





# **Faculty of Health Sciences (FHS)**

# Faculty of Health Sciences (FHS)

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## Historical Background

The Faculty of Health Sciences (FHS) was first established in 1954 as an independent School of Public Health, the first of its kind in the region. The name of the school was changed to the Faculty of Health Sciences in 1978 to accommodate programs in allied health.

FHS serves to educate and train professionals and competent leaders to help meet the health needs of Lebanon and the region. Currently, FHS hosts four departments: Epidemiology and Population Health (EPH), Environmental Health (EH), Health Behavior and Education (HBE), Health Management and Policy (HMP), and a Medical Laboratory Technology Program in collaboration with the Faculty of Medicine. FHS offers a BS degree in Health Sciences (major: Environmental Health or Medical Laboratory Technology); a master's degree in Public Health (MPH) (concentrating in EB-Epidemiology and Biostatistics, HBE, or HMP); an MS in Epidemiology; an MS in Population Health; and, an MS in Environmental Sciences (concentrating in EH). FHS also provides teaching of public health to students in the Faculty of Medicine.

## Mission

The Faculty of Health Sciences prepares professionals in the disciplines of public health and health sciences through graduate and undergraduate programs, and introduces future physicians to public health. It contributes to knowledge and the improvement of the public's health in the region by conducting scholarly and relevant research and by responding to priority health issues and training needs in collaboration with stakeholders. In all of its functions, FHS promotes and adheres to the principles of ethics, social justice, and collective responsibility.

## Vision

The vision of FHS is to contribute to the promotion of the health and well being of populations through the provision of quality higher education in public health and related disciplines. This is to be accomplished through state-of-the-art research that addresses public health problems particularly relevant to Lebanon, the region, and the developing world, and through transfer of that knowledge to policy makers, program managers, and other practitioners in relevant organizations and fields.

## Undergraduate Programs

### Bachelor of Science in Health Sciences (Environmental Health, Medical Laboratory Technology)

To be eligible for admission to the programs leading to the degree of Bachelor of Science in Health Sciences, candidates must have satisfactorily completed the freshman program in the Faculty of Arts and Sciences, or an equivalent program, with a minimum cumulative average of 70 and a minimum science average of 70.

Lebanese students must present the Lebanese Baccalaureate, or its equivalent, and should be considered eligible by the AUB Office of Admissions for admission to the first year in health sciences. These candidates are evaluated based on SAT I scores and school performance.

Candidates holding the Lebanese Baccalaureate Part II -literature and humanities- or its equivalent are required to take CHEM 200 and MATH 203 as remedial courses. Candidates holding the Lebanese Baccalaureate Part II- sociology and economy- or its equivalent are required to take CHEM 200 as a remedial course.

Freshman students applying to the first year in health sciences must complete the following science requirements: CHEM 101 and 102, MATH 101 and 102 (see page 116), or CHEM 200 and MATH 203. Courses taken before the student is admitted to any of the BS programs in Health Sciences may be credited at the discretion of the appropriate department.

## Admission

For complete and detailed information regarding admission to AUB, including recognized certificates, see the Admissions section on pp. 32-43 and Certificate and Class Chart on pp. 44-47 of this catalogue.

## Graduation Requirements

All recommendations for graduation are made by a vote of the faculty, upon the recommendation of the academic and curriculum committee.

## Bachelor of Science in Health Sciences

- **Major in Environmental Health:** To be eligible for graduation with the degree of Bachelor of Science in Health Sciences, with a major in environmental health, a student must have satisfactorily completed the prescribed course of study and passed a minimum of 96 credit hours (in addition to field training), after freshman science class or the equivalent, while attaining a total cumulative average of 70.
- **Major in Medical Laboratory Technology:** To be eligible for graduation with the degree of Bachelor of Science in Health Sciences, with a major in medical laboratory technology, a student must have satisfactorily completed the prescribed program of study and passed a minimum of 103 credit hours after the freshman science class, or the equivalent, while attaining a total cumulative average of 70.

All undergraduate transfer students from AUB, or from other recognized institutions of higher learning, need to complete the required course of study for the two undergraduate programs. A minimum residency period of three semesters must be completed within the Faculty of Health Sciences. For purposes of this requirement, two summer sessions shall be equivalent to one semester.

## Minors and Electives

The Faculty of Health Sciences offers two minors, which require the completion of a number of courses as specified in the list below. Moreover, electives can be chosen from the following list of courses to satisfy the distributional requirements of social sciences or sciences.

- The minor in Environmental Health allows students to acquire knowledge about the components of the environmental system and the interactive processes that affect human health, environmental protection, and development.

The minor in Environmental Health requires 15 credits, including the following:

PBHL 200<sup>1</sup>, ENHL 220<sup>2</sup>, plus a minimum of 10 credits selected from the following ENHL courses: ENHL 221<sup>2</sup>, ENHL 230, ENHL 231, ENHL 234<sup>2</sup>, ENHL 241, and ENHL 243. The following courses can be selected following the approval of the department: ENHL 232, ENHL 233, ENHL 237 or ENHL 242

<sup>1</sup> Satisfies the distribution requirements for social sciences

<sup>2</sup> Satisfies the distribution requirements for sciences

- The minor in Public Health introduces students to the public health field through exposure to the disciplines of public health and current public health issues. Students are given a general overview of the field in PBHL 200 and subsequently get more in-depth knowledge by choosing one course from each of the public health disciplines. A minor in public health allows students to become better consumers and producers of health, and to become more conscious of their own health and their community's health. In addition, a minor in public health expands students' career options by exposing them to an increasingly important and expanding profession.

The minor in Public Health requires 15 credits, including the following:

- PBHL 200<sup>1</sup>
- one of the following courses from the Department of Environmental Health: ENHL 220<sup>2</sup>, ENHL 221<sup>2</sup>, ENHL 230, ENHL 231, ENHL 234<sup>2</sup>, ENHL 241
- one of the following courses from the Department of Epidemiology and Population Health: EPHD 203<sup>2</sup>, EPHD 213<sup>1</sup>, EPHD 227<sup>2</sup>
- one of the following courses from the Department of Health Behavior and Education: HBED 201<sup>1</sup>, HBED 203<sup>1</sup>, HBED 237
- one of the following courses from the Department of Health Management and Policy: HMPD 204<sup>1</sup>, HMPD 212<sup>1</sup>, HMPD 251

The remaining credits can be taken from courses listed above in any of the departments, or from other courses in the faculty, with permission of the instructor.

To graduate with a minor, a student must attain an average of 70 or more in courses taken to satisfy the requirements of that minor.

## List of Humanities/Social Sciences Electives

FHS students are allowed to select humanities/social sciences elective courses from the following list:

### Humanities

- ARAB: 211 and above
- AROL: 201 through 231; 235; 236
- CVSP: 201 through 208; 230; 250; 251; CVSP/German 201-211; CVSP/French 201-211.
- FAAH: One course can be selected from FAAH 201 through 217 or 234 or 240 through 284; 221;222;223;224; 225A; 225B, 225C; 226A; 226B,226C; 227A; 227B; 227C; 228A; 228B; 228C; 229A; 229B; 229C; 235; and 238
- ENGL: 201; 205; 207; 210 through 215; 219; 221 through 226; 229; 233; 236; 239; 240 through 243

<sup>1</sup> Satisfies the distribution requirements for social sciences.

<sup>2</sup> Satisfies the distribution requirements for sciences.

- HIST: All 200 level courses up to 274
- PHIL: 201 through 249
- ARCH: 020 through 029; 121; 122; 223; 224; 325

### **Social Sciences**

- ECON: All 200 level courses up to 243
- EDUC: 211-216; 218; 221; 222; 223; 225; 226
- PSPA: All 200 level courses up to 278 except PSPA 203
- SOAN: All 200 level courses up to 232 except SOAN 210; 211
- PSYC: All 200 level courses up to 251 except PSYC 213; 223 or 243.

## **Academic Rules and Regulations**

Please refer to the section on General University Academic Information (pp. 48-63) for information on attendance, classes and laboratories, examinations and quizzes, course loads, premedical requirements, incompletes, probation (placement on academic probation, removal of probation), dismissal and readmission, repeating courses, residence requirements, special students not working for a degree, tutorials, and withdrawal from courses.

### **Full-Time Students and Credit Load**

A full-time student must carry a minimum load of 12 credits per semester. If a student wishes, or is forced to reduce, his/her load to fewer than 12 credits, s/he must first apply to the academic and curriculum committee for approval. This should be done no later than 10 weeks after the start of the semester.

Students on probation for the first time are allowed a maximum load of 17 credits. Students who continue on probation beyond one semester can register for a maximum of 13 credits per semester.

### **Transfers**

To be eligible for admission to advanced standing (second and third year), a candidate must have completed the equivalent requirements for the first (or second) year of undergraduate study in the Faculty of Health Sciences and meet the following criteria:

- a minimum cumulative average of 70
- a minimum average of 70 in science courses

A student, who has completed a minimum of two semesters of study as a sophomore, or its equivalent, is eligible for admission to the first year in the Faculty of Health Sciences if the following criteria are met:

- s/he obtains a minimum cumulative average of 70
- s/he obtains a minimum average of 70 in science courses
- s/he completes a minimum of 6 credits in basic science courses

## Promotion

For class promotion from year I to year II, a student must complete a minimum of 30 credits (for EH major) or 31 credits (for MLT major), excluding credits for ENGL 102. For class promotion from year II to year III, a student must complete a minimum of 63 credits (for EH major) or 65 credits (for MLT major).

New students accepted to the undergraduate programs (EH, MLT), who refrain from following the assigned course curriculum, have their academic status changed automatically from regular to majorless. Majorless students are given two academic semesters to transfer to the desired major. If, by the end of the second semester, the student does not secure acceptance to the desired major, s/he is not allowed to register beyond that.

## Curricula for Bachelor of Science in Health Sciences

### Major: Environmental Health

#### First Year<sup>1</sup>

First Semester			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
BIOL	200	Diversity of Life	2	2	4
CHEM	208	Brief Survey of Organic Chemistry	3	0	3
CHEM	209	Introductory Organic Laboratory	1	4	2
ENGL	203	English Communication Skills III	3	0	3
ENHL	220	Introduction to Environmental Sciences	3	0	3
					<b>Total 15</b>

Second Semester			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
ENHL	221	Management of Domestic and Hazardous Wastes	3	0	3
ARAB	201A/B/211 or above		3	0	3
ENGL	204	English Communication Skills IV	3	0	3
HMPD	206 <sup>2</sup>	Computer Literacy	2	2	0
Humanities Elective			–	–	3
Humanities Elective			–	–	3
					<b>Total 15</b>

<sup>1</sup> CHEM 200 is a remedial course required of Literature and Humanities and Sociology and Economics Baccalaureate holders.

MATH 203 is a remedial course required of Literature and Humanities Baccalaureate holders. Remedial courses should be taken during the first year.

<sup>2</sup> Students can be exempted from the course if they pass the exemption test.

**Second Year**

			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
<b>First Semester</b>					
ENHL	231	Water and Wastewater Quality Control	3	0	3
ENHL	232	Instrumentation, Analytical Techniques, and Sampling	2	3	3
ENHL	237	Environmental Microbiology	3	3	4
EPHD	203	Epidemiology and Biostatistics	2	2	3
HMPD	251	Introduction to Health Care Economics	3	0	3
					<b>Total 16</b>

			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
<b>Second Semester</b>					
ENHL	233	Quality Determination of Water and Wastewater	1	4	3
ENHL	234	Occupational Health and Toxicology	2	2	4
ENHL	230	Food Quality and Control	4	0	4
EPHD	213	Survey Methods	2	2	3
Free Elective			-	-	3
					<b>Total 17</b>
<b>Summer Session</b>					
ENHL	236	Summer Field Training	-	-	0

**Third Year**

			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
<b>First Semester</b>					
ENHL	241	Indoor and Outdoor Air Pollution	3	0	3
ENHL	242	Environmental Management Tools and Applications	2	4	3
HMPD	204	Introduction to Health Services Administration	3	0	3
HBED	237	Theories and Methods of Health Education I	2	2	3
		Free Elective	-	-	3
		Free Elective	-	-	3
					<b>Total 18</b>

			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
<b>Second Semester</b>					
ENHL	243	Seminar on Global Environmental Issues	1	6	3
HBED	203	Health Communication	2	2	3
PHIL	209	Environmental Ethics	3	0	3
		Free Elective	-	-	3
		Humanities Elective	-	3	
					<b>Total 15</b>

**Major: Medical Laboratory Technology****First Year**

			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
<b>First Semester</b>					
BIOL	200	Diversity of Life	3	3	4
CHEM	208	Brief Survey of Organic Chemistry I	3	0	3
CHEM	209	Introductory Organic Laboratory I	1	4	2
ENGL	203	English Communication Skills III	3	0	3
		Humanities Elective	3	0	3
					<b>Total 15</b>

<b>Second Semester</b>			<b>Lecture Hrs./ Week</b>	<b>Lab Hrs./ Week</b>	<b>Credit Hrs.</b>
ARAB	201A/B/211 or above		3	0	3
BIOC	255	Biochemistry for MLTP (or its equivalent)	3	0	3
ENGL	204	English Communication Skills IV	3	0	3
HMPD	206 <sup>2</sup>	Computer Literacy	2	2	0
PHYL	246	Physiology for Nursing Degree Students and Undergraduates	4	0	4
Humanities Elective			3	0	3
					<b>Total 16</b>

## Second Year

<b>First Semester</b>			<b>Lecture Hrs./ Week</b>	<b>Lab Hrs./ Week</b>	<b>Credit Hrs.</b>
LABM	201	Clinical Chemistry I	2	0	2
MLTP	201	Clinical Hematology I	3	0	3
MLTP	203	General Microbiology	2	2	3
MLTP	207	Immunology and Blood Banking	2	0	2
MLTP	208	General and Diagnostic Virology	2	0	2
Social Sciences Elective			3	0	3
Humanities Elective			3	0	3
					<b>Total 18</b>

<b>Second Semester</b>			<b>Lecture Hrs./ Week</b>	<b>Lab Hrs./ Week</b>	<b>Credit Hrs.</b>
LABM	202	Clinical Chemistry II	2	0	2
LABM	210	Cytology and Histological Techniques	2	0	2
MBIM	223	Medical Parasitology	2	4	4
MLTP	202	Clinical Hematology II	3	0	3
MLTP	204	Systematic Bacteriology	2	4	4
MLTP	259	Diagnostic Serology	1	0	1
					<b>Total 16</b>

<b>Summer Session</b>			<b>Lecture Hrs./ Week</b>	<b>Lab Hrs./ Week</b>	<b>Credit Hrs.</b>
Practical Training in Laboratory Medicine			–	–	4
					<b>Total 4</b>

<sup>2</sup> Students can be exempted from the course if they pass the exemption test.

## Third Year

First Semester			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
EPHD	203	Epidemiology and Biostatistics I	2	2	3
HMPD	204	Introduction to Health Services Administration	3	0	3
LABM	233	Genetics and Molecular Biology	2	0	2
LABM	235	Medical Mycology	1	0	1
Practical Training in Laboratory Medicine			-	-	8
					<b>Total 17</b>

Second Semester			Lecture Hrs./ Week	Lab Hrs./ Week	Credit Hrs.
Humanities Elective			3	0	3
HBED	203	Health Communication	3	0	3
LABM	234	Selected Topics in Laboratory Medicine	2	0	2
MLTP	211	Seminar	1	0	1
Practical Training in Laboratory Medicine			-	-	8
					<b>Total 17</b>

## Practical Training in Laboratory Medicine

A total period of ten months (July to June excluding a one month vacation in September) to cover practical experience and application of theoretical knowledge in the following areas of laboratory medicine, for the periods and credits indicated below:

			Duration	Credits
LABM	220	Clinical Chemistry and Endocrinology	8 weeks	4
LABM	230	Clinical Hematology and Special Procedures	8 weeks	4
LABM	240	Clinical Microbiology	8 weeks	4
LABM	250	Clinical Parasitology and Urinalysis	4 weeks	2
LABM	260	Serology	4 weeks	2
LABM	270	Blood Banking	4 weeks	2
LABM	280	Phlebotomy, Cytogenetics, and Histological Techniques	4 weeks	2
				<b>Total 20</b>

## Interdisciplinary Courses

**PBHL 200****Introduction to Public Health****2.0; 2 cr.**

An introduction to public health. This course begins with a general overview of health, disease, and public health. Students are then exposed to (1) the professional disciplines of public health and to the field of lab sciences; and to (2) current issues in public health and lab sciences. This course ends with a discussion of the values and ethics of public health. *First and/or second semester.*