

**Faculty of
Medicine and
Medical Center
(FM/AUBMC)**

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Historical Background

Since 1867, the date of the founding of the Faculty of Medicine, both the Faculty of Medicine and the Medical Center have been providing services in the realms of medical education, training, and health care to their immediate constituencies in Lebanon and the Middle East region continuously. To date the Faculty of Medicine has graduated 4,225 physicians and there is a large postgraduate training program of over 280 residents in most of the departments. The Faculty of Medicine programs have been approved by and registered in the Education Department of the State of New York on a continual basis since 1867. In 1957 the faculty became an institutional member of the Association of American Medical Colleges. It enjoyed this status until 1988, when the new rules of the association precluded membership of institutions outside the confines of the North American continent.

The AUB Medical Center has been accredited by the Joint Commission International (JCI) as of October 2007. Previously, the Medical Center was accredited by the US-based Joint Commission on Accreditation of Healthcare Organizations (JCAHO) from 1965 until 1983, when the civil war in Lebanon prevented review teams from continuing with their periodic site visits. The JCI is the international arm of the JCAHO. The National Board Examinations were administered to the faculty's undergraduate students for credit between 1966 and 1982. The faculty was a regional center for the administration of the examinations of the Educational Commission for Foreign Medical Graduates between 1959 and 1993. In addition, the faculty takes pride in having had very close links with prestigious American medical schools and centers including Columbia University from 1945 to 1955, Harvard School of Medicine from 1955 to 1965, and a formal affiliation with the Johns Hopkins School of Medicine from 1965 to 1975 which was supported by the Commonwealth Fund.

The Faculty of Medicine and the Medical Center have revived and established a number of links and affiliations with the following:

- Columbia University College of Physicians and Surgeons for student elective exchange (since 2002)
- University of George Washington School of Medicine in Washington, DC (as of September 8, 2004)
- Medical University of South Carolina (MUSC) (as of April 1, 2003) for an MD-PhD program that admits up to three medical students annually from AUB/FM
- Johns Hopkins University School of Medicine (as of May 10, 2004) for collaboration in research, education, and the provision of medical services training
- University of Paris 7 Denis Diderot for cooperative cancer research (as of December 8, 2004)

- University of Poitiers (France) for cooperative neurosciences research (as of February 3, 2006)
- St. Jude Children’s Research Hospital (as of April 19, 2000)
- Laval University in Quebec, Canada
- M.D. Anderson Cancer Center (as of June 6, 2007)
- Palermo University (as of April 23, 2007) for cooperation in research and higher education
- University of Montpellier (France) (as of August 3, 2007)

The Faculty of Medicine and the Medical Center (FM/AUBMC) are currently accredited by the following American-based accreditation bodies:

- The Middle States Commission on Higher Education
- The Joint Commission International (JCI) for hospital accreditation
- Accreditation of AUBMC by the Lebanese Ministry of Public Health
- Accreditation of the School of Nursing by the Commission on Collegiate Nursing Education (CCNE)
- Accreditation of the Nursing Services at AUBMC by the American Nurses Credentialing Center (ANCC)
- The College of American Pathologists (CAP)

In addition, the Faculty of Medicine with its Medical Center is a member of the following organizations:

- Alpha Omega Alpha (AOA) - Honor Medical Society (The Faculty of Medicine is the only member of the AOA outside North America since 1958)
- The American Medical College Application Service
- The American College of Physicians/American Society of Internal Medicine
- The Association of Program Directors in Internal Medicine

Mission

The mission of the Faculty of Medicine is to provide optimum, advanced, state-of-the-art, comprehensive, timely, and cost-effective medical education for each student. The faculty aims to reach this objective by implementing innovative teaching techniques, and by recruiting and retaining outstanding faculty and students. The faculty also strives for improved student performance and career opportunities, as well as improved basic and clinical research, more effective patient management, and new and innovative medical approaches. The faculty focuses on enhancing the regional and global reputation of the AUB Medical Center (AUBMC) by encouraging the development of additional centers of excellence, and developing more effective uses of physical resources and funds.

Vision

The vision of the Faculty of Medicine is to continuously upgrade the quality of education provided to its medical students and postgraduate physicians in the various medical and surgical subspecialties. This vision is implemented by the strong commitment of the faculty to educate young men and women to become excellent physicians with humane and high ethical standards, as well as technical expertise. The faculty also aims at providing a better environment for personal growth and recognition for all its students by inspiring them to become leaders in their fields. The Faculty of Medicine will always endeavor to provide opportunities for its students to develop individual initiative, creative ability, and professional leadership through participation in extracurricular seminars, discussion groups, research projects, and student organizations.

Program Outline

Admission (Updated September 15, 2011)

The Faculty of Medicine was established to give properly qualified candidates, particularly from Lebanon and the Near East, the opportunity for sound education in both the art and science of medicine. All applicants must hold a Bachelor's degree and must have completed the premedical requirements as well as the Medical College Admission Test (MCAT). Applicants in their senior year expecting to graduate with a Bachelor's degree in June are eligible to apply provided they have completed the premedical requirements and have taken the MCAT by the end of the first semester of their senior year. For applicants holding (or expecting) a Bachelor's degree, consideration for acceptance is limited to students with a minimum cumulative general average of 75% in each of the following: 1) all courses, 2) the required premedical core courses, and 3) the major courses. For applicants from North American colleges, a minimum GPA of 3.2 is required. Applications from individuals holding (or expecting by June of the same year) a Master or a doctoral degree are encouraged. These applicants will be considered based upon their academic performance and their research productivity; in these cases, some of the premedical requirements may be waived depending on the field of study.

Interviews are granted to a selected group of applicants based on their MCAT scores and their academic achievement. Granting an interview does not necessarily imply that the applicant will be accepted. Students are accepted to medical school on the basis of their academic qualifications, their MCAT score, and the results of their interviews. In addition, due consideration is given to the applicants' letters of recommendation from their teachers and mentors, their curriculum vitae, as well as their personal statements. Among the traits that the successful applicant will demonstrate are humanistic and ethical attitudes, good communication and interpersonal skills, emotional maturity and personal integrity. Previous experience in research, community service and volunteer work are considered positive attributes.

The Faculty of Medicine at AUB does not discriminate on the basis of age, gender, nationality, ethnic origin or religion.

The minimal premedical requirements are summarized below:

1. **A bachelor's degree in any field of study.** Historically, the vast majority of applicants to the Faculty of Medicine have been holders of bachelor degrees in biology or chemistry. In an effort to diversify the pool of applicants, graduates from other majors are strongly encouraged to apply as long as they complete the premedical core courses required for admission to the Faculty of Medicine. Students can take some of the premedical courses as electives in their respective majors.
2. **Premedical core course requirements.** The minimal premedical requirements include biology with laboratory (7 credits), chemistry with laboratory (15 credits including 8 credits of organic chemistry), physics and basic electronics with laboratory (8 credits), English (6 credits at AUB or exemption), social sciences and/or the humanities (6 credits). To facilitate applications by non-science majors and from diverse fields of study, some courses taken in the Lebanese Baccalaureate Program may count towards fulfillment of the premedical core course requirements as detailed in Table 1. Table 2 presents the recommended courses depending on the major of study at AUB.

Table 1. Premedical core course requirements and credit equivalents according to Lebanese Baccalaureate Program. (*: required of all majors in the Faculty of Arts Sciences).

Subject	Required premedical credits	Lebanese Baccalaureate Credit Equivalents according to Program				Remaining credits
		Life Sciences	General Sciences	Economics and Sociology	Literature and Humanities	
Biology	7	3	-	-	-	4-7
Chemistry	15	4	4	-	-	11-15
Physics	8	5	5	3	3	3-5
English	6*	-	-	-	-	
CS/Humanities	6*	-	-	-	-	
Total	42	12	9	3	3	30-39

Table 2: Recommended premedical core courses according to field of study at AUB.

Premedical Requirements	AUB Courses	Biology Major	Chemistry Major	Physics Major	Other Majors
English (6 Cr)	Eng 203 (3 Cr) Eng 204 (3 Cr)	X	X	X	X
Humanities + Social Sciences (6 Cr)	Any two courses	X	X	X	X
Biology (7 Cr)	Biol 101 (3 Cr) or equivalent	X	X	X	X
	Biol 201 (4 Cr)	X			
	Biol 200 (4 Cr) or Biol 201 (4 Cr)		X	X	X
Physics (8 Cr)	Phys 101 (4 Cr) + Phys 101L (1 Cr)		X	X	X
	Phys 103 (3 Cr) + Phys 101L (1 Cr) or equivalent	X			
	Phys 204 (3 Cr) + Phys 204L (1 Cr) or Phys 205 (3 Cr) + Phys 205L (1 Cr)	X			X
	Phys 211 (3 Cr) + Phys 211L (1 Cr)		X		
	Phys 210 (3 Cr) + Phys 210L (1 Cr)			X	
Chemistry (15 Cr)	Chem 101 (3 Cr) + Chem 101L (1 Cr) or equivalent	X	X	X	X
	Chem 201 (3 Cr)	X	X	X	X
	Chem 211 (3 Cr)	X	X	X	X
	Chem 212 (3 Cr)	X	X	X	X
	Chem 210 (2 Cr)	X		X	X
	Chem 225 (4 Cr)			X	

3. **MCAT.** A competitive score in the MCAT, which may be taken twice only, is required. If taken twice, the higher score is considered. The MCAT score must be available at the time the application is submitted.

Applicants expecting to receive a Bachelor degree after the deadline for application should be aware of the following:

- Applicants must be in their senior year.
- The cumulative average of 70 credits or more (at the time of application) should be equal to or higher than 75% for students from AUB, or its equivalent for those from other universities. All core required courses must have been completed by the end of the fall semester of the senior year with an average of at least 75% or its equivalent. The cumulative average in the major courses completed by the end of the fall semester of the senior year must also be equal to or greater than 75%.
- Admission to medical school is contingent upon completion of graduation requirements and obtaining the Bachelor degree, which should be achieved by the end of the spring semester of the students' senior year.

Applicants expecting to receive a Master or doctoral degree after the deadline for application should be aware of the following:

- A minimum cumulative grade average of 80% or its equivalent is required.
- Admission to medical school is contingent upon completion of graduation requirements and obtaining the Master or doctoral degree, which should be achieved by the end of the spring semester.

Conditional acceptance to the faculty is issued by the middle of April of the senior year and is finalized upon completion of the requirements for the Bachelor, Master or doctoral degree.

Graduation Requirements

To be eligible for the degree of Doctor of Medicine a student must satisfactorily complete the curriculum of the Faculty of Medicine and must be recommended by the Academic Committee. The degree may be granted with distinction to students who attain a grade of excellent in at least 50 percent of their credits, and with a grade of pass in no more than 20 percent of credits during the four years of the program.

The Faculty of Medicine offers post-graduate training positions in the various academic departments at AUBMC to AUB and non-AUB medical graduates. However, these positions are limited and are granted on a highly competitive basis.

Dean's Honor List

To be placed on the dean's honor list a student must be full-time and must not be repeating the year. The dean's honor list is limited to the upper 15 percent of the class.

Academic Rules and Regulations

Also see General University Academic Information on pp. 43-57.

Attendance

Regular attendance is required at lectures, laboratories, clerkships, examinations, and other assigned duties. Credit is not given for work not performed. Students absent on account of illness or other valid reasons are requested to confer with the chairmen of the departments concerned. Prolonged or repeated absences are reviewed by the committees concerned which will decide on the appropriate action to take.

Language Requirement

The language of instruction is English. However, students must have a speaking knowledge of Arabic before entering the third year. This requirement may be waived by special vote of the academic committee.

Promotions and Deficiencies

A student's performance is evaluated as Excellent (E), Good (G), Pass (P), or Fail (F). The distribution of grades in a class is as follows: about 15% E, then 35% G, the remaining 50% (unless there are any failures). The evaluation of the student in each subject is based on total performance and not solely on the results of examinations.

The student's performance is evaluated by appropriate class teaching committees, which make recommendations to the academic committee. The action of the academic committee is final. The class teaching committees and the academic committee give due consideration to a general evaluation of fitness for a career in medicine. Only those students who, in the opinion of the committees, give promise of being a credit to themselves, the faculty, and the medical profession are advanced.

To be promoted a student must attain a grade of pass or better in all courses or clerkships, and must be recommended by the committees concerned. However, a student with a grade of pass in all courses or clerkships may, at the discretion of the committees, be promoted on probation, be asked to do remedial work and pass the re-examinations in designated courses or clerkships, or repeat the year.

A student in the first or second year who fails 25 percent or more credits in that year may be asked to repeat the year or withdraw from the faculty. A student who fails less than 25 percent of credits may be asked to do remedial work and pass the re-examination, repeat the year, or leave the faculty. At the discretion of the committees concerned, and in exceptional cases, a student repeating the year may be asked to repeat all or some of the courses.

A student in the third or fourth year who fails 50 percent or more of clerkship hours may be asked to repeat the year or withdraw from the faculty. A student who fails less than 50 percent of clerkship hours may be asked to do remedial work and pass the re-examinations, repeat a clerkship, repeat the year, or leave the faculty. At the discretion of the committees concerned, a student repeating the year may be asked to repeat all or some of the clerkships.

A student who is repeating a year and fails any course or does not attain a grade of good or better in 50 percent of credits will be asked to withdraw from the faculty.

A student who is placed on probation cannot graduate unless probation has been removed.

Graduate Study

Graduate Study in the Basic Medical Sciences

For general requirements about graduate study at AUB refer to the Admissions section on pages 31-42 of this catalogue.

In addition to the AUB general requirements for graduate study, the Faculty of Medicine graduate study requirements and regulations are as follows:

- **Application and Notification of Acceptance.** The deadline for submitting applications is April 30. Letters of acceptance or rejection and placement on the waiting list are sent to applicants no later than the first week of August.
- **Acceptance.** The letters of acceptance are sent in duplicate and contain the category of the position offered, the registration period set during the last week of August, the date of the start of classes set at September 1, and a statement of acceptance or rejection of the position offered.

Candidates must sign a copy of the above letter, indicating acceptance, and return it to the Office of Admissions no later than the second week in August. If acceptance letters are not signed and sent back by this deadline, positions will be re-assigned to candidates on the waiting list.

- **Periods of Study.** The graduate program, once initiated, proceeds without interruption through the first semester, the second semester, and the summer session.
- **Transfer Students.** Applicants who started a graduate program in other AUB faculties or at another recognized university can be accepted as transfer graduate students, subject to evaluation and approval of the departments and the Faculty of Medicine graduate committee. No more than a total of 6 credits of graduate course work from the previously covered program can be transferred. These courses are evaluated as satisfactory, are not assigned a numerical grade, and are not counted as part of the accrued average after the transfer.
- **Membership of the Examining Committee.** In addition to the university provisions outlined under Graduate Studies, the examining committee should include three members from the department concerned, one being the chairperson and one a member of the Faculty of Medicine graduate committee, selected by the student's adviser who will be the third member of the committee.
- **Categories of Graduate Students.** The categories applicable at the University in general are also applicable in the Faculty of Medicine with the following modifications: **regular graduate student status**, applicable to students with a cumulative undergraduate average in the major field of study of at least 80 or its equivalent; **graduate on special status**, applicable to students with a cumulative undergraduate average in the major field of study or an overall average of 75 or higher but lower than 80 or equivalent. Graduates on special status are transferred to regular status upon achieving an overall average of at least 80 in 9 credits of graduate courses within two semesters.
- **Course and Thesis Requirements.** Students must complete a minimum of 21 credits of graduate course work with a minimum general average of 80. Graduate students who intend to apply to the medical program should complete 21 credits of graduate courses, 10 credits of which are not integral to the structured medical curriculum. Medical students and medical graduates who wish to join the MD-MS program are required to complete a minimum of 10 credits of graduate courses not integral to the structured medical curriculum, with a minimum general average of 80. Those with a degree in dental or veterinary medicine are required to complete a minimum of 15 credits of graduate course work. In addition, all students must pass a comprehensive examination and complete a thesis project equivalent to 9 credits. The thesis must be presented and defended to the satisfaction of the examining committee.
- **Approval for Graduation.** For graduation with the degree of Master of Science, a student's performance must be approved by the advisor, the examining committee, the graduate committee, the academic committee, the Faculty of Medicine Assembly, and the University Senate.
- **Visiting Graduate Students.** The Faculty of Medicine recognizes the following categories: **observers**, applicable to students who do not pay a fee; **visiting students** accepted for training, applicable to students who pay a fee; and **exchange students**, applicable to students who participate in the graduate program in accordance with formal agreements between the Faculty of Medicine and other institutions. In all instances candidates must submit applications which are reviewed and acted upon by the graduate committee.
- **Re-enrollment.** Graduate students who withdraw voluntarily can apply for re-enrollment if the period between the date of withdrawal and the date of intended re-enrollment does not exceed four regular semesters. Re-enrollment requires the approval of the department concerned.

Courses

Numbers Preceding Course Titles

Courses required for the Doctor of Medicine degree are numbered 200 to 299 as follows:

200 to 219 indicate courses given in first year medicine

222 to 239 indicate courses given in second year medicine

240 to 259 indicate courses given in third year medicine

260 to 279 indicate courses given in fourth year medicine

280 to 299 are reserved for clinical clerkships during the year of internship

For the first and second years, odd numbers refer to first semester courses and even numbers to second semester courses. Year courses are indicated by a hyphen between the two numbers.

- Graduate courses leading to the Master's and Doctor of Philosophy degrees are numbered 300 to 399.
- Regular medical courses approved for graduate work (MS and PhD program) have two numbers.
- Numbers preceded by the letters ID (Interdepartmental) or FM (Faculty of Medicine) indicate integrated courses taught by two or more departments together.

Numbers Following Course Titles

- The first number following the title of a course indicates the total number of lectures, conferences, and discussion hours given, except where otherwise stated.
- The second number indicates the total laboratory or clinical practice hours, except where otherwise stated.
- The third number indicates the number of semester credit hours. Credit hours are used in conjunction with first and second year courses only.

Course Descriptions

All the following courses, except those listed as electives, are required of students working toward the degree of Doctor of Medicine. The electives designated may be chosen with the consent of the instructor. Detailed course descriptions are available under individual departments.

Curricula

First Year		No. of Weeks	Lecture and Clinical Recitation	Laboratory Clerkship Hrs.	Total Hrs.	Credits
BIOC 211	Basic Biochemistry	16	70	52	122	6
HUMR 207	Gross Anatomy	18	24	198	222	7
HUMR 209	Basic Histology	18	58	69	127	6
PHYL 200	Homeostasis	4	26	15	42	2
PHYL 202	Cardiovascular System	4	31	21	52	2
PHYL 204	Metabolism	4	32	24	56	3
IDTH 206–207	Social and Preventive Medicine	16	34	46	80	4
IDTH 208	Basic Neuroscience	6	62	54	116	6
IDTH 209	Problem Based Learning	16	–	56	56	2
EPHD 225	Medical Statistics	16	16	32	48	3
PHYL 210	General Physiology and Introductory Biophysics	16	36	16	52	3
				Total	973	44

Second Year		Months	Clinical Recitation	Clerkship Hrs.	Total Hrs.	Credits
MBIM 227	Microbiology and Immunology	18	108	72	180	9
IDTH 221–222	Introduction to Medicine	36	108	72	180	9
PSYT 227	Psychopathology	18	32	36	68	3
PATH 229	General Pathology	36	108	72	180	9
PHRM 228	Pharmacology and Toxicology	18	108	72	180	9
EPHD 226	Epidemiology	18	32	36	68	3
IDTH 223–224	Physical Diagnosis	36	36	72	108	3
				Total	964	45

Third Year		Months	Clinical Recitation	Clerkship Hrs.	Total Hrs.	Credits
Clinical Conferences		11	240	–	240	–
INMD 246	Clinical Clerkship	3	120	540	660	–
FMMD 242	Physicians, Patients and Society II	0.5	16	24	40	–
INMD 254	Infection Control	–	6	34	40	–
INMD 250	Forensic Medicine	–	–	12	12	–
PSYT 252	Clinical Clerkship	1	25	180	205	–
OBYG 247	Clinical Clerkship	2	47	360	407	–
PEDT 246	Clinical Clerkship	2	35	360	395	–
SURG 246	Clinical Clerkship	3	44	540	584	–
Total					2583	

Fourth Year		Months	Clinical Recitation	Clerkship Hrs.	Total Hrs.	Credits
ANES 267	Clinical Clerkship	0.7	15	120	135	–
Clinical Conferences		11	–	240	240	–
INMD 262	Clinical Clerkship	3.5	–	630	630	–
OPHT 267	Clinical Clerkship	0.7	–	120	120	–
ORLG 267	Clinical Clerkship	0.7	11	120	131	–
PEDT 267	Clinical Clerkship	2	–	360	360	–
Elective in any department		2	–	360	360	–
IDTH 268	Clerkship in Preventive Medicine and Public Health	0.5	10	80	90	–
FMMD 262	Clinical Clerkship	1	30	150	180	–
Total					2246	

Interdepartmental Teaching

First Year

IDTH 206/207 Social and Preventive Medicine 34.46; 4 cr.

A course that explores the inter-relationships among the patient, the physician, and society. This course is divided into two parts. The first is a lecture and discussion series (2 credits) that examines health and disease, the social and individual determinants of health, healthcare systems, and the patient-physician relationship. The second part (2 credits) is a field project during which students investigate a health issue at the level of the community.

IDTH 208 Basic Neuroscience 62.54; 6 cr.

A course that covers the study of structure and function of the human nervous system. *Six weeks. Annually.*

IDTH 209 Problem Based Learning 0.56; 2 cr.

Problem based multi-disciplinary seminars in which students interactively discuss clinical problems in small groups under the supervision of a facilitator.

Second Year

IDTH 221/222 Introduction to Medicine 108.72; 9 cr.

See Department of Internal Medicine. *Annually.*

IDTH 223/224 Physical Diagnosis 36.108; 3 cr.

See Department of Internal Medicine. *Annually.*

Fourth Year

IDTH 268 Clerkship in Preventive Medicine and Public Health 10.80

In this clerkship, teams of senior medical students assess, critique, and propose solutions to problems of public health or clinical significance. The students examine policy, organizational, social, and individual challenges to these problems, addressing issues such as equity in health and setting public health programs, and identifying opportunities for change. Data collection and statistical analysis are secondary objectives.

Graduate

IDTH 301 Introduction to Medical Science Literature 16.32; 2 cr.

A multidisciplinary approach to the use of medical science publications (open to beginning graduate students in the Faculty of Medicine).

IDTH 302 Methods 16.64; 3 cr.

Theory and practice of techniques used in the various disciplines of medical sciences.

IDTH 303/304/305/306 Integrated Graduate Course I–IV 32 0; 2 cr. (each)

An integrated lecture seminar course introducing graduate students to the thinking in various medical science disciplines (required of all PhD students in the Faculty of Medicine). *Four semesters. One two-hour session a week each.*

IDTH 307 Biomedical Electronics 32.16; 3 cr.

An introductory course in electricity and electronics as applied to biology and medicine. *Alternate years.*

IDTH 308A Neuroanatomy 31.27; 3 cr.

A course similar to the first part of 208, offered to graduate students, covering the normal structure of the human nervous system. See Department of Human Morphology. *Three weeks.*

IDTH 308B Neurophysiology 31.27; 3 cr.

A course similar to the second part of 208, offered to graduate students, covering the function of the human nervous system. See Department of Physiology. *Three weeks.*

IDTH 309 Biology of Nerve and Muscle 48.0; 3 cr.

A multi-disciplinary study of anatomy, physiology, biochemistry, pharmacology, and pathology of nerve and muscle. *Alternate years.*

IDTH 317 Perspectives in Medical Sciences 32.0; 2 cr.

A course of selected readings and seminars in the history, philosophy, and methodology of medical and related sciences.

IDTH 319/320 Integrated Research Seminars 16.0; 1 cr. (each)

Participation of all PhD students and professors.

IDTH 330 Medical Pedagogy 3 cr.

A tutorial in teaching methods and practical experience under supervision. *Open to PhD candidates only.*

IDTH 333/334 Projects 2 cr. (each)

Two months half-time in a department other than the student's major occurring toward the end of the PhD candidate's residency.