the basic journalistic and technological skills of visual media production. Pre or corequisite: ENGL 203. Occasionally.

MCOM 246 Multimedia Production 3.0; 3 cr.
An introduction to digital and multimedia production, covering basic digital and Web design principles, photojournalism, audio reporting, video journalism, news blogging, social media reporting, CMS managing, multiplatform publishing, and writing for a converged news environment. It also covers emerging new media issues, such as interactivity, information architecture, and individualization. Pre or corequisite: ENGL 203. Occasionally.

MCOM 247 Trauma Journalism 3.0; 3 cr.
This course aims to sensitize and train students on how to deal with victims of trauma, conflict and violence, including war, suicide, homicide, rape, domestic violence and other traumatizing experiences. It teaches students how to ethically and fairly cover trauma victims, how to protect themselves physically and psychologically from the negative effects of trauma reporting, and how to professionally and sensibly tell the trauma story to their audiences. Pre or corequisite: ENGL 203. Occasionally.

MCOM 250 Video Editing 3.0; 3 cr.
This course is an introduction to the field of digital and video editing, including the history and overview of analog and digital video. The course explores a variety of digital video career options, industry trends and the practical application of non-linear video editing. Students will learn how to manage data efficiently, how to manage a variety of data formats and will work hands-on with Final Cut Pro 10 or Premiere Pro CC on a variety of editing projects, from simple sequences to branded content, music videos and parallel editing of fiction scenes. Pre or corequisite: ENGL 203. Occasionally.

MCOM 251 Photojournalism 3.0; 3 cr.
This course is for students who have mastered basic photography skills and are familiar with the history of photojournalism. Students will learn about the ethics of photojournalism and explore critical issues in the field today. In addition to photojournalism, the class will cover the basics of documentary video shooting and the related fields of documentary photography and street photography. Pre/co-requisite: ENGL 203. Occasionally.

MCOM 252 Digital Media Practices 3.0; 3cr.
This course is about the study and production of digital media on video and audio streaming platforms. The course will focus on increasingly popular media phenomena that are being produced independently and around the globe. Students will study, analyze, critique and produce one of these new media forms. Pre or corequisite: ENGL203. Occasionally.

MCOM 253 Social Media Strategies 3.0; 3cr.
This course aims to expand familiarity of theories and methods that explore the interrelationship between social media and society, how each is shaped by and in turn shapes the other. Students will critically explore the role of social media in contemporary society, and then engage with planning and implementing social media campaigns including content creation, seeding and promotion. Pre/co-requisite: ENG 203. Occasionally.

MCOM 260 Senior Seminar in Media Studies 3.0; 3 cr.
A senior undergraduate seminar on the role of media in society. The content areas may change. Prerequisite: Senior standing. Every term.

MCOM 290 Special Topics Seminar 3.0; 3 cr.
MCOM faculty or visiting professors and recognized scholars might be invited to offer seminars to explore relevant dimensions of their research in progress. May be repeated for credit. Pre or corequisite: ENGL 203. Occasionally.

MCOM 291 Special Topics (Humanities) 3.0; 3 cr.
A humanities course that provides a general overview of an area in media studies that is not normally covered by the department's offerings. May be repeated for credit. Pre or corequisite: ENGL 203. Occasionally.

MCOM 292 Special Topics (Social Sciences) 3.0; 3 cr.
A social sciences course that provides a general overview of an area in media studies that is not normally covered by the department's offerings. May be repeated for credit. Pre or corequisite: ENGL 203. Occasionally.

MCOM 293 Special Topics (Practice-based elective - List B) 3.0, 3 cr.
A practice-based course that addresses an area in media studies that is not normally covered by the department's offerings. May be repeated for credit. Pre or corequisite: ENGL 203. Occasionally.

MCOM 294 Media Brown Bag 0 cr.
The Media Brown Bag course consists of a series of seminars presented by leading media researchers and practitioners from local and international media initiatives, broadcasters, print media, and advertising agencies. The aim of the seminar is to allow students first-hand accounts of working in the media industry, to engage in discussion with prominent media practitioners, and to allow students to discover potential career paths in media. Pre or corequisite: ENGL 203. Every term.

MCOM 296 Internship 3.0; 3 cr.
A summer period of guided work experience supervised by the MCOM Internships and Workshops Coordinator and designed to acquaint students with a specific media/communication profession and help them acquire core values and basic skills necessary for finding future work and succeeding in that profession. Prerequisite: Consent of instructor. Every term.

MCOM 299 Directed Study 3–6 cr.
A tutorial course offered to MCOM students with an average of A- or above in their major at the beginning of their senior year. This tutorial consists of independent research, original creative compositions, or directed reading, and includes the presentation of a report, project, or thesis on the work. Students with averages lower than A- may be admitted to directed study at the discretion of the department. Pre or corequisite: ENGL 203. Occasionally.

45 Credits in MCOM

Modes of Analysis	**Understanding Communication - English and Arabic(9)**	**Cultures and Histories (9), Human Values (3)**	**Societies and Individuals (Min. 39+6)**	**Understanding the World, Quantitative Reasoning (9:3/6+3/6)**	**Societies and Individuals outside the major (3)**	**Community-Engaged Learning (3),**
Lecture Courses (9+12 +46+ 3+3)	Required Arabic course (3) Required English courses: ENGL 203(3), 204(3)	Required credits in the Cultures and Histories: 9 credits including History of Ideas and 3 credits Human Values	Required (16): MCOM 201(3), 202(3), 203(3), 204(3), 260(3), 296(3) MCOM 210 (or PSPA 203 or STAT 203 (3) Electives (15) From MCOM 205, 215-239, 261-294, 299; (9) electives from MCOM 240-259, MCOM 293, or MCOM 295 (A...Z) 1 credit or ARAB 223) (3) SOAN 237	Required 6 Understanding the world courses. Required 3 credits CMPS 207	Required 3 credits	Required course (3)

Minors in Sociology, Anthropology, and Media Studies

Anthropology: One core course (SOAN 203 or SOAN 212) and 4 electives from the following: SOAN 203, SOAN 212, SOAN 215-218, SOAN 220–227, SOAN 236, SOAN 237, SOAN 250-252, and SOAN 290 (if selected topic is in Anthropology).

Media and Communication: Two requirements from the following: MCOM 201, MCOM 202, MCOM 203 or MCOM 204. Two List A electives from: MCOM 205, MCOM 206, MCOM 215 to MCOM 239, MCOM 290 - MCOM 292. One List B elective from MCOM 240 to MCOM 259, MCOM 293.

Film and Visual Culture: Two of the following core courses (ENGL 219, MCOM 206, MCOM 222), two electives from the following: ENGL 241A, ENGL257 (A....Z), MCOM219, MCOM220, MCOM221, MCOM 223, MCOM 225, MCOM 230, SOAN236, SOAN250, or other classes/special topics courses approved by the coordinator of the minor program, and one elective from the following: ENGL 239, ENGL 254A, MCOM 245, MCOM 246 or special topics courses approved by the coordinator of the minor program.

Reporting in the Digital Age: Three core courses (MCOM 226, MCOM 240 and MCOM 246), and two additional electives from the following: MCOM 215, MCOM 225, MCOM 241, MCOM 244 (a to z), MCOM 245, MCOM 247, MCOM 250, MCOM 251 and any new or related special topics courses as approved by the program.

Sociology: SOAN 201, SOAN 213, SOAN 237, plus two electives from the following: SOAN 210, SOAN 220, SOAN 222, SOAN 223, SOAN 224, SOAN 225, SOAN 232, SOAN 240–242, SOAN 245 and SOAN 290 (if selected topic in Sociology). If a student has taken SOAN 101 and, therefore, cannot take SOAN 201, they should take SOAN 213, SOAN 237, and three of the electives listed above.

Human Rights and Transitional Justice: The requirements are: SOAN 245, SOAN 240 or PSPA 235, and three electives from the following: SOAN 221, MCOM 250, MCOM 251, SOAN 232, PSYC 211, PHIL 216, PHIL 252, PSPA 222, PSPA 232, or any special topics course in SOAN, PSYC, PHIL, PSPA, which will fit with the minor topic, upon the approval of the respective department chair and the coordinator of the minor program. Students majoring in sociology-anthropology should take at least three courses other than SOAN courses.

The Anis Makdisi Program in Literature (AMPL)

Director:	Jarrar, Maher
Advisory Committee:	AbdelMegeed, Maha; Harb, Sirene; Jarrar, Maher; Makdisi, Saree (UCLA)

The Anis Makdisi Program in Literature (AMPL) was inaugurated in October 2002.

Objectives

The AMPL promotes and supports interdisciplinary dialogue and different approaches in the study of literature following the tradition initiated by Anis K. Makdisi. The aim of this program is to encourage and develop scholarly interest in the humanities in general and in literature in particular, and to foster intellectual exchange among members of different departments, students, and visiting scholars.

Activities

Program activities include:

- an annual Anis K. Makdisi memorial lecture by a leading scholar in literature or a noted author of poetry or prose. All lectures are published by the program.
- a series of seminars on various issues and topics in literature and cultural studies offered by local, regional, and international scholars, novelists, and artists. The primary aim of the seminars is to enrich the study and the teaching of literature at AUB by providing wide discussion forums.
- informal gatherings (lectures, discussions, colloquia) as a venue for scholarly debate for the academic community in Beirut.

Scholarships

The Program offers two scholarships every year:

- The Anis K. Makdisi Graduate Fellowship to support graduate studies in literature at AUB
- The Anis K. Makdisi Scholarship in Literature for undergraduate studies
  Website: https://www.aub.edu.lb/fas/ampl/Pages/index.aspx

Center for Arab and Middle Eastern Studies (CAMES)

Director:	Hanafi, Sari
Assistant Director:	Saidi, Aliya R.
Lecturer:	Sultani Kanawati, Rima
Instructor:	Semaan, Rima
Middle Eastern Studies Steering Committee:	Atwood, Blake Robert; Hanafi, Sari; Mejcher- Atassi, Sonja; Orfali, Bilal; Saidi, Aliya; Tell, Tariq
Islamic Studies Steering Committee:	Hanafi, Sari; Haydar, Bashshar; Ismail, Ghena; Khodr, Hiba; Orfali, Bilal; Saidi, Aliya

The Center for Arab and Middle Eastern Studies (CAMES) is an interdepartmental, interdisciplinary unit that seeks to enhance the understanding of the Middle East and Islamic civilization and to encourage informed scholarship in all related academic disciplines. CAMES is committed to the study of the Arabic language and offers courses at all levels in coordination with the Department of Arabic and Near Eastern Languages, as well as seven-week intensive language courses in Modern Standard Arabic and Lebanese Colloquial Arabic in the summer.

CAMES offers MA programs in Middle Eastern and Islamic Studies (see Graduate Catalogue) and a select number of courses at the undergraduate level. To complement students' course work and to promote scholarship about the Middle East and Islamic civilization at AUB, the center also sponsors visiting lectures and conferences and holds occasional events, such as film showings and readings.

MEST 201 Introduction to the Middle East 3.0; 3 cr.
This course provides an introductory survey of the history, politics, political economy, international relations, and cultures of the contemporary Middle East.

MEST 210 Special Topics in Middle Eastern Studies 3.0; 3 cr.
Special Topics in Middle Eastern Studies.

MEST 240 Introduction to Lebanese Arabic 5.0; 3 cr.
This course is only for foreign speakers of Arabic. The course builds proficiency in Lebanese Arabic through the introduction of the grammatical features of the Lebanese dialect and the practice of interactive functional skills, including listening comprehension, conversation tasks, and vocabulary building. For undergraduate and graduate students. Consent of instructor required. Every term.

MEST 241 Intermediate Lebanese Arabic 5.0; 3 cr.
This course is only for foreign speakers of Arabic. Intermediate Lebanese Arabic is a continuation of MEST 240 Introduction to Lebanese Arabic. The course emphasizes the further development of conversational skills in Lebanese Arabic, and therefore targets primarily speaking and listening skills. Knowledge of the Arabic alphabet is required to join MEST 241. This course concentrates on increasing vocabulary and command of syntax enabling students to reach a higher level of fluency. For undergraduate and graduate students. Consent of instructor required. Prerequisite: MEST 240 or placement based on a placement interview. Every term.

MEST 242 Advanced Lebanese Arabic 3.0; 3 cr.
This course is the continuation of the sequence begun in MEST 241 (Intermediate Lebanese Arabic) and MEST 240 (Introduction to Lebanese Arabic). Like the preceding courses, it focuses on spoken rather than written Arabic and will therefore target primarily the oral/aural skills: speaking and listening. Knowledge of the Arabic alphabet is required to join MEST 242. The course is designed to meet the needs and expectations of non-native young adults and adults who are seeking to develop a comfortable level of proficiency in a variety of complicated communicative tasks and social situations. For undergraduate and graduate students. Consent of instructor required. Prerequisite: MEST 241 or placement based on a placement interview. Every term.

Intensive Summer Arabic Programs
Modern Standard Arabic

MEST 360 Elementary Arabic (Intensive) 9 cr.
This course is designed to introduce students who have no previous knowledge of Arabic to the Arabic language and culture within its Lebanese setting. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts. By the end of the course, students will be able to speak and write simple connected sentences about themselves, their families and their immediate environment. They will also be able to read and listen to short authentic texts (announcements, advertisements, short weather reports, menus, daily schedules, etc.). During the course, students will become familiar with Arab culture in general and various aspects of Lebanese culture and society. The course will use Alif Baa: Introduction to Arabic Letters and Sounds (3rd Edition) as well as part of Al-Kitaab fii Ta'allum al-'Arabiyya: Part One (3rd Edition). At the end of this course, students are expected to reach Intermediate-Low to Intermediate-Mid proficiency in Arabic on the ACTFL scale. Annually.

MEST 361 High Elementary Arabic (Intensive) 9 cr.
This course is designed for students who have had the equivalent of one semester of Arabic instruction. It is also appropriate for students who have already had some limited exposure to the Arabic language, for instance, those who have lived in an Arab country or an Arabic-speaking environment, as well as those who have received some tutoring in Arabic. Students who enroll at this level are expected to know the Arabic alphabet and have limited reading, writing and conversational skills. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts and will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part One (3rd Edition). By the end of the course, students are expected to reach Intermediate-Mid proficiency in Arabic following the ACTFL scale. Annually.

MEST 362 Intermediate Arabic (Intensive) 9 cr.
This course is designed for students who have completed at least two semesters of Arabic in an academic setting but whose placement results require that they go at a slower pace than the intermediate class. The course is also appropriate for students who have been away from the language for some time. The objectives of this course, in general, are to further develop the students' skills and strategies, expand active vocabulary in a wide variety of topics and settings, enhance knowledge of basic Arabic grammar, and further develop intercultural competence. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts and will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part One (3rd Edition) and a part of Al-Kitaab fii Ta'allum al-'Arabiyya: Part Two (3rd Edition). By the end of the course, students are expected to reach Intermediate-Mid to Intermediate-High proficiency in Arabic following the ACTFL scale. Annually.

MEST 363 Intermediate Mid Arabic (Intensive) 9 cr.
This course is designed for students who have had the equivalent of two to three semesters of Arabic instruction. The course aims to further enhance students' proficiency in the various skills, expand their cultural knowledge, expand their vocabulary, and enhance their control of grammatical structures and pronunciation. All communications between instructors and students are carried out strictly in Arabic. Part of the students' activities at this level involves giving oral presentations and doing a lengthy writing project. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts and will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part Two (3rd Edition) and parts of Al-Kitaab fii Ta'allum al-'Arabiyya: Part Two (2nd Edition). By the end of the course, students are expected to reach Intermediate-High proficiency in Arabic following the ACTFL scale. Annually.

MEST 364 Intermediate High Arabic (Intensive) 9 cr.
This course is designed for students who have already had the equivalent of four to five semesters of Arabic instruction. The objective of the course is to further enhance students' proficiency in the various skills, expand their cultural knowledge, expand their vocabulary, and enhance their control of complex grammatical structures and pronunciation. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts. By the end of the class, students are expected to comprehend lengthy authentic listening material and to give long oral presentations with facility. They are also expected to be able to write extensive compositions and to read authentic Arabic texts for research purposes. The course will use part of Al-Kitaab fii Ta'allum al-'Arabiyya: Part Two (2nd Edition) and part of Al-Kitaab fii Ta'allum al-'Arabiyya: Part Three. By the end of the course, students are expected to reach Advanced-Low to Advanced-Mid proficiency in Arabic following the ACTFL scale. Annually.

MEST 365 Advanced Arabic (Intensive) 9 cr.
This course is designed for students who have already had the equivalent of six semesters of Arabic instruction. It aims to enable students to reach higher levels of advanced proficiency in all skills. Students are required to do extensive readings on a variety of topics and genres, such as literature, language and the social sciences. They are also expected to engage in debates, give oral presentations and write short research papers. The course utilizes an integrated approach that teaches both Standard and Lebanese Arabic based on communicative tasks and contexts and will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part Three, to be supplemented by extra material as needed. By the end of the course, students are expected to reach Advanced-Mid to Advanced-High proficiency in Arabic following the ACTFL scale. Annually.

MEST 366 Advanced High Arabic (Intensive) 9 cr.
This course is designed for students who are placed at the Advanced-Mid level of proficiency of Arabic upon entering the program and it aims to take them to the Advanced-High level in the various language skills. Readings at this level are extensive and span a variety of genres; readings will cover at least one novel, short stories, academic articles, lengthy newspaper articles, and selections from medieval texts. Listening skills are sharpened through extensive work with news broadcasts, documentaries, and television shows in both Standard and Lebanese Arabic. Special emphasis is placed on understanding the nuances of the language and the use of idiomatic expressions and rhetorical devices in all the language skills. The course also features extended oral presentations in class where students demonstrate the oral skills of an educated native or near native speaker of Arabic. The course will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part Three in addition to other readings assigned by the teachers. By the end of the course, students are expected to reach Advanced-High proficiency in Arabic following the ACTFL scale. Annually.

MEST 367 Superior Arabic (Intensive) 9 cr.
Students entering this level are expected to have Advanced-High proficiency in Arabic and are expected to make progress towards Superior proficiency. This level features extensive readings that cover a wide variety of genres including novels, short stories, academic articles, lengthy newspaper articles, and selections from medieval texts. Listening skills are enhanced through extensive work with news broadcasts, documentaries, and television shows in both Standard and Lebanese Arabic. Special emphasis is placed on understanding the nuances of the language and the use of idiomatic expressions and rhetorical devices in all the language skills. The course also features extended oral presentations in class where students demonstrate the oral skills of an educated native or near native speaker of Arabic. The course will use Al-Kitaab fii Ta'allum al-'Arabiyya: Part Three in addition to other readings assigned by the teachers in a variety of genres. Annually.

Lebanese Colloquial Arabic

MEST 380 Introductory Lebanese Colloquial Arabic (Intensive) 9 cr.
This course is designed for students who have had little or no previous exposure to Arabic and would like to gain basic proficiency in Lebanese Arabic (LA). The course builds proficiency in LA through a communicative-based approach. Through video and text materials that deal with a wide variety of communicative functions and tasks and that are rich in cultural content, students will develop their speaking and listening skills in LA. In addition, they will be able to contextualize these skills in culturally-appropriate contexts and demonstrate their understanding of the diverse products, practices, and perspectives of Lebanese culture and society. The course will introduce students to the Arabic alphabet and to an extensive vo-

cabulary and grammatical structures that will enable them to interact with speakers of LA in contexts related to the Novice and Intermediate levels of proficiency with ease and confidence. The course will focus on discussing topics of personal and public interest, describing and narrating personal experiences, delivering presentations, watching and analyzing TV programs, soap operas and films, and listening to songs. The course utilizes a wide variety of instructional materials developed by the CAMES Arabic teaching team. No prior knowledge of Arabic is required for the course. Annually.

MEST 382 Intermediate Lebanese Colloquial Arabic (Intensive) 9 cr.
This course is designed for students who already have some knowledge of Standard Arabic and/or Lebanese Arabic (LA) but want to devote more attention to developing higher level of proficiency in LA. The program provides students with the opportunity to improve their Lebanese colloquial Arabic skills through a wide variety of activities, including discussing topics of personal and public interest, describing and narrating in detail, holding conversations and debates, stating and supporting opinions, delivering presentations, watching and analyzing TV programs, soap operas and films, and listening to songs and music. In addition, the program helps students develop familiarity with and understanding of the diverse products, practices, and perspectives of Lebanese culture and society. The program utilizes a wide variety of instructional materials developed by the CAMES Arabic teaching team. The prerequisite for this program is one year (two semesters or the equivalent) of Arabic study. To ensure proper placement in the program, a Skype oral interview is required of all applicants. Annually.

MEST 384 Advanced Lebanese Colloquial Arabic 9 cr.
The Advanced Lebanese Colloquial Arabic class enables students to further develop their speaking and listening skills in Lebanese Arabic with special attention to expanding their knowledge of Lebanese culture. Students in the course are exposed to a variety of historical, social, economic, touristic, and artistic topics related to Lebanese Arabic language and culture. The class enhances students' listening skills by exposing them to different uses of the Lebanese dialect in authentic frames such as news reports, television and Internet series. Conversation skills are developed by encouraging students to speak in a participatory manner during the extensive discussions of the materials in class, with emphasis on pronunciation and speaking the Lebanese dialect properly. The class encourages students to use the general vocabulary used in daily life situations in a precise and smooth manner, and enriches their linguistic reserve by exposing them to a large amount of vocabulary and expressions related to the historical, social, economic, touristic, media and artistic fields. This enables students to use more complex and advanced structures and to master the use of certain verbs and words of recurrent use in the Lebanese dialect that have multiple meanings. The class demonstrates the similarities and differences between Lebanese Arabic and Standard Arabic, allowing students to learn how to move between the two with ease and helping them to understand the sociolinguistic contexts in which these Arabic varieties are used. Annually.

The Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Center for American Studies and Research (CASAR)

Director:	Myers, Robert
Professors:	Myers, Robert
Program Coordinator:	Baghdadi, Rana
CASAR AUB Advisory Committee:	Esanu, Octavian; Halaoui, Lara; Hanafi Sari; Harb, Sirene; Waterman, Adam

The Center for American Studies and Research (CASAR) aims to promote dialogue about issues in American Studies through research, teaching, and outreach. The center offers a Minor in American Studies and sponsors conferences, seminars, and public lectures. It also promotes research activities, particularly in the area of American encounters with the Middle East.

The Center for American Studies and Research (CASAR) works to establish and maintain a world-class locus of activity and exchange of ideas for an interdisciplinary community of researchers, teachers, students and others in the Middle East interested in building further understanding of American institutions and practices (political, social, economic, cultural) and the complex contextual realities in which these institutions and practices have developed and currently exist.

Minor in American Studies

American Studies is an interdisciplinary field that critically examines the connections among American literature, arts, culture, religions, economics and politics. The Center for American Studies and Research (CASAR) has a particular interest in encounters between the United States and the Middle East.

Interested students can declare a Minor in American Studies by going to the “Minors” part of the FAS website.

Requirements for a Minor in American Studies, 15 credits (minimum):

- AMST 215 Introduction to American Studies (3 credits)
- One other AMST course (3 credits)
- Three elective courses from other departments with American Studies content or relevance (9 credits total)

Qualifying Course Options

Core Course (required): AMST 215 Introduction to American Studies

American Studies elective (any one required): AMST 220 Shock of Modernity in America; AMST 230 Cultural Geography of North American; AMST 240 America in the Middle East/ Middle East in America; AMST 265/266 Special Topics in American Society (carries Social Science credit); AMST 275/276 Special Topics in American Humanities (carries Humanities credit)

Electives from other departments (at least three courses required):

- ARCH 023 Form, Event, Ideology: The American City as Case Study
- ENGL 209 Survey of American Literature
- ENGL 216 Drama
- ENGL 219 Film as Text
- ENGL 222 Literature and Cultural Studies
- ENGL 224 Early American Literature
- ENGL 225 Modern American Literature
- ENGL 226 Contemporary American Literature
- ENGL 241 Transnational Literatures
- HIST 200 Introduction to the History of the United States
- HIST 271 Race, Class, Gender: Introduction to American Social History
- HIST 272 Economic History of the United States
- HIST 273 The United States and the Middle East
- HIST 274 The United States in the Twentieth Century
- HIST 278/279 Special Topics in United States History
- MCOM 201 Intro to Media Studies
- MCOM 204 From Telegraph to Twitter: Media History (formerly 263)
- MCOM 219 Media Depictions of Society (formerly 262)
- MCOM 222 Introduction to Visual Culture Studies
- MCOM 290E On Television
- MEST 315M Making of the Modern Middle East
- PHIL 263A Contemporary Philosophical Movements: American Pragmatism and Its Critics
- PSPA 220 Globalization and Culture
- PSPA 237 The Middle East in International Politics since WWI
- PSPA 251 Politics and Government: United States of America
- PSPA 293D Senior Seminar in International Politics: US in the Middle East
- SOAN 215 Anthropology of America

In addition, new courses including special topics courses in other departments and programs may occasionally be related to American Studies. Students can petition to apply for such a course toward the requirements for the Minor, which must be approved first by the CASAR director and then by the FAS Curriculum Committee.

Courses

AMST 215 Introduction to American Studies 3.0; 3 cr.
This course begins with the question: What is America? Its approach is to explore the complex encounters that have shaped the cultures of the United States and the Americas. Equivalent to HIST 278/279. Annually.

AMST 220 Shock of Modernity in America 3.0; 3 cr.
Examines how Americans dealt with the first onslaught of commercial capitalism, industrial technology, and new modes of communication in the decades before the Civil War. A surge of nationalism and social tension fueled an orgy of expansion that created a continental super-state. The wrenching economic, social, and cultural changes of this era continue to resonate in the United States and in societies confronting modernity today. Annually.

AMST 230 Cultural Geography of North America 3.0; 3 cr.
An examination of the geography of cultures in the United States and Canada through multiple frameworks including regions, languages, religions, ethnicity, and gender. This course explores the roots and implications of these cultural patterns and considers cultural dynamics at several scales: the household, the city, the region, the nation, and the continent. It also investigates the economic and industrial evolution of cities and regions, the dynamics of public versus private space, the effects of mobility, the dynamics of border zones, diasporic communities, and globalization. Equivalent to HIST 278/279. Annually.

AMST 240 America in the Middle East/The Middle East in America 3.0; 3 cr.
This course historicizes contemporary United States military and economic involvement in the Middle East by considering the cultural history of U.S./Middle East relations from the mid-19th century to the present. An emergent area of transnational study within American Studies; studies of U.S./Middle East cultural relations are focused on policy, economic, cultural, and affective dimensions. Students will engage the field by analyzing primary documents, reading literature, and viewing visual and popular culture. Annually.

AMST 265/266 Special Topics in American Society 3.0; 3 cr.
A term-specific interdisciplinary course focusing on some aspect of American society. May be repeated for credit. This course carries social science credit. Occasionally.

AMST 275/276 Special Topics in American Humanities 3.0; 3 cr.
A term-specific interdisciplinary course focusing on some aspect of American arts. May be repeated for credit. This course carries humanities credit. Occasionally.

AMST 298 Tutorial in American Society 3.0; 3 cr.
A tutorial course offered to seniors completing the minor in American Studies who have an overall average of at least 80 and at least an 85 in the minor courses. This tutorial consists of independent research or directed reading in some aspect of American society, and includes the preparation of a report or thesis on the work. This course can be taken for 3 or 6 credits. This course carries social science credit. Offered on request.

AMST 299 Tutorial in American Humanities 3.0; 3 cr.
A tutorial course offered to seniors completing the minor in American Studies who have an overall average of at least 80 and at least an 85 in the minor courses. This tutorial consists of independent research or directed reading in some aspect of American arts and includes the preparation of a report or thesis on the work. This course can be taken for 3 or 6 credits. Offered on request.

Center for Language Research and Teaching (CeLRT)

Director:	Shaaban, Kassim A.
Professors:	Choueiri, Lina G.; Ghaith, Ghazi M.; Shaaban, Kassim A.
Associate Professors:	Hanafi, Sari; Orfali, Bilal W.
Assistant Professors:	Allen, Ira J.; Avant, Doyle R.; Kelly, Niamh; Majed, Rima; Nish, Jennifer M.; Vermy, A. Michael; Zimmerman, Erin

CeLRT is currently inactive. For more information, please contact the Center Director.

The proposed functions of the Center are the following:

- Providing language practitioners with professional support through workshops, panel discussions, forums, seminars, and discussions
- Establishing connections with professional organizations and supporting their goals and mission
- Holding a biannual conference on different topics in theoretical and applied linguistics and related fields (sociolinguistics, language acquisition, pragmatics, and mass communication)
- Publishing an electronic journal that addresses generic language issues as well as issues specific to the language situation and language education in the Middle East region
- Working on offering new postgraduate degrees in language related areas such as Creative Writing, Rhetoric and Composition, and Translation
- Offering consultation services in language-related areas
- Hosting visiting scholars and post-doctoral fellows
- Working on the establishment of new language-based interdisciplinary graduate programs at AUB, and
- Engaging in research in theoretical and applied linguistics and in language teaching and language learning

Science and Mathematics Education Center (SMEC)

Director:	El Mouhayar, Rabih
Professor:	BouJaoude, Saouma
Associate Professors:	Amin, Tamer; El Mouhayar, Rabih; Khishfe, Rola
Lecturer:	Osman, Enja

The overall mission of the Science and Mathematics Education Center is four-fold:

- to conduct and support quality research on the teaching and learning of science and mathematics at the pre-school, elementary, and secondary levels,
- to contribute to the development of quality science and mathematics teaching and research professionals,
- to design and provide ongoing professional development for science and mathematics teachers in Lebanon and abroad,
- and to effect a positive influence on the quality and status of school science and mathematics education locally, regionally, and internationally.

The Center currently accomplishes its mission through the performance of a variety of functions including, but not limited to:

- designing and teaching science and mathematics education courses for pre-service teachers and master's level graduate students in cooperation with the Department of Education,
- designing and conducting research on teaching, learning, and teacher professional development in science and mathematics,
- designing and developing instructional materials in science and mathematics for students and teachers,
- maintaining a current science and mathematics curriculum library for use by pre-service and in-service teaching professionals,
- providing outreach consultation in science and mathematics education for schools, institutions, and governments regarding curriculum design, the design of instructional environments, methods of evaluation, and professional development for teachers, and
- providing in-service professional development for teachers and subject-matter coordinators through special courses, workshops, institutes, conferences, or through participation in professional development initiatives sponsored by AUB or other institutions and organizations.

University Preparatory Program (UPP)

Lecturers:	Harkouss, Samar; Rahme, Joseph; Sadaka, Nadine
Full-time Instructors:	El-Harake, Rima; Peltekian, Katia
Part-time Instructors:	Almekkawi, Rola; Ramadan, Mahassen
Assistant Instructor:	Nabbouh, Salam

The University Preparatory Program (UPP) is a unit within the Faculty of Arts and Sciences. Its main objective is to address the specific English language needs of students who have completed high school with strong academic records but are unprepared to function in all-English curricula at the university level. The program also aims to develop the science and mathematics content competencies and computer skills of its students, as well as develop the requisite academic literacy, study skills, and information library skills needed for success in university studies.

UPP is a one-year program consisting of 25 contact hours per week. Its curriculum follows an integrated approach to the teaching of language skills (listening, speaking, reading, and writing) and a student-centered approach to the teaching of science and mathematics. Furthermore, the curriculum incorporates study skills, pronunciation training, and conversational English, depending on individual needs. The development of computer literacy, preparation for the critical reading part of the SAT reasoning test, and cultural orientation are also emphasized.

Applicants must have completed at least twelve years of schooling, or the equivalent, before beginning the program and must submit a UPP application with all supporting material. Completed applications are reviewed and students are notified of their acceptance or non-acceptance to UPP in due course.
Accepted applicants to UPP are assigned to a learning level based on their performance on a special English language test. This test measures the English language proficiency of learners and is used to place students into three proficiency levels. Other diagnostic tests specifically prepared for the program are used to determine the mastery level of various language skills and elements (listening, speaking, reading, writing, grammar, and vocabulary). In addition, applicants receive developmentally appropriate instruction based on their performance on science, math, and computer skills tests.

Promotion to a higher level is not automatic; learners must demonstrate that they have successfully met the instructional objectives set for the current level. The placement test may be administered again to serve as an indicator of the progress made by the learners over the period of one term. Successful completion of the program and admission to sophomore standing is determined on the basis of passing the UPP sequence of courses and attaining the scores on the TOEFL and SAT tests required for admission to regular AUB programs. Students wishing to enter the university with freshman standing must successfully complete the UPP sequence of courses. Furthermore, all UPP applicants to AUB must present a letter of good performance from the Program Director. They should also maintain a good attendance record. Students who miss more than one-fifth of the sessions of any section in the first

ten weeks of the term (five weeks in the case of the summer term) will be dropped from the program.
It is important to stress that students are required to complete the program, even if they attain the needed TOEFL and SAT scores before the term is finished. Failing to complete the program jeopardizes students' chances of admission to AUB.
The UPP also offers an Intensive English Summer Course for newly admitted graduate students coming from outside AUB who have not fulfilled the English Language Requirement. This course (a minimum of 20 contact hours per week) aims at enabling these students to function effectively in all-English curricula.

Courses

UPEN 001 0 cr.
This course is designed for beginning UPP students who have little or no knowledge of English. It provides learners with basic listening, speaking, reading, and writing skills, enabling them to understand and take part in English conversations, in addition to reading simple stories and responding to them in writing.

UPEN 002 0 cr.
This course is designed for low-intermediate UPP students who possess limited language skills but can initiate conversations and read and/or write a paragraph or several paragraphs. Word-building and study skills, in addition to more sophisticated reading and writing skills, are introduced to enable these college-bound students to cope with the tasks required of them in the future. There is also emphasis on orientation to the American model of education, and to living in a diverse ethnic and cultural environment.

UPEN 003 0 cr.
This course is designed for high intermediate UPP students who can communicate well both in conversation and in writing. It serves as a transition from intensive English courses to regular academic study. Students read various texts, give oral presentations, receive cultural orientation, and practice their academic writing and basic research skills.

UPEN 004 SAT Writing and Critical Reading 0 cr.
This course prepares students for the writing and critical reading sections of the Scholastic Aptitude Test (SAT Reasoning) required of all undergraduate students joining AUB. Emphasis is placed on critical reading skills, college writing skills, vocabulary building, and standardized test-taking strategies.

UPMA 001 SAT Math 0 cr.
This course prepares students for the math section of the Scholastic Aptitude Test (SAT Reasoning) required of all undergraduate students joining AUB. Emphasis is placed on mathematical terminology, arithmetic skills and concepts, word problems, geometric concepts and reasoning, in addition to standardized test-taking strategies.

UPMA 002 0 cr.
This course reviews the fundamental operations with algebraic expressions (exponents, radicals, logarithms, factoring, algebraic quotients, absolute value). It introduces elementary functions with graph representations: linear, quadratic, polynomial, rational, exponential and logarithmic. It includes methods to solve systems of linear equations and inequalities, Matrices, Sequences, and Series.

UPMA 003 0 cr.
This course introduces the principles of permutations, combinations and other counting principles, elementary notions of probability and statistics. The last part of the course emphasizes fundamental notions in calculus: limits and continuity, differentiation, indefinite and definite integrals, & the fundamental theorem of integration calculus.

UPSC 001 Science 0 cr.
This course is a science literacy course that introduces students to major concepts in the physical and life sciences and their applications in everyday life. It emphasizes in-depth conceptual understanding of science concepts by using a variety of teaching approaches. Additionally, the course introduces students to scientific terminology in English to prepare students to take science courses at the university level.

UPIT 001 Information Technology 0 cr.
This course is a computer literacy course that is an introduction to micro-computer applications for Windows. It includes an overview of Windows, Microsoft Word, Excel, PowerPoint and essential email and Internet skills.

UPHU 001 Humanities 0 cr.
This course aims to introduce students of UPP to the humanities, through an examination of how the human has attempted to understand and express itself, its values, its condition, and its history. This will be addressed through a close encounter with selections ranging in time and space (from the ancient classics, through the medieval cultures, to the 19th and 20th centuries), and from a varied array of expressions in the humanities (literature, philosophy, and various forms of the arts).

The Zaki Nassif Program for Music (ZNPM)

Chairperson:	Nassif, Nabil
Academic Committee:	Jureidini, Wadi; Sadek, Walid; Orfali, Bilal; Taher, Ali; Touma, Jihad

The Zaki Nassif Program for Music was inaugurated in December 2004.

Objectives

The Program aims to preserve and promote the musical heritage of Zaki Nassif, together with the heritage of Nassif's contemporary musicians, and to foster excellence in the teaching of music by contributing to its advancement through a variety of activities that include:

- Organizing competitions, concerts, conferences, and seminars
- Inviting professional musicians and academics to the university
- Awarding prizes, scholarships, and fellowships to students in the name of Zaki Nassif
- Reinstating and sustaining courses and programs in musical studies and practice at AUB, in both the Continuing Education Center, and in the department of Fine Arts and Arts History
- Recruiting quality musicians, scholars, to initiate and run those music courses and programs

The Center for Arts and Humanities (Mellon Grant)

Director:	Brassier, Raymond
Program Manager:	Bassil, Rita

AUB's Centre for Arts and Humanities (CAH) seeks to increase understanding and appreciation for the Arts and Humanities both inside and outside the university. Hosting a diverse array of cultural events, including lectures, exhibitions, plays, films, and performances, CAH provides a forum for research and debate in the Arts and Humanities. These events are intended to enrich cultural engagement and dialogue not only for faculty and students on campus but also for the wider intellectual community in Beirut and beyond. CAH creates forums for scholarly collaboration and exchange, organizing workshops and symposia to facilitate the exploration of new and challenging ideas. It also fosters exchanges between artists and writers, encouraging creative collaboration to broaden AUB's intellectual landscape. Building regional relationships, CAH has established ties and exchanges with universities in Lebanon and the wider region, contributing to a vibrant network of academic and cultural connections. It has been instrumental in organizing significant conferences at AUB, sparking debate and inquiry within the university and the broader community.

The Writing Center

Interim Director:	Baalbaki, Rula
Administrative Assistant:	Takkoush, Sarah

The Writing Center's mission is to support the teaching and learning of writing on campus. Established in 2004, the Writing Center performs this work through its peer tutoring program, support for General Education Writing in the Disciplines courses and special projects and events at AUB and beyond. We are committed to research and outreach to the larger community. The Writing Center supports AUB students, staff, and faculty via one-on-one consultations and workshops on individual or group writing projects at any stage of development. Undergraduate and graduate students serve as tutors who work to help individuals become stronger writers in both English and Arabic. Appointments may be made on our online scheduler at https://aub.mywconline.com or by phone. Writing resources and more information about Writing Center tutors and services are located on our website at https://www.aub.edu.lb/fas/writing_center/Pages/default.aspx. The Writing Center supports faculty members via writing workshops, small group meetings, and individual consultations. Writing Center staff collaborate with faculty members as they develop, assess, and revise courses complying with the General Education-mandated requirement to offer Writing in the Disciplines instruction in every major. Workshops for programs or departments and individual consultations for faculty seeking to improve writing assignments and activities in their courses can be scheduled by emailing or calling the Writing Center. The main Writing Center office is located in Ada Dodge Hall, room 214. Contact the Writing Center by email at writingcenter@aub.edu.lb or by phone at AUB extension 3157.