

FACULTY OF HEALTH SCIENCES

MISSION STATEMENT

The mission of the Faculty of Health Sciences is to nurture a lively collegial learning environment that would enable students to become caring and capable healthcare professionals and citizens ready to engage effective roles within healthcare systems, families and communities. This entails the continuous development of integrated scientifically sound and socially appropriate multidisciplinary impact-directed academic, co-academic, research, and service programs.

Guided by the principles and policies of the University of Balamand, and working in partnership with St. Georges Hospital University Medical Center, the Faculty seeks excellence, fosters professionalism, rewards commitment, encourages service, emphasizes professional ethics, nurtures partnerships, values research, and respects intellectual property.

FACULTY LIST

OFFICERS OF THE FACULTY

Salem, Elie	President of the University
Bashour, Tali	Vice President of the University
Karam, Nadim	Vice President of the University, Dean
Nahas, George	Vice President of the University
Najjar, Michel	Vice President of the University
Moubayed, Walid	Dean of Admissions and Registration
Bashir, Sameera	Librarian

FACULTY STAFF

Nseir, Micheline	Administrative Assistant
Chaddad, Rita	Secretary
Constantine, Catherine	Secretary
Kharrat, Rita	Associate Librarian
Khater, Paul	IT Assistant
Atallah, David	IT Assistant
Abbas, Lina	Project Assistant
Aramouni, Jaqueline	Project Assistant
Beydoun, Nadia	Project Assistant
Chabbany, Sanaa	Project Assistant
Nehme, Bassam	Project Assistant
Saade, Maria	Project Assistant
Khamis, Youssef	Office Assistant

FACULTY MEMBERS

Abdallah, Bahia	M.P.H., Health Services Administration American University of Beirut, Lebanon
Abdallah, Laura	B.S. Chemistry, M.S. Physiology American University of Beirut, Lebanon
Abdel Rahman, Abeer	M.P.H., Health Services Administration, American University of Beirut, Lebanon
Abi Habib, Laurie	Ph.D., Social Anthropology, Manchester University, U.K.
Abi Hanna, Pierre	M.D., Internal Medicine, University of Illinois, U.S.A
Abi Khalil, Nissrine	B.S.N. University of Balamand, Lebanon
Abou Jaoudeh, Maya	M.S. Food Technology American University of Beirut, Lebanon
Abou Chawareb, Maha	DEA, Gerontology, University of Malta, Malta
Allouch, Zeina	M.P.H. American University of Beirut

Aoun, Habbouba	M.S., Population Studies, American University of Beirut, Lebanon
Araman, Irene	B.S.N, T.D. Health Education American University of Beirut, Lebanon
Assaf, Georges	Ph.D., Public Law Université Paris I – Sorbonne, France
Azar, Eid	M.D., Infectious Diseases Beth Israel Medical Center, U.S.A.
Azar, Mathil	D.E.A., Nursing, St. Joseph University, Lebanon
Baboudjian Nayiri	M.A., English Literature, American University of Beirut, Lebanon
Badr, Lina	Ph.D., PNP Nurse Practitioner UCLA, U.S.A.
Baroudy, Katia	D.E.S. Spanish Literature Spanish Ministry of Education, Spain
Basbous, Wafa	D.E.S.S. d'Expert Démographe, Institut de Demographie de Paris (IDP), France
Bassil, Dolly	M.P.H., American University of Beirut, Lebanon
Bechwati, Brigitte	M.S. Nursing Université Saint Joseph, Lebanon
Beyrouthy, Nicole	B.S.N., M.S. Nursing Informatics University of Colorado, USA
Bou Abdallah, Eliane	D.E.A. PharcoChimie Université de Paris XI, France
Chalhoub, Elias	Ph.D., Molecular Genetics Université de Montpellier II, France
Chaoui, André	D.E.S., Animal Physiology Faculté Libre des Sciences, France
Chemaitelly, Hiam	M.S., Epidemiology and Population Health American University of Beirut, Lebanon
Daher, Mirna	B.S., Nursing University of Balamand, Lebanon
Daou, Badrieh	B.S.N, M.S. Education American University of Beirut, Lebanon
Daoud, Ziad	Ph.D., Medical Laboratory- Microbiology, Complutense University of Madrid- Spain, IPP- France
Deyirmenjian, Mary	B.S.N, M.P.H., American University of Beirut, Lebanon
Dhaini, Hassan	Ph.D., Toxicology University of Michigan Ann Arbor, U.S.A.
Diab, Shereen	M.A. Psychology American University of Beirut, Lebanon
Djaffar, Isabelle	Ph.D., Molecular and Cellular Biology Université Paris VII, France

Eid, Ali	Ph.D., Biomedical Sciences Ohio State University, U.S.A.
El-Chami, Riad	M.S., Computer Science University of Technology, Australia
El-Daw, Badrieh	B.S., Nursing American University of Beirut, Lebanon
El Hachem, Ghada	M.A., Applied Linguistics Lebanese University, Lebanon
El-Hajj, Raymond	M.S., Clinical Laboratory Sciences University of Balamand, Lebanon
El-Zein, Fares	Ph.D., Public Administration and Policy State University of New York, U.S.A.
Farah, Raja	B.A. English, M.S. Humanitarian Program Management University of Liverpool, U.K.
Fakhoury, Rajaa	Ph.D., Clinical Biochemistry, Manchester University, U.K.
Gebrayel Asmar, Rola	D.E.A. Lettres Françaises Université Saint Joseph, Lebanon
Gemayel, Pierre	B.S., Law, Sagesse University, Lebanon
Georges, Vicky	Maitrise in Nursing, St. Joseph University, Lebanon
Gerges, Zeina	M.D., Family Medicine American University of Beirut, Lebanon
Ghanem, Noha	Ph.D., Organic Chemistry, Université de Montpellier II, France
Ghantous, Marwan	Computer Engineer, St. Joseph University, Lebanon
Ghosn, Nada	M.D., D.E.S. Public Health Université Lille II, France
Habib, Hiba	B.S., Nursing, Lebanese University, Lebanon
Haddad, John	Ph.D., Molecular Biology and Immunology, University of Dundee, U.K.
Haddad, Mona	M.P.H., Epidemiology & Biostatistics – Health Management American University of Beirut, Lebanon
Hajjar, Micheline	M.S., Natural Sciences Lebanese University, Lebanon
Hayek, Joumana	D.E.A., Sciences, Université Paris I – Sorbonne, France
Jaalouk, Lina	M.S., Health Promotion Management, Marymount University, U.S.A.
Jamous, Sami	M.S., Educational Math Lebanese University, Lebanon
Kalash, Pamela	D.U., Santé Communautaire, Saint Joseph University, Lebanon

Karam, Corine	B.S.N, University of Balamand, Lebanon
Karam, Fadia	B.S., Medical Laboratory Sciences Lebanese University, Lebanon
Karam, Jessica	Midwife, M.P.H. American University of Beirut, Lebanon
Karam, Nadim	M.D., American University of Beirut, Lebanon M.P.H. Johns Hopkins University, USA
Kattini, Marie	Midwife, Université Saint Joseph, Lebanon
Keyrouz, Robert	Ph.D, Electro Organic Chemistry Université de Rennes 1, France
Khalife, Marie Therese	D.E.S.S., Psychology, St. Joseph University, Lebanon
Khalil, Samar	M.S., Environmental Impact Assessment, Auditing and Management Systems, University of East Anglia, U.K.
Khashfeh, Hassan	Ph.D., Psychology and Biophysics Boston University, U.S.A.
Khodary, Rami	Ph.D., Natural Sciences Technical University of Hamburg, Germany
Maalouf, Saydeh	B.S., Nursing, St. Joseph University
Maalouf, Wafa	M.A., Educational Psychology, American University of Beirut, Lebanon
Maamary, Bassem	M.S., Business Management Lebanese American University, Lebanon
Masri, Rania	Ph.D., Forestry North Carolina State University, Lebanon
Mattar, Jocelyne	Ph.D. Epidemiology University of Pittsburg, U.S.A.
Mattar, Nevine	M.A., Education in Psychology, American University of Beirut
Mageurian, Zarouhie	M.D., Pathology, St. Joseph University, Lebanon
Najjar, Walid	Ph.D., Arabic Literature, St. Joseph University, Lebanon
Nehme, Alexandre	M.D., General Medicine, Université Paul Sabatier, France
Obeid, Pierre	Ph.D., Chemistry, University of Patras, Greece
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Rassam, Paul	M.D., Gastro-Enterology, Medical College of Wisconsin, U.S.A.

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Rizk, Ursula	M.P.H., Health services Administration, American University of Beirut, Lebanon
Saade, Carole	M.D., Endocrinology Université Saint Joseph, Lebanon
Salem, Suhaila	M.A., English Literature American University of Beirut, Lebanon
Salibi, Joseph	M.B.A., Webster University, U.S.A.
Samaha, Hanady	M.D., Oncology, St. Joseph University, Lebanon
Seriani, Nathalie	M.A., Psychology, St. Joseph University, Lebanon
Shehadeh Elias	M.B.A., International Business University of Western Sydney, Australia
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Stéphan, Elie	M.D., Family Medicine, St. Joseph University, Lebanon
Stéphan, Joumana	M.S., Biostatistics, John Hopkins University, U.S.A.
Sukarieh, Ola	B.S.N., M.P.H. American University of Beirut, Lebanon
Tabshoury, Patrick	Ph.D., Business Université Lyon III, France
Tanios, Christine	M.S. Clinical Psychology Université Saint Joseph, Lebanon
Tannous, Tony	Ph.D., Physical Optics Sydney University, Australia
Wehbe, Micheline	M.S., Nursing, St. Joseph University, Lebanon
Ziade, Nelly	M.P.H. Université Paris XI, France

PROGRAMS OF STUDIES

The Faculty of Health Sciences encompasses the following academic programs:

- BS in Nursing (offered in English and French) 3 years
- Ladder Program in Nursing (offered in English and French) 3 years
 - o BT-BSN Program
 - o TS-BSN Program
- BS in Medical Laboratory Sciences (Including a Pre-Medical track) 3 years
- MS in Clinical Laboratory Sciences 2 years
 - o Clinical Microbiology
 - o Diagnostic Molecular Biology
 - o Molecular Toxicology
- BS in Public Health and Development Sciences 3 years
- BS in Health Promotion 3 years
- BS in Nutritional Sciences 3 years
 - o Nutrition and Dietetics (Including a Pre-Medical track)
 - o Community Nutrition
 - o Food Science and Quality Assurance
- Dual Degree in Public Health and Development Sciences and Health Promotion, leading to two BS degrees 4 years

The Academic Programs are supported by a wide range of Co-Academic Programs.

COURSE CODES

Each course is assigned a number of credit hours normally equivalent to the number of hours of classroom teaching per week. In the case of practical training courses in the Nursing program, each credit is equivalent to 3 hours of training. The letters preceding the course number indicate the area or subject of study to which the course belongs.

FHSC	Faculty Courses	ENGL	English Language and Literature Courses
NURS	Nursing Courses	FREN	French Language and Literature Courses
MLAB	Medical Laboratory Sciences Courses	ARAB	Arabic Language and Literature Courses
CLAS	Clinical Laboratory Sciences Courses	CVSQ	Civilization Sequence Courses
PDHP	Public Health/Health Promotion Courses	LISP	Library and Information Science Courses
NUSC	Nutritional Sciences Courses		

Courses are grouped into two categories:

Major courses: Students should pass these courses with an average of 65% or 70%. (Refer to respective department curricula). Major courses are flagged in the text by two asterisks (**).

Non – major courses: Student should pass these courses with an average of 60%.

UNDERGRADUATE PROGRAMS

The University policies stipulated in the “General Information Section” in this catalogue are followed by the Faculty of Health Sciences unless otherwise stated.

1. ADMISSION REQUIREMENTS

Admission to the undergraduate program in the Faculty of Health Sciences is on a semester basis.

- a. Applications are processed as described in Section I of this catalogue.
- b. Applicants must satisfy University admission requirements as described in this catalogue.

2. ADMISSION OF TRANSFER STUDENTS

See University Rules and Regulations

3. ACADEMIC RULES AND REGULATIONS

See University Rules and Regulations

A- ACADEMIC PERFORMANCE

See University Rules and Regulations

B- GRIEVANCE PROCEDURE

Students may appeal against a decision regarding them taken by the Faculty. The appeal must be submitted in writing. A Grievance Committee structured according to the rules and regulations of the University will evaluate the situation.

4. STUDENT HOUSING SERVICES

Students have access to the St. Georges Hospital dormitory that is located next to the Faculty building. Lodging prices are subsidized. Reservations must be made upon acceptance for admission.

5. FINANCIAL AID

The University offers financial aid. A sponsorship program may be available for qualified nursing students through Saint Georges Hospital University Medical Center.

6. TEACHING LABORATORY

Teaching laboratory sessions are an integral part of many basic as well as clinically oriented courses.

A- FACILITIES

The laboratories in the Faculty of Health Science and the Saint Georges Hospital University Medical Center laboratories are multidisciplinary; designed and equipped to cope with all the experiments that are carried out as part of curricular requirements. The settings meet the needs of basic laboratory research work.

B- SUPPLIES

All laboratory supplies as required by each department must be purchased at the student's expense. No charge is made to regular students taking required laboratory work for normal amounts of expendable material used in connection with the laboratory subject.

C- DAMAGES

Students will be charged for damage to instruments caused by neglect. The amount of the charge will be the actual cost of repair, and, if the damage results in total loss of apparatus, adjustments will be made in light of the condition of the instruments. Where there is a danger of costly damage, an instructor should be requested to check the equipment's set-up. When a group does laboratory work, charges for breakage will be divided among the members of the group concerned. The amount of the charge will be stated immediately or as soon as it can be determined.

7. TRANSPORTATION

Students are responsible for providing their own transportation.

8. GRADUATION REQUIREMENTS

To be eligible for graduation, students who enter as sophomores must complete a minimum number of credits as described in the respective curricula of Public Health and Development Sciences, Health Promotion, Medical Laboratory Sciences, Nursing, and Nutritional Sciences.. For other graduation requirements refer to the "General Information Section" in this catalogue.

GRADUATE PROGRAM

To earn a Master of Science Degree, a student must successfully complete 30 credits of coursework (including the completion of a 6 credits-thesis) approved by the program.

1. ADMISSION REQUIREMENTS

Applicants to the graduate program must hold a bachelor of science degree from a recognized institution of higher learning with a minimum cumulative average of 80 or its equivalent in the last two years of undergraduate study and in major courses of the field of study. Applicant should present the following documents:

- A completed official application form
- A certified copy of the Lebanese Baccalaureate or its equivalent
- Two letters of recommendations
- Three recent passport-size photographs
- A non-refundable application fee.
- Proof of English Proficiency (a minimum score of 527 on the paper-based TOEFEL exam or 197 On the computer-based TOEFEL exam. Scores remain valid up to 4 years from test date
- Statement of interest

Graduate acceptance is granted upon recommendation of the Graduate Admission Committee after reviewing the application.

The Graduate Admission Committee may admit students on probationary status based on their presented credentials. A student admitted on probation must achieve a minimum average of 80 in the first semester of graduate study provided that the student enrolls in a minimum of six credits. Failure to satisfy these requirements will result in automatic dismissal from the graduate program.

Students not admitted on probation due to unsatisfactory undergraduate achievements may be allowed to enroll in remedial courses to improve their undergraduate cumulative average and reapply for admission to the graduate program.

2. ACADEMIC RULES & REGULATIONS

A. TIME LIMIT

All students are expected to complete all academic requirements within a minimum of two years and a maximum of 4 years.

Course credits earned in the program of graduate studies or accepted by transfer are valid for a maximum of six years, unless an extension is granted in special circumstances as based on a written petition by the student.

B. TRANSFER CREDITS

A maximum of 6 graduate credits obtained at an accredited institution of higher learning may be accepted towards the degree. A grade of 80 or above is required for transfer credits to be accepted. Courses must not be used as credit towards any other degree at UOB. Transfer credits will be granted for courses that have an equivalent offered at UOB.

C. PASSING GRADE

The passing grade for all courses is 70

D. FULL – TIME STATUS

Students are considered to have a full-time status when their credit load per semester is nine credits or above.

E. GRADUATION REQUIREMENTS

In order to graduate students must achieve a minimum cumulative average of 80

F. PROBATIONARY STATUS

A student is placed on probation in any of the following cases:

- The student has a failing grade in any of the courses (less than 70)
- The student has a cumulative average under 80

G. DISMISSAL

A graduate student may be dismissed from the program in any of the following cases:

- The student has a failing grade in 2 courses within the same semester
- The students stay on probation for two consecutive semesters

H. APPEAL

A graduate student may petition the Dean when there is a dispute that cannot be resolved at the Program Level.

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 280	Information Technology and Health Sciences	2
ENGL 203	English Communication Skills III	3
		<hr/>
		13

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 203	Basic Human Physiology	4
FHSC 225	Basic Organic Chemistry	3
FHSC 227	Basic Organic Chemistry Laboratory	1
ENGL 204	English Communication Skills IV	3
FHSC 260	Introduction to Sociology	3
LISP 200	Library Use and Research Techniques	1
		<hr/>
		15

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 204	Principles of Genetics	2
FHSC 224	Basic Analytical Chemistry	2
		<hr/>
		4

* Major course with passing grade = 65

** Major course with passing grade = 70

LISP 200 is a no-fee obligatory 1 credit course for graduation.

SECOND YEAR**Semester 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217	Civilisation Sequence I	3
MLAB 210	Basic Biochemistry *	3
MLAB 211	Clinical Chemistry I *	3
MLAB 212	Basic Immunology and Hematology*	4
ML AB 213	General Microbiology *	3

		16

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
MLAB 221	Clinical Chemistry II *	3
MLAB 222	Clinical Immunology and Hematology*	3
MLAB 223	Clinical Bacteriology*	3
	Elective	

		16

SECOND YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
	Practical training**	1
	Practical training**	1
	Practical training**	1

		3

* Major course with passing grade = 65

** Major course with passing grade = 70

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
MLAB 224	Medical Parasitology and Mycology*	2
MLAB 230	Molecular Biology*	3
MLAB 231	Seminars in Medical Laboratory Sciences*	3
FHSC 288	Research in Health Care Sciences	3
CVSQ 218	Civilisation Sequence II	3
	Practical Training**	1
	Practical Training**	1
		<hr/>
		16

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 232	Medical Virology *	2
MLAB 233	Toxicology *	2
FHSC 268	Survey of Management and Marketing	3
	Elective	3
	Practical Training**	1
	Practical Training**	1
	Practical Training**	1
		<hr/>
		13

TOTAL **96**

MLAB 251	Applied Clinical Chemistry **	1
MLAB 252	Applied Clinical Hematology **	2
MLAB 253	Applied Clinical Bacteriology**	2
MLAB 254	Applied Clinical Parasitology and Body Fluids Analysis**	1
MLAB 255	Applied Clinical Immunology and Endocrinology**	1
MLAB 256	Applied Blood Banking**	1
MLAB 257	Applied Anatomic Pathology**	1
MLAB 258	Techniques in Molecular Biology and Assisted Reproduction**	1

* Major course with passing grade = 65

** Major course with passing grade = 70

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES (PREMEDICAL TRACK)

The PREMED Program in the MLS department presents unique opportunities:

- It allows capable students to complete PREMED requirements in a period of three years in addition to the B.S. in Medical Laboratory Sciences
- It prepares students for the MCAT examinations
- It qualifies students for the early admission to the Medical School
- It prepares students for graduate education

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 280	Information Literacy and Health Sciences	2
ENGL 203	English Communication Skills III	3
FHSC 240	Mathematics for Applied Sciences	3

		16

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 203	Basic Human Physiology	4
FHSC 226	Organic Chemistry I	3
FHSC 224	Basic Analytical Chemistry	2
ENGL 204	English Communication Skills IV	3
FHSC 260	Introduction to Sociology	3
LISP 200	Library Use and Research Techniques	1

		16

* Major course with passing grade = 65

** Major course with passing grade = 70

FIRST YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 204	Principles of Genetics	2
FHSC 227	Basic Organic Chemistry Laboratory	1
FHSC 228	Organic Chemistry II	3
		<hr/>
		6

SECOND YEAR**Semester 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 210	Basic Biochemistry *	3
MLAB 211	Clinical Chemistry I *	3
MLAB 212	Basic Immunology and Hematology*	4
MLAB 213	General Microbiology *	3
FHSC 241	Fundamentals of Physics I	3
FHSC 242	Fundamentals of Physics I Laboratory	1
		<hr/>
		17

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
MLAB 221	Clinical Chemistry II *	3
MLAB 222	Clinical Immunology and Hematology*	3
MLAB 223	Clinical Bacteriology*	3
MLAB 243	Fundamentals of Physics II	3
MLAB 244	Fundamentals of Physics II Laboratory	1
		<hr/>
		17

SECOND YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
	Practical training**	1
	Practical training**	1
		<hr/>
		2

* Major course with passing grade = 65

** Major course with passing grade = 70

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 224	Medical Parasitology and Mycology*	2
MLAB 230	Molecular Biology*	3
MLAB 231	Seminars in Medical Laboratory Sciences*	3
FHSC 288	Research In Health Care Sciences	3
CVSQ 217	Civilisation Sequence I	3
	Practical Training**	1
	Practical Training**	1
	Practical Training**	1
		<hr/>
		17

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 232	Medical Virology *	2
MLAB 233	Toxicology*	2
FHSC 268	Survey of Management and Marketing	3
CVSQ 218	Civilisation Sequence II	3
	Practical Training**	1
	Practical Training**	1
	Practical Training**	1
		<hr/>
		13

TOTAL **104**

MLAB 251	Applied Clinical Chemistry **	1
MLAB 252	Applied Clinical Hematology	1
MLAB 253	Applied Clinical Bacteriology	1
MLAB 254	Applied Clinical Parasitology and Body Fluid Analysis	1
MLAB 255	Applied Clinical Immunology and Endocrinology	1
MLAB 256	Applied Blood Banking	1
MLAB 257	Applied Anatomic Pathology	1
MLAB 258	Techniques in Molecular Biology and Assisted Reproduction	1

* Major course with passing grade = 65

** Major course with passing grade = 70

**MASTER OF SCIENCE IN CLINICAL LABORATORY
SCIENCES
CLINICAL MICROBIOLOGY CONCENTRATION**

FALL 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 301	Laboratory Organization, Management, and Quality Assurance	3
CLAS 303	Applied Molecular Biology	3
CLAS 304	Research Methods	3
		9

SPRING 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 305	Human Patholog	3
	Elective	3
CLAS 321	Medical Microbiology	3
		9

FALL 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 302	Bio-molecules: Structures and Functions	2
CLAS 322	Antimicrobial Agents and Mechanisms of Resistance	2
CLAS 323	Infection Control Practices	2
CLAS 320	Thesis	6
		12

SPRING 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 320	Thesis continued	3

TOTAL **30**

DIAGNOSTIC MOLECULAR BIOLOGY CONCENTRATION

FALL 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 301	Laboratory Organization, Management, and Quality Assurance	3
CLAS 303	Applied Molecular Biology	3
CLAS 304	Research Methods	3
		<hr/>
		9

SPRING 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 305	Human Pathology	3
	Elective	3
CLAS 331	Advanced and applied molecular biology: genomics and proteomics	3
		<hr/>
		9

FALL 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 302	Bio-molecules: Structures and Functions	2
CLAS 332	Ethical and medical aspects of molecular biology	2
CLAS 333	Bioinformatics	2
CLAS 320	Thesis	6
		<hr/>
		9

SPRING 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 320	Thesis continued	

TOTAL **30**

MOLECULAR TOXICOLOGY CONCENTRATION

FALL 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 301	Laboratory Organization, Management, and Quality Assurance	3
CLAS 303	Applied Molecular Biology	3
CLAS 304	Research Methods	3
		<hr/>
		9

SPRING 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 305	Human Pathology	3
	Elective	3
CLAS 341	Principles of Toxicology	3
		<hr/>
		9

FALL 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 302	Bio-molecules: Structures and Functions	2
CLAS 342	Molecular and Biochemical Toxicology	2
CLAS 343	Current topics in Toxicology	1
CLAS 344	Mechanisms of carcinogenesis	1
CLAS 320	Thesis	6
		<hr/>
		12

SPRING 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CLAS 320	Thesis continued	
TOTAL		30

COURSE DESCRIPTIONS

CVSQS 217 CIVILISATION SEQUENCE I

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

CVSQ 218 CIVILISATION SEQUENCE II

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

ENGL 203 ENGLISH COMMUNICATION SKILLS III

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

ENGL 204 ENGLISH COMMUNICATION SKILLS IV

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

LISP 200 LIBRARY USAGE AND RESEARCH TECHNIQUES

1.1: 1 cr. E.

Refer to Faculty of Arts and Social Sciences, Department of Library and Information Service.

FHSC 200, FHSC 201

Refer to Faculty of Sciences, Department of Biology and to Faculty of Health Sciences Service Courses.

FHSC 203, FHSC 204, FHSC 260, FHSC 267, FHSC 280, FHSC 282, FHSC 288

Refer to Faculty of Health Sciences Service Courses.

FHSC 222, FHSC 223, FHSC 224, FHSC 225, FHSC 226, FHSC 227, FHSC 228

Refer to Faculty of Health Sciences Service Courses.

FHSC 240, FHSC 241, FHSC 242, FHSC 243, FHSC 244, FHSC 260, FHSC 268

Refer to Faculty of Health Sciences Service Courses.

MLAB 210 BASIC BIOCHEMISTRY

3.0: 3 cr. E

This course will introduce students to basic structural and dynamic, chemical and biological processes that occur in living organisms. The subjects of metabolism, energy conversion and usage in biological organisms are discussed in detail. Furthermore, interactions of various catabolic and anabolic pathways are emphasized. The biochemistry of higher organisms is the focus throughout this course.

Pre-requisite: FHSC 225 or FHSC 226

MLAB 211 CLINICAL CHEMISTRY I

3.1: 3 cr. E

Introductory course intended to familiarize the students with clinical chemistry in laboratory medicine. It covers the chemistry of compounds of clinical interest, their implication in the patho-physiology of related diseases, and finally focuses on the available techniques for their assay. Manual determinations of different parameters are performed during weekly laboratory sessions.

Co-requisite: MLAB 210.

MLAB 212 BASIC IMMUNOLOGY AND HEMATOLOGY-**4.1: 4 cr. E**

The immunology part in this course covers all major topics of basic immunology, and the theoretical principles of most immunological analytical methods. They include development of the immune system, innate immunity, immunoglobulin structure, the major histocompatibility complex and antigen presentation. The basic Hematology course covers the theory and principles of blood cell production and function. It also introduces the basic practices and procedures. The lectures in this course stress on normal hematopoiesis, morphology of peripheral blood and bone marrow, normal hemostasis.

Pre-requisite: FHSC 203

MLAB 213 GENERAL MICROBIOLOGY**2.2: 3 cr. E**

The course introduces the basic principles of microbiology. It covers bacterial structure, morphology and techniques of cultivation. The interactions between human and microbial cells are discussed with special emphasis on the disease causation process; it also covers antimicrobial and chemotherapeutic agents. The course introduces the guidelines for collection, handling and processing of clinical specimens.

Pre-requisite FHSC 200

MLAB 221 CLINICAL CHEMISTRY II**3.1: 3 cr. E**

This course is a complementary course of MLAB 211. It emphasizes on special parameters and techniques used in diagnostic laboratory medicine.

Pre-requisite: MLAB 211

MLAB 222 CLINICAL IMMUNOLOGY AND HEMATOLOGY**3.2: 4 cr. E**

The course includes four components. The first covers hematological anomalies with focus on Anemia and Leukemia in addition to platelet disorders. The second part acquaints the students with various serological concepts; it includes topics pertaining to antigen-antibody interactions, precipitation/agglutination techniques, complement fixation pathways and immunotechniques, immunofluorescence, in addition to discussing autoimmune and infectious diseases. The third part introduces the basic principles in the blood bank applications. The last part deals with the theoretical basis of the main cytologic and histopathologic laboratory techniques and their main applications

Pre-requisite: MLAB 212

MLAB 223 CLINICAL BACTERIOLOGY**3.2 : 3 cr. E**

This course covers characteristics of bacteria of medical importance with a highlighting on the methods for their isolation and identification including advantages, disadvantages, limitations, control and interpretation. It focuses on the clinical implication of these microorganisms in infectious diseases.

Pre-requisite: MLAB 213

MLAB 224 MEDICAL PARASITOLOGY AND MYCOLOGY-**2.1: 2 cr. E**

The course aims at familiarizing students with the basic concepts of parasitology, types of animal associations, adaptation to parasitic mode of life, evolution of parasitism, introduction to the immune system as well as host - parasite relationships. It encompasses Parasite life cycles - infection, transmission, pathology, symptoms, diagnosis, treatment and control of parasitic protozoa and helminthes.

On the other hand, this course constitutes a study of the medically significant fungi. It offers knowledge necessary to identify clinical signs, symptoms, treatment, and epidemiology associated with human fungal diseases. It explores laboratory methods used to detect and identify pathogenic fungi.

Pre-requisite: FHSC 200

MLAB 230 MOLECULAR BIOLOGY**3.0: 3cr. E**

This course covers the main molecular biology tools and focus on their application in the diagnostic field. Students are introduced to the methods allowing DNA and RNA analysis and quantification (Northern, Southern, PCR, RT-PCR, Real Time PCR) as well as Cloning and gene therapy.

Pre-requisite: FHSC 204

MLAB 231 SEMINARS IN MEDICAL LABORATORY SCIENCES**3.0: 3cr. E**

This course includes a series of lectures and demonstration sessions that covering special and diversified topics relevant to the medical and biological testing. It is given by specialists in the respective fields Emphasis is put on the advances in the different areas of the medical laboratory sciences. This course is offered in the senior year and after the student has completed fifty six credits.

MLAB 232 MEDICAL VIROLOGY**2.0: 2cr. E**

The course introduces the basic principles of virology - definition, structure, nomenclature and classification of viruses - modes of viral infections, viral diseases and viral vaccines. It constitutes a study of the interactions of human and animal viruses and their hosts and of important diseases of humans caused by viruses in different taxonomic groups. The emphasis is on aspects of pathogenesis, epidemiology, immune responses and control. Recent advances in the application of molecular biology to the development of diagnostic tests and vaccines will be included.

Pre-requisite: FHSC 200

MLAB 233 TOXICOLOGY**2.0: 2 cr. E**

The chemistry and, briefly, the pharmacology of common drugs of abuse and some therapeutics are discussed. Clinical importance of such assays is highlighted accompanied by demonstrations and applications of different techniques used in this field.

Pre-requisite: FHSC 200

MLAB 251 APPLIED CLINICAL CHEMISTRY**1 cr. E**

Practical experience of 4 weeks duration in clinical chemistry and special procedures allows students to get acquainted with the tests performed in this department and with the special procedures in clinical chemistry. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 221

MLAB 252 APPLIED CLINICAL HEMATOLOGY**1 cr. E**

Practical experience in clinical hematology and phlebotomy of 4 weeks duration, offers the students the possibility to get familiar with the majority of procedures performed in the respective sections. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 222

MLAB 253 APPLIED CLINICAL BACTERIOLOGY AND MYCOLOGY**1 cr. E**

Practical experience of 4 weeks in clinical bacteriology provides students with the opportunity to be familiarized with all the tests performed in this department, such as culturing, sensitivity testing and media preparation. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 223

MLAB 254 APPLIED CLINICAL PARASITOLOGY AND BODY FLUIDS ANALYSIS 1 cr. E

This corresponds to a practical experience in urine analysis and clinical microscopy extending over 3 weeks. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 213 or MLAB 224

MLAB 255 APPLIED CLINICAL IMMUNOLOGY AND ENDOCRINOLOGY 1 cr. E

Practical experience in the Endocrinology (2 weeks) and Serology (2 weeks) departments allows students to perform special procedures. This includes clinical rotation in the respective section of the hospital laboratory. The student is exposed to the different procedures performed in this branch of the Clinical Laboratory. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective fields.

Co-requisite: MLAB 222

MLAB 256 APPLIED BLOOD BANKING 1cr. E

Practical experience in Blood banking of 4 weeks duration enables students to experience routine and special procedures in Blood Banking. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 222

MLAB 257 APPLIED ANATOMIC PATHOLOGY 1 cr. E

Practical experience in the Pathology department of the hospital of 4 weeks duration offers the student the opportunity to acquaint with histology and cytology procedures. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Co-requisite: MLAB 222

MLAB 258 TECHNIQUES IN MOLECULAR BIOLOGY AND ASSISTED REPRODUCTION**1 cr. E**

Practical experience in the Molecular Biology section of the hospital (2 weeks) and in the Fertility center department (2 weeks) offers the student the opportunity to be trained to the main procedures used in routine. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective fields.

Co-requisite: FHSC 204 or MLAB 230

CLAS 301 LABORATORY ORGANIZATION, MANAGEMENT, AND QUALITY ASSURANCE**3 cr. E**

This course targets clinical laboratory scientists who have an interest or responsibility in technical quality management of laboratory testing processes, as well as managers of healthcare laboratories, clinical QC technologists and specialists, laboratory inspectors, and others. The course enables students to develop managerial skills, to acquire knowledge of total quality management, to be able to assume administrative responsibility in any laboratory setting.

CLAS 302 STRUCTURE & FUNCTION OF BIOMOLECULES 2 cr. E

This course is designed to extend the student's knowledge of the structures and properties of biomolecules and their relationship to the properties of cells, tissues and organisms. The course examines the relationship between the structure of the biomolecule and its function, the structural characteristics of subunits that dictate the molecular final structure, and the structural features in macromolecules that play a role in specific molecular interactions.

CLAS 303 APPLIED MOLECULAR BIOLOGY**3 cr. E**

This course is designed to introduce major molecular biology techniques used in diagnosis and prediction of risk in clinical laboratories. In addition to an overview of the basic techniques in molecular diagnostics, the course examines advanced techniques in areas such as DNA identity, applications in hematology, applications in infectious diseases, and other diagnostic tools in a number of common genetic disorders.

CLAS 304 RESEARCH METHODOLOGY**3 cr. E**

This course is an introduction to the research process in clinical and laboratory sciences and the various steps, methods, strategies and procedures associated with it. The course is designed to equip students with the necessary skills to design, undertake and disseminate basic and clinical research.

CLAS 305 HUMAN PATHOLOGY**3 cr. E**

The course offers an advanced covering of a wide number of human diseases mainly infectious diseases, genetic disorders, molecular basis of cancer, in addition to certain metabolic diseases.

CLAS 320 MASTER'S THESIS**6 cr. E**

This course consists of a thorough supervised research project whereby a student formulates a research hypothesis with specific objectives, then develops methods to demonstrate his/her hypothesis. Results from the performed study would be submitted in the form of a thesis to an examination committee, and would be defended in public.

CLAS 321 MEDICAL MICROBIOLOGY**3 cr. E**

This course introduces microbes from a medical and ecological perspective. The course begins with a concise description of the microbial world with special emphasis on microbial structure, classification, and interaction with the human host. The course covers subjects in bacterial microbiology, virology, mycology, and parasitology, with special emphasis on mechanisms of infection characteristic of each studied microorganism.

The main focus of the course is on the clinical behavior of pathogens to humans.

CLAS 322 ANTIMICROBIALAGENTS & MECHANISMS OF MICROBIAL RESISTANCE**2 cr. E**

This course provides a solid foundation for understanding the basis and the development of antimicrobial resistance. The course covers resistance mechanisms against bacterial antibiotics, antiviral, antifungal, and antiparasitic drugs. Topics covered also include effects of resistant microorganisms on cancer treatment, as well as their impact on public health.

CLAS 323 INFECTION CONTROL IN CLINICAL PRACTICES**2 cr. E**

This course provides a comprehensive guide to the principles and practices of infection control and prevention, in addition to the basic elements of microbiology and epidemiology that underlies them. The course offers an evidence-based overview of routine and latest infection control practices, as well as isolation techniques.

CLAS 324 CASE STUDIES IN MICROBIOLOGY**3 cr. E**

This course deals with the diagnostic and clinical aspects of infectious diseases. It takes the students from the bedside to the lab setting exposing them to both patient examination and laboratory procedures. It entails the involvement of the students in ward visits and lab work. A weekly case presentation and discussion is done and evaluated.

CLAS 331 GENOMICS & PROTEOMICS**3 cr. E**

The objective of this course is for students to gain an understanding of how genomic data are gathered and analyzed. The course introduces research methods used to accumulate genomic data, instruct on how to access major genomic databases, how various nucleotide alignment algorithms work, and how to use them. Topics covered include functional and structural homology, and analysis of gene expression patterns using gene chip technology. In addition, the course introduces and discusses latest proteomics techniques to measure protein activities, modifications and interactions of proteins in complexes.

CLAS 332 ETHICAL AND MEDICAL ASPECTS OF MOLECULAR BIOLOGY**2 cr. E**

This course introduces the basic principles of biotechnology and its applications in various disciplines such as medicine, agriculture, and environmental sciences. The course is designed to provide students with the knowledge and understanding of the scientific, commercial, and ethical aspects of biotechnology. Knowledge of scientific concepts as well as commercial, legal, moral, ethical, and social aspects of biotechnology will enable students to take into account ethical considerations in any molecular experimental design or research they will conduct in the future.

CLAS 333 BIOINFORMATICS & MOLECULAR MODELING**2 cr. E**

This course is an introduction to theory and methods used for genome-level sequence analysis. Specific topics covered include sequence alignment, biological database design, geometric analysis of protein structure, and macromolecular simulation. The module use public databases and software to extract, analyze and interpret DNA and protein sequences and to model structures of proteins.

NURSING PROGRAM

The Nursing Program is a community-Based, population- focused BSN Program. It is offered in English & French in partnership with Saint George Hospital University Medical Center.

PHILOSOPHY

The philosophy of the Nursing Program emanates from the philosophy of the University of Balamand, which is committed to raising future generations with no discrimination against race, nationality, religion or gender.

The Nursing Program believes that:

NURSING is both a scientific discipline and a profession. The discipline is based on scientific knowledge, values and ethics while the profession aims at practicing the discipline in providing health care.

HEALTH is a basic social right where the needs of individuals, families, and communities are respected, accepted, and attended to.

MISSION

The mission of the Nursing Program is to prepare professional nurses who are well equipped to meet the challenging demands of health care in the Lebanese community and the region.

The program aims at fostering excellence and innovation in the delivery and management of evidence-based health care through critical thinking, analytical skills, leadership abilities, creative endeavors, and community involvement.

CONCEPTS UNDERLYING THE NURSING CURRICULUM

The basic concepts of the Nursing Program are the following:

1. Critical thinking
2. Community involvement
3. Leadership abilities
4. Professionalism

NURSING PROGRAM OBJECTIVES

The Nursing Program provides a learning environment to foster purposeful self-direction, critical thinking and well-informed decision-making.

The main aim of the program is a graduate who can assume leadership in nursing and the health care field.

TO ACHIEVE THESE ENDS THE GRADUATE WILL

1. Demonstrate competence in the primary roles at the cognitive, affective and psychomotor levels.
2. Demonstrate commitment to making a difference at all levels of health promotion, prevention of disease, health protection and rehabilitation.
3. Demonstrate know-how and care for individuals, families and communities.
4. Act as advocate for all health consumers especially, the very young, very old, the disadvantaged and disabled.
5. Demonstrate potentials for leadership by leading, coordinating and collaborating with the health team.
6. Improve nursing and the image of the nurse in society.

CLINICAL PLACEMENTS

Nursing students are placed in clinical settings that provide them with the opportunities to apply theory to practice at the primary, secondary and tertiary levels of health care.

Saint George Hospital University Medical Center and other community based health care agencies serve as a framework for clinical training.

BACHELOR OF SCIENCE IN NURSING

(OFFERED IN ENGLISH AND FRENCH)

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 2031	English Communication Skills III	3
FHSC 220	General Chemistry	3
FHSC 260	Introduction to Sociology	3
FHSC 261	Introduction to Psychology	3
FHSC 280	Information Technology and Health Sciences	2
NURS 210	Introduction to Professional Nursing	2
		16

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 2041	English Communication Skills IV	3
FHSC 202	Introduction to Human Anatomy	2
FHSC 203	Basic Human Physiology	4
LISP 2002 Library	Usage and Research techniques I	1
NURS 211	Introduction to Nursing Practice	4
		14

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 205	Introduction to Microbiology	2
FHSC 264	Human Growth and Development	2
	SERVICE TRAINING ³	0
		4

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 229	Pharmacology	2
NURS 220	Nursing Care of Adults I	5
NURS 221	Practicum in Nursing Care of Adults I	3
NURS 224	Nursing Care in Perinatology and Gynecology	3
NURS 225	Practicum in Nursing Care in Perinatology and Gynecology	3
		16

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
NURS 222	Nursing Care of Adults II	5
NURS 223	Practicum in Nursing Care of Adults II	3
NURS 226	Nursing Care of Children	3
NURS 227	Practicum in Nursing Care of Children	3
		17

SECOND YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NURS 228	Nursing Care of the Elderly	1
NURS 229	Practicum in Nursing Care of the Elderly	1
NURS 212	Legislation and Nursing First Aid Course	1 -
	SERVICE TRAINING ⁴	3
		6

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217	Civilisation Sequence I	3
FHSC 288	Research in Health Care Sciences	3
NURS 230	Mental Health and Psychiatric Nursing	3
NURS 231	Practicum in Mental Health and Psychiatric Nursing	3
NURS 232	Nursing Care of Adults in Critical Condition	3
NURS 233	Practicum in Nursing Care of Adults in Critical Condition	3
		18

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 218	Civilisation Sequence II	3
NURS 234	Nursing in the Community	3
NURS 235	Practicum in Nursing in the Community	3
NURS 236	Leadership and Management in Nursing and Health	3
NURS 237	Practicum in Leadership and Management in Nursing and Health	3
	Elective	3
		18

TOTAL NUMBER OF CREDITS TO BE COMPLETED AT GRADUATION = 106 CR.

All NURS courses passing grade is 70. Other courses passing grade is 60.

1. In the French Section, FREN 201 and FREN 202 respectively replace ENGL 203 and ENGL 204
2. LISP 200 is a no-fee obligatory 1 credit course for graduation.
3. Service training is a requirement for graduation equivalent to 60 hours. Students are evaluated as P=Pass or F= fail.
4. Service Training is a requirement for graduation equivalent to 110 hours. Students are evaluated as p=Pass or F=Fail.

Students coming from a non science background are required to take the course FHSC 207 Principles of Human Biology (3 cr) as a foundation for their curriculum requirements.

LADDER PROGRAMS IN NURSING

Objectives:

- To provide the non-university BT & TS degree holders the opportunity to earn a Bachelor of Science in Nursing
- To enhance the quality of nursing and health practices through the use of leadership and educational skills
- To synthesize theoretical and empirical knowledge from nursing, scientific and humanistic disciplines with practice
- To enhance therapeutic nurse-patient relationship by developing self-awareness

BT-BSN PROGRAM*

A. BT HOLDERS WITH NO WORKING EXPERIENCE

A holder of a BT in nursing of a government accredited BT program, with no working experience, may join the BSN program after meeting the University admission requirements concerning English or French. The student has to follow the basic program i.e. 105 credits. However, he/she can sit for competency examinations to earn credits for the following courses:

- NURS 221 & NURS 223 - Practicum of Nursing Care of Adults I & II
- NURS 225 - Practicum of Nursing Care in Perinatology and Gynecology
- NURS 227 - Practicum in Nursing Care of Children
- NURS 233 - Practicum in Nursing Care of Adults in Critical Condition

B. BT HOLDERS WITH WORKING EXPERIENCE

A holder of BT in nursing of a government accredited BT program with at least 3 years of experience may join the BSN program after meeting the University admission requirements concerning English or French.

The student has to take at least 90 credits. The applicant's credentials will be reviewed and assessed to decide what additional courses he/she should take for eligibility.

The courses are the following:

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217 & CVSQ 218	Civilisation Sequence I & II	6
ENGL 203 & ENGL 204	English Communication Skills III & IV	6
Or FREN 201 & FREN 202		
FHSC 202	General Anatomy	2
FHSC 203	Human Physiology	4
FHSC 205	Introduction to Microbiology	2
LISP 200 ¹	Library Usage and Research techniques I	1
FHSC 229	Pharmacology	2
FHSC 260	Introduction to Sociology	3
FHSC 261	Introduction to Psychology	3
FHSC 264	Human Growth and Development	2
FHSC 280	Computer literacy	2
FHSC 282	Principles of Epidemiology & Biostatistics	3
FHSC 288	Research in Health Care Sciences	3
NURS 210	Introduction to Nursing as a Profession	2
NURS 211	Introduction to Nursing Practice	4
NURS 212	Legislation and Nursing	1
NURS 220/ NURS 221	Nursing Care of Adults I	5
NURS 222/ NURS 223	Nursing Care of Adults II	5
NURS 224/ NURS 225	Nursing Care in Perinatology & Gynecology	3
NURS 226/ NURS 227	Nursing Care of Children	3
NURS 228/ NURS 229	Nursing Care of the Elderly	1
NURS 230	Mental Health & Psychiatric Nursing	3
NURS 231	Practicum in Mental Health & Psychiatric Nursing	3
NURS 232	Nursing of Adults in Critical Condition	3
NURS 233	Practicum in Nursing Care of Adults in Critical Condition	3
NURS 234	Nursing in the Community	3
NURS 235	Practicum in Nursing in the Community	3
NURS 236	Leadership & Management in Nursing and Health	3
NURS 237	Practicum in Leadership & Management in Nursing and Health Elective	3
TOTAL		90

The student can sit for competency examinations to earn credits for the following courses:

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 229	Pharmacology	2
FHSC 280	Computer literacy	2
FHSC 264	Human Growth and Development	2
NURS 210	Introduction to Nursing as a Profession	2
NURS 211	Introduction to Nursing Practice	4
NURS 212	Legislation and Nursing	1
NURS 228/ NURS 229	Nursing Care of the Elderly	1
TOTAL		14

1 LISP 200 is a no-fee obligatory 1 credit course for graduation.

TS-BSN PROGRAM*

A holder of TS in nursing with at least 1 year of experience may join the BSN program after meeting the University admission requirements concerning English or French.

The student has to take at least 90 credits [identical to courses in BT-BSN Program (B)] of which 27 are mandatory and the rest can be earned by examination. The program is the same as that of the BT-BSN.

The mandatory courses are the following:

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 203 & ENGL 204 Or FREN 201& FREN 202	English Communication Skills III & IV	6
CVSQ 217 & CVSQ 218	Cultural Studies I & II	6
FHSC 282	Principles of Epidemiology & Biostatistics	3
FHSC 288	Research in Health Care Sciences	3
NURS 230	Mental Health & Psychiatric Nursing	3
NURS231	Practicum in Mental Health & Psychiatric Nursing	3
NURS 236	Leadership & Management in Nursing And Health	3
NURS 237	Practicum in Leadership & Management in Nursing and Health	3
	Elective	3
TOTAL		27

* Passing grade of all NURS courses is 70

Passing grade of all courses other than Nursing is 60

A student who fails a competency examination twice for a designated course will have to enroll and successfully complete that course

COURSE DESCRIPTIONS

CVSQ 217 CIVILISATION SEQUENCE I Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.	3.0: 3 cr. E,F
CVSQ 218 CIVILISATION SEQUENCE II Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.	3.0: 3 cr. E,F
ENGL 203 ENGLISH COMMUNICATION SKILLS III Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.	3.0:3 cr.E
ENGL 204 ENGLISH COMMUNICATION SKILLS IV Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.	3.0:3 cr.E
FREN 201 TECHNIQUES DE L'EXPRESSION I Refer to Faculty of Arts and Social Sciences, Department of French Language and Literature.	3.0: 3 cr. F
FREN 202 TECHNIQUES DE L'EXPRESSION II Refer to Faculty of Arts and Social Sciences, Department of French Language and Literature.	3.0: 3 cr. F
LISP 200 LIBRARY USAGE AND RESEARCH TECHNIQUES Refer to faculty of Arts and Social Sciences, Department of Library and Information Service.	1.1:1 cr. E,F
FHSC 202, FHSC 203, FHSC 205, FHSC 207, FHSC 220, FHSC 229, FHSC 260, FHSC 261, FHSC 264, FHSC 280, FHSC 282, FHSC 288 Refer to Faculty of Health Sciences Service Courses.	
NURS 210 INTRODUCTION TO PROFESSIONAL NURSING Introduces the framework of the nursing curriculum, concepts related to the profession and discipline of nursing are discussed, as well as the major historical events that have shaped the nursing profession. Issues and moral problems that arise in the practice of delivering health care are addressed within the context of ethical principles.	2.0: 2 cr. E,F
NURS 211 INTRODUCTION TO NURSING PRACTICE This course introduces the principles of communication, the components of the nursing process and basic practice issues. In the laboratory, students practice skills in safety, hygiene, infection control, communication and basic physical assessment. Pre-requisite: NURS 210 Co-requisite FHSC 202/203	3.3: 4 cr. E,F
NURS 212 LEGISLATION AND NURSING This course enhances students' awareness and increases students' understanding of the legal aspects of nursing in Lebanon. Pre-requisite: NURS 210	1.0: 1 cr. A
NURS 220 NURSING CARE OF ADULTS I	5.0: 5 cr. E,F

This course focuses on the theories underlying the principles involved in the planning of nursing interventions, which are appropriate for adults representing with medical – surgical problems.

Pre-requisite: NURS 211

Co-requisite: FHSC 229, NURS 221

NURS 221 PRACTICUM IN NURSING CARE OF ADULTS I **0.9: 3 cr. E,F**

Students will assess, plan, implement and evaluate nursing care of adult patients under clinical supervision. Appropriate nursing care for patients with a wide range of disorders will be implemented in a variety of settings, emphasizing the impact of illness and hospitalization on the family, as well as, the need for continuity of care and patient teaching as he/she returns to the community.

Co-requisite: NURS 220

NURS 222 NURSING CARE OF ADULTS II **3.0: 3 cr. E,F**

This course is complementary to NURS 220 and follows the same framework previously outlined.

Pre-requisite: NURS 211

Co-requisite: FHSC 229, NURS 223

NURS 223 PRACTICUM IN NURSING CARE OF ADULTS II **0.6: 2 cr. E,F**

This course provides the students with opportunities for implementation of the scientific principles discussed in NURS 222.

Co-requisite: NURS 222

NURS 224 NURSING CARE IN PERINATOLOGY AND GYNECOLOGY **3.0: 3 cr. E,F**

This course deals with the reproductive family and women's health throughout the life span. The student focuses on physical, psychological and emotional needs of mothers, newborns, and families. The course focuses on family health during the reproductive cycle, as well as on prevalent gynecological conditions.

Pre-requisite NURS 211

Co-requisite: NURS 220 & 221, NURS 225

NURS 225 PRACTICUM IN NURSING CARE IN PERINATOLOGY AND GYNECOLOGY **0.9: 3 cr. E,F**

This practicum prepares the student to play an active role in family-oriented maternity care. It encompasses the entire childbearing process from preconception to postpartum. The student gets hands-on experience in the outpatient and in-patient areas, as well as in community settings.

Co-requisite: NURS 224

NURS 226 NURSING CARE OF CHILDREN **3.0: 3 cr. E,F**

This course provides the student with the opportunity to learn the needs of the child, well and ill, from infancy through adolescence. The nursing process serves as a framework for study and application. Emphasis is placed on health promotion, maintenance and restoration of health during the stages of child development.

Pre-requisite: FHSC 264, NURS 224 & 225

Co-requisite: NURS 227

NURS 227 PRACTICUM IN NURSING CARE OF CHILDREN**0.9: 3 cr. E,F**

Clinical practice is organized to provide students with direct observation and application of nursing care concepts for children. Students are provided with opportunities to use the nursing process, develop effective communication skills, identify teaching needs of children, practice selected psychomotor skills and apply play therapy techniques. The clinical setup can range from outpatient department to general unit and critical care areas.

Co-requisite: NURS 226

NURS 228 NURSING CARE OF THE ELDERLY**1.0: 1 cr. E,F**

This course focuses on developing skills in problem-solving and clinical judgment so that student may successfully act with the aging process and the health problems of the elderly.

Pre-requisite: NURS 222, 223

Co-requisite: NURS 229

NURS 229 PRACTICUM IN NURSING CARE OF THE ELDERLY**0.3: 1 cr. E,F**

Students will assess, plan, implement and evaluate nursing care of the elderly under clinical supervision. Appropriate nursing care of elderly patients will be discussed emphasizing the impact of illness or the aging process on the family.

Co-requisite: NURS 228.

NURS 230 MENTAL HEALTH AND PSYCHIATRIC NURSING**3.0: 3 cr. E,F**

This course focuses on mental health and illness of individuals, couples and families throughout the life cycle. Principles of communication and therapy are emphasized, as well as the development of nursing intervention for patients experiencing psychiatric problems.

Pre-requisite: FHSC 261 & FHSC 264

Co-requisite: NURS 231

NURS 231 PRACTICUM IN MENTAL HEALTH AND PSYCHIATRIC NURSING **0.9: 3 cr. E,F**

This course is designed to offer students hands-on experience in the area of therapeutic communication and therapeutic modalities. The focus is on clients with maladjustment patterns ranging from mild to critical. Therapeutic modalities such as crisis intervention, family therapy, and group therapy are within the scope of this course. Fieldwork encompasses in-hospital and community-based experience.

Co-requisite: NURS 230

NURS 232 NURSING CARE OF ADULTS IN CRITICAL CONDITION**3.0: 3 cr. E,F**

This course focuses on adult experiences and critical psycho-physiologic disruptions. The student will focus on advanced nursing skills, the application of biomedical technology and the care of families under severe stress.

Pre-requisite: NURS 228, 229

Co-requisite: NURS 233

NURS 233 PRACTICUM IN NURSING CARE OF ADULTS IN CRITICAL CONDITION

0.9: 3 cr. E,F

This course focuses on the application of the theoretical content of NG 226. Clinical practice is organized to provide students with direct observation and application of nursing care concepts of adults, old adults and families in critical condition. Student learning includes working with adults experiencing complex, multiple system problems requiring rapid utilization of the nursing process. Multidisciplinary interaction with the health team is a major component of the course.

Co-requisite: NURS 232

NURS 234 NURSING IN THE COMMUNITY

3.0: 3 cr. E,F

The course provides students with the opportunity to study nursing in multiple setups, outside a hospital setting. It gives students the opportunity to learn about the health and psychosocial needs of individuals, families and communities on the full health trajectory.

Pre-requisite: NURS 226 & 227

Co-requisite: NURS 235

NURS 235 PRACTICUM IN NURSING IN THE COMMUNITY

0.9: 3 cr. E,F

Students gain hands-on experience outside hospital walls. Students meet the challenge of transferring their skills and know-how to the client in his/her own milieu.

Co-requisite: NURS 234

NURS 236 LEADERSHIP AND MANAGEMENT IN NURSING AND HEALTH

3.0: 3 cr. E,F

This course helps the student develop an understanding of the role of the professional nurse as a leader and change agent. The theoretical framework is based on the concepts of communication, problem solving, decision making, and evaluation, delegating authority and effecting change.

Pre-requisite: NURS 226/227

Co-requisite: NURS 237

NURS 237 PRACTICUM IN LEADERSHIP AND MANAGEMENT IN NURSING AND HEALTH

0.9:3 cr. E,F

Practicum designed to help the student make the transition from the relatively dependent role as a student to the relatively independent role as a beginning practitioner. It is divided into 2 blocks, one that is in-hospital oriented and the other focusing on administering and managing nursing care in health promotion, screening and rehabilitation in different settings

Co-requisite: NURS 236

NURS 238 PROFESSIONAL ISSUES SEMINARS

1.0: 1 cr. E,F

Current issues and trends, and legal aspects related to the profession in Lebanon are analyzed in this seminar course. Its purpose is to enhance students' awareness of major areas of concern to the nursing profession as a whole.

BACHELOR OF SCIENCE IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES

The Faculty of Health Sciences offers two multidisciplinary, community-oriented degrees in the fields of Public Health. These can be completed over a minimum period of three academic years.

The BS degree in Public Health and Development Sciences emphasizes the complex ways in which the health and wellbeing of individuals, families, groups and communities are affected by the dynamic interaction of social and environmental conditions.

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 207	Principles of Human Biology	3
PDHP 202/		
CHEM 208	Basic Chemistry for Health Sciences	3
FHSC 280	Information Technology and Health Sciences	2
ENGL 203	English Communication Skills III	3
FHSC 261	Introduction to Psychology	3
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		14

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 260	Introduction to Sociology	3
PDHP 203/		
CHEM 209	Basic Chemistry Laboratory	1
FHSC 262	Introduction to Business	3
PDHP 204	Business Arabic for Health Professionals	3
ENGL 204	English Communication Skills IV	3
PDHP 201	Environment, Health and Development**	3
LISP 200	Library Usage and Research Techniques ¹	1
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		17

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 200/		
FHSC 206	Microbiology for Health Sciences	3
	Elective	3
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		6

** Major course: students should secure an average of 70.

¹ LISP 200 is a no-fee obligatory 1 credit course for graduation

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217	Civilisation Sequence I	3
FHSC 281	Community Health, Education and Mobilisation	3
PDHP 205	Public Health Nutrition and Food Hygiene**	3
PDHP 206	Occupational Hygiene and Toxicology**	3
PDHP 207	Physics for Health Care Sciences	2
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		14

SECOND YEAR

Semester 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 212	Introduction to Ecology	3
PDHP 208	Clean Technology and Pollution Control**	3
PDHP 209	Municipal Sanitation**	3
FHSC 284	Project Planning and Evaluation**	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 266	Anthropology and Health	2
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		17

Red Cross Course²

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 232	Project Residency-PD** ³	5
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		5

** Major course: students should secure an average of 70.

² This is a no-fee, no-credit course requirement for graduation

³ Topics for project, seminars and tutorials will be chosen by student according to his/her interest, availability and the consent of the student's advisor..

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP229/ FHSC 285	Epidemiology in Public Health Practice**	3
FHSC 263	Human Resources Management	3
PDHP 220	Economics of Health and Development**	3
PDHP 222	Public Administration in Lebanon**	3
PDHP 214	Family Health**	3
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		15

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 288	Research in Health Care Sciences	3
PDHP 223	Seminars in Development**	3
FHSC 286	Financial Management in Health and Development Programs**	3
PDHP 225	Issues in Community Health**	3
CVSQ 218	Civilisation Sequence II	3
		<hr/>
		15

TOTAL NUMBER OF CREDITS TO BE COMPLETED AT GRADUATION = 102 CR.

Number of Credits in Major: 43 CR

** Major course: students should secure an average of 70.

COURSE DESCRIPTIONS

CVSQ 217 CIVILISATION SEQUENCE I

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

CVSQ 218 CIVILISATION SEQUENCE II

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

PDHP 204 BUSINESS ARABIC FOR HEALTH PROFESSIONALS

3.0: 3 cr. E

يتناول هذا المقرر تعليم اللغة العربية من ناحية إستراتيجية في "صناعة الكتابة". خاكي طلاب الصحة العامة. يسعى هذا المقرر الى نقل تقنيات خاصة بالتعبير الكتابي ومعايير موضوعية تتعلق بانماط مكتوبة. يحتاج اليهاكل من يعمل في حقل الصحة العامة.

ENGL 203 ENGLISH COMMUNICATION SKILLS III

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

ENGL 204 ENGLISH COMMUNICATION SKILLS IV

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

LISP 200 LIBRARY USAGE AND RESEARCH TECHNIQUES

1.1: 1 cr. E

Refer to Faculty of Arts and Social Sciences, Department of Library and Information Service.

FHSC 200, FHSC 206, FHSC 207, FHSC 223, FHSC 260, FHSC 261, FHSC 262, FHSC 263

Refer to Faculty of Health Sciences Service Courses.

FHSC 266 ANTHROPOLOGY AND HEALTH

2.0: 2 cr. E

This course explores some of the important concepts, methods and perspectives that have been developed by anthropologists and their relevance for health care sciences. Among the topics considered are: culture, qualitative methods, cultural relativity and ethics, gender, family, political structures, symbolic systems.

Prerequisite: FHSC 260

FHSC 274, FHSC 280, FHSC 281, FHSC 282, FHSC 285, FHSC 288

Refer to Faculty of Health Sciences Service Courses

PDHP 200 MICROBIOLOGY FOR HEALTH SCIENCES

3.0: 3 cr. E

Introduction to the biology of microorganisms emphasizing the microbial structure, metabolism and infectious diseases they cause and the related immune response. This course introduces the students of the world of microorganisms and covers medical and environmental issues related to Microbiology.

Prerequisite: FHSC 200 or FHSC 207

PDHP 201 ENVIRONMENT, HEALTH AND DEVELOPMENT

3.0: 3 cr. E

This course examines the interactions between the environment and human development, with an emphasis on public health. Students are introduced to current environmental challenges at the local, regional and global level. The course also examines efforts to overcome environmental obstacles by introducing potential or alternative solutions and resources.

PDHP 202/CHEM 208 BASIC CHEMISTRY FOR PUBLIC HEALTH**3.0: 3 cr. E**

This course introduces Public Health students to the basic principles of chemistry. The course discusses basic general and organic chemistry, water chemistry, atmospheric chemistry, Inorganic and Organic pollutants as well as hazardous waste.

(Students who have already completed CHEM 202 may be granted equivalence)

PDHP 203/CHEM 209 BASIC CHEMISTRY FOR PUBLIC HEALTH**0.3:1 cr. E**

This is a laboratory course which introduces public health students to experiments in basic and applied chemistry.

(Students who have already completed CHEM 203 may be granted equivalence)

PDHP 205 PUBLIC HEALTH NUTRITION AND FOOD HYGIENE**3.0: 3 cr. E**

The course covers subject matter related to the science of nutrition, including human nutrition, food hygiene and community nutrition.

Prerequisite PDHP 200

PDHP 206 OCCUPATIONAL HYGIENE AND TOXICOLOGY**3.0:3 cr. E**

The course introduces students to the notions of physical, chemical, biological and psycho-social hazards in the working environment. The sources of these hazards (e.g. noise, vibration, toxic gases, lead, asbestos, viruses, stress), their toxic potential and the measures available for their control and prevention are explored. Course includes field surveys in industries.

PDHP 207 PHYSICS FOR HEALTH CARE SCIENCES**2.0: 2 cr. E**

Students completing this course will be able to identify potential sources of physical hazards, by having a good grasp of the basic associated concepts. They will be able to evaluate these hazards, understand their interactions with man and the environment, and appreciate risk associated with their exposure. Means of detection, quantification and control utilized to reduce human exposure to these hazards are presented.

PDHP 208 CLEAN TECHNOLOGY AND POLLUTION CONTROL**3:0 3 cr. E**

This course develops skills in business and environmental management and clean production engineering. It looks at the types, sources, nature and dynamics of pollution and their effects on man and his environment. Identification, monitoring, control, risk assessment, biological monitoring. Quality assurance, modeling and standards and legislation of environmental pollution are examined.

Prerequisite: PDHP 201

PDHP 209 MUNICIPAL SANITATION**3:0 3 cr. E**

This is an introductory course into solid waste, water quality and waste water management. The course deals with domestic and industrial solid waste production, handling and disposal, physical, chemical, biological and radioactive water quality and pollution dynamics, and municipal, residential and industrial waste water treatment.

PDHP 212 INTRODUCTION TO ECOLOGY**3.0: 3 cr. E**

The course focuses on understanding relationships between living and non-living matter in their environment. Main topics in ecology such as food chains, natural balance, mineral cycles and natural resources are examined. The course also touches upon man-made threats to the global ecology (eco-toxicology).

PDHP 214 FAMILY HEALTH**3.0: 3 cr. E**

The course leads to an understanding of how family dynamics affect individual and community health. It also casts light on the developmental stages and needs of the growing child, as well as maternal and child health at various stages, including vaccination requirements and family planning. The course includes field visits and exposure to real life situations.

PDHP 220 ECONOMICS OF HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

Students are introduced to theories of economic development covering topics of demand and supply in health care systems and insurance, and cost-benefit analysis of health care system initiation, maintenance and development.

Prerequisite: FHSC 262 or permission of the instructor

PDHP 222 PUBLIC ADMINISTRATION IN LEBANON**3.0: 3 cr. E**

The course exposes students to the role of international, national and local politics in the provision and promotion of health care, using selected cases studies and taking into consideration current trends in Lebanon and the Middle East

PDHP 223 SEMINARS IN DEVELOPMENT**3.0: 3 cr. E**

A senior level course dealing with selected topics in the development of education, management and administration of services and research in the fields of environmental, occupational and community health. Seminars will be presented by guest speakers and include debates and critical discussions. The course emphasizes hot topics of current interest in Lebanon and the Middle East.

Prerequisite: PDHP 220

PDHP 224 GENDER AND DEVELOPMENT**3.0 3 cr. E**

This course provides students with a basic understanding of gender relations as well as with an essential understanding of the factors that shape the social, political and economic roles of women and men and the ways in which they relate to each other. The course will cover a review of development policies aimed at integrating women into development policies and programs. In doing so, the course will focus on Lebanon, the Arab region as well as developing countries

Prerequisite: FHSC 260

PDHP 225 ISSUES IN COMMUNITY HEALTH**3.0 3 cr. E**

A critical in-depth examination of factors affecting the health of rural and urban communities in developing and developed countries, including the impact of urbanization, migration, politics, poverty and globalization. Prerequisite: FHSC 281 or permission of the instructor.

PDHP 229 EPIDEMIOLOGY IN PUBLIC HEALTH PRACTICE**3.0 3 cr. E**

This course addresses the different concepts and methodologies of epidemiology utilized in the field of public health. It also provides an overview of some of the different sub-disciplines within the broad remit of this in order to upgrade the analytical and problem solving skills of the students.

Prerequisite: FHSC 282

PDHP 230 PROJECT RESIDENCY**5:0:5 cr. E**

An individualised project designed, planned, executed, written and presented by the student on a topic of their choice related to Public Health. An essential course in the major, each student is expected to complete a minimum of two months (8 hours/day), under the supervision of a faculty member, within the context of an organization or institution involved with addressing needs related to health, social welfare and development. Pre-requisite: permission of the student's advisor.

PDHP 242 PUBLIC HEALTH AND URBAN ENVIRONMENTS**3:0:3 cr. E**

The course focuses on the interactions between socio-economic, environmental and spatial features of urban dynamics and their impact on public health. Special reference is made to public health challenges arising out of the processes of urbanization and migration in Lebanon and the Middle East.

Pre-requisite: ENGL 203, FHSC 260, FHSC 281, or permission of the instructor

PDHP 250 THEMES IN PUBLIC HEALTH AND DEVELOPMENT**3:0:3 cr. E**

This course gives students the opportunity to explore in-depth a topic of public health relevance and expand their research skills. Students are expected to conduct a literature review, collect data from primary sources in the community in Lebanon, as well as secondary sources, use electronic software for data analysis, and write an extended paper based on their work.

Pre-requisite: FHSC 288

BACHELOR OF SCIENCE IN HEALTH PROMOTION

The Faculty of Health Sciences offers two multidisciplinary, community-oriented degrees in the fields of Public Health. These can be completed over a minimum period of three academic years.

The BS degree in Health Promotion focuses on the importance of prevention, education, and lifestyle as determinants of health and wellbeing.

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 207	Principles of Human Biology	3
FHSC 280	Information Technology and Health Sciences	2
ENG 203	English Communication Skills III	3
PDHP202/ CHEM208	Basic Chemistry for Public Health	3
PDHP 204	Business Arabic for Health professionals	3
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		14

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 261	Introduction to Psychology	3
ENG 204	English Communication Skills IV	3
FHSC 281	Community Health, Education and Mobilisation**	3
FHSC 283	Environment, Health and Development **	3
LISP 200	Library Usage and Research Techniques ¹	1
PDHP 200/ FHSC 206	Microbiology for Health Sciences	3
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		16

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217	Civilisation Sequence I	3
FHSC 260	Introduction to Business	3
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** Major course: students should secure an average of 70 and above.

¹ LISP 200 is a no-fee obligatory 1 credit course for graduation

SECOND YEAR**Semester 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 205	Public Health Nutrition and Food Hygiene **	3
PDHP 210	Kinesiology in Health Promotion**	2
PDHP 218	Principles of Health Promotion I**	3
FHSC 260	Introduction to Sociology	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 284	Project Planning and Evaluation	3
		17

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 213	Marketing Design and Development of Media Tools	3
PDHP 214	Lifestyle, Illness and Disease**	2
PDHP 216	Family Health**	3
PDHP 228	Principles of Health Promotion II**	3
FHSC 263 or FHSC 269	Human Resource Management OR HEALTHCARE Management and Administration	3
		17

*RED CROSS¹***SECOND YEAR****Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 240	Project Residency- HP** ²	5
		5

** Major course: Students should secure an average of 70 and above.

¹ This is a no-fee, no-credit required course for graduation. It may be taken in second or third year.

² This is a no-fee, no-credit required course for graduation. It may be taken in second or third year.

³ Topics for project, seminars and tutorials will be chosen by the student according to his/her interest/availability and the consent of the student's advisor.

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 220	Economics of Health and Development**	3
PDHP 232	Educational Strategies in Health Promotion**	3
CVSQ 218	Civilisation Sequence II	3
FHSC 266	Anthropology and Health	2
PDHP 229/ FHSC 285	Epidemiology of Public Health Practices**	3
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		14

Red Cross Course¹

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 225	Issues in Community Health**	3
FHSC 288	Research in Health Care Sciences	3
PDHP 234	Health Communications**	3
PDHP 236	Health and Human Rights	2
	Elective	3
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		14

TOTAL NUMBER OF CREDITS TO BE COMPLETED AT GRADUATION = 102 CR.

Number of Credits in Major: 42 CR

** Major course: students should secure an average of 70 and above.

¹ This is a no-fee, no-credit required course for graduation. It may be taken in second or third year.

COURSE DESCRIPTIONS

- CVSQ 217 CIVILISATION SEQUENCE I** **3.0: 3 cr. E**
Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.
- CVSQ 218 CIVILISATION SEQUENCE II** **3.0: 3 cr. E**
Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program
- PDHP 204 BUSINESS ARABIC FOR HEALTH PROFESSIONALS** **3.0: 3 cr. A**
يتناول هذا المقرر تعليم اللغة العربية من ناحية إستراتيجية في "صناعة الكتابة". خاكي طلاب الصحة العامة. يسعى هذا المقرر الى نقل تقنيات خاصة بالتعبير الكتابي ومعايير موضوعية تتعلق بانماط مكتوبة. يحتاج اليها كل من يعمل في حقل الصحة العامة.
- ENGL 203 ENGLISH COMMUNICATION SKILLS III** **3.0: 3 cr. E**
Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.
- ENGL 204 ENGLISH COMMUNICATION SKILLS IV** **3.0: 3 cr. E**
Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.
- LISP 200 LIBRARY USAGE AND RESEARCH TECHNIQUEs** **1.1: 1 cr. E**
Refer to Faculty of Arts and Social Sciences, Department of Library and Information Service
- FHSC 200, FHSC 206, FHSC 207, FHSC 258, FHSC 260, FHSC 261, FHSC 262, FHSC 263, FHSC 266, FHSC 269, FHSC 280, FHSC 281, FHSC 282, FHSC 283, FHSC 284, FHSC 285, FHSC 288**
Refer to Faculty of Health Sciences Service Courses.
- PDHP 200/FHSC 206 MICROBIOLOGY FOR HEALTH SCIENCES** **3.0: 3 cr. E**
Introduction to the biology of microorganisms emphasizing the microbial structure, metabolism and infectious diseases they cause and the related immune response. This course introduces the students of the world of microorganisms and covers medical and environmental issues related to Microbiology.
Prerequisite: FHSC 200 or FHSC 207
- PDHP 201 ENVIRONMENT, HEALTH AND DEVELOPMENT** **3.0: 3 cr. E**
This course examines the interactions between the environment and human development, with an emphasis on public health. Students are introduced to current environmental challenges at the local, regional and global level. The course also examines efforts to overcome environmental obstacles by introducing potential or alternative solutions and resources.
- PDHP 202 (CHEM208) BASIC CHEMISTRY FOR PUBLIC HEALTH** **3.0: 3 cr. E**
This course introduces Public Health students to the basic principles of chemistry. The course discusses basic general and organic chemistry, water chemistry, atmospheric chemistry, Inorganic and Organic pollutants as well as hazardous waste.
(Students who have already completed CHEM 202 may be granted equivalence)

PDHP 205 PUBLIC HEALTH NUTRITION AND FOOD HYGIENE**3.0: 3 cr. E**

The course covers subject matter related to the science of nutrition, including human nutrition, food hygiene and community nutrition.

Prerequisite PDHP 200

PDHP 210 KINESIOLOGY IN HEALTH PROMOTION**1.0: 1 cr. E**

Application of the principles of mechanics and muscle action to the analysis of skill in basic human movement. (Students who take PDHP 211 are not permitted to take this course)

PDHP 211 KINESIOLOGY IN HEALTH**2:0 2 cr. E**

Kinesiology in Health is an introduction to the mechanical, physiological, and anatomical bases of human movement. The purpose of the course is to provide meaningful information concerning the physiological and biomechanical aspects of movement in order to improve health. Basic concepts related to physical fitness, body composition and training principles are discussed.

PDHP 213 MARKETING, DESIGN AND DEVELOPMENT OF MEDIA TOOLS**3.0: 3 cr. E**

This course covers the design and development of tools used in health promotion initiatives, including: the development of posters, brochures, pamphlets, role model stories, videotapes, health theaters, community affairs, socio-political debates, advocacy positions, press releases, and public announcements. Emphasis is given to methods of selection and tailoring of appropriate tools according to the target group.

Prerequisite: PDHP 218

PDHP 214 FAMILY HEALTH**3.0: 3 cr. E**

The course leads to an understanding of how family dynamics affect individual and community health. It also casts light on the developmental stages and needs of the growing child, as well as maternal and child health at various stages, including vaccination requirements and family planning. The course includes field visits and exposure to real life situations.

PDHP 216 LIFESTYLE, ILLNESS AND DISEASE**2.0: 2 cr. E**

An introduction to the biologic and behavioral bases of pathogenesis of the major diseases. Causative agents of chronic diseases are examined, with emphasis on those illnesses which have been termed psychosomatic and related to stress, and related methods of adaptation and prophylaxis .

PDHP 218 PRINCIPLES OF HEALTH PROMOTION I**3.0:3 cr. E**

Developing effective health promotion initiatives to reduce risk demands a sound grasp of the principles of health behavior and behaviour change. This course examine a wide spectrum of behavior change theories and techniques, including behavior modification, social modeling, social interaction theory, information processing research, and models of behavioral self-regulation and problem solving. Lectures and applications consider different topics, such as substance abuse, hazard control, behavioral risk factor modification including diet, exercise, smoking, stress, safe sexual behaviors, and adherence to medical treatment.

PDHP 220 ECONOMICS OF HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

Students are introduced to theories of economic development covering topics of demand and supply in health care systems and insurance, cost-benefit analysis of health care systems initiation, maintenance and development.

Prerequisite: FHSC 262 or permission of the instructor.

PDHP 225 ISSUES IN COMMUNITY HEALTH**3.0: 3 cr. E**

A critical in-depth examination of factors affecting the health of rural and urban communities in developing and developed countries, including the impact of urbanisation, migration, politics, poverty and globalisation.

Prerequisite: FHSC 281 or permission of the instructor.

PDHP 228 PRINCIPLES OF HEALTH PROMOTION II**3:0 3 cr. E**

In this course, the interrelationships between theory, research and practice in health promotion are explored. Students will expand their knowledge of basic health promotion theories to become familiar with more advanced and new emerging theories. These will be considered in relation to the planning models used for applied interventions, and in relation to theories and models that focus on behavior change. Specific health promotion applications using a settings approach to schools, patient care settings, small groups, and the community-at-large will be presented through case studies, discussions, and readings.

Prerequisite: PDHP 218

PDHP 229 EPIDEMIOLOGY IN PUBLIC HEALTH PRACTICE**3.0: 3 cr. E**

This course addresses the different concepts and methodologies of the study epidemiology utilized in the field of public health. It also provides an overview of some of the different sub-disciplines within the broad remit of this field, such as occupational and molecular epidemiology, which have evolved during the past several decades, in order to upgrade the analytical and problem solving skills of the students.

Prerequisite FHSC 266

PDHP 232 EDUCATIONAL STRATEGIES IN HEALTH PROMOTION**3:0 3 cr. E**

This course introduces students to a variety of educational strategies designed to help improve the health of individuals and communities. Students will become familiar with common theories of learning and principles of pedagogy, approaches to adult education and learning, developing and evaluating educational materials, and teaching styles suitable for various health education settings. They will be exposed to different communication methods, training methods and organizational methods. Students will develop written health education materials for prototypical health promotion interventions

Prerequisite: PDHP 218

PDHP 233 ISSUES IN HEALTH COMMUNICATION CAMPAIGNS**3.0: 3 cr. E**

This course addresses issues related to the development, implementation and evaluation of integrated health promotion campaigns. It discusses frameworks that offer a range of ideas, strategies and for health promoters can utilize according to the specific health problem and context/target audience, in a step-by-step approach.

PDHP 234 HEALTH COMMUNICATIONS**3.0:3 cr. E**

This senior level course covers the principles and theories of health communications and their application in health promotion programs. Models of effective health communications addressing a range of health problems, contexts, target audiences, and delivery systems are discussed in depth. Students learn to apply health communication frameworks in a step-by-step approach covering processes related to the development, implementation, management and evaluation of integrated health promotion campaigns.

Prerequisite: PDHP 213, PDHP 218, PDHP 228, FHSC 284 or permission of the program director.

PDHP 235 SEMINARS IN HEALTH PROMOTION**3.0: 3 cr. E**

Selected topics are presented by guest speaker on the development of education, management and administration of services and research in the fields of Health Promotion, occupational and community health are presented by guest speakers. Seminars involve presentations, general discussions and evaluation. Student evaluation is based on written essays and applying lessons learned to case studies.

Prerequisite: PDHP 228 or permission of the instructor.

PDHP 236 HEALTH AND HUMAN RIGHTS**2.0: 2 cr. E**

The general concepts and principles of human rights are covered in this course, in relation to their impact on health and the health sector. Emphasis is placed on the role of human rights as empowering of individuals and communities, with specific reference to Lebanon and the Middle East.

Prerequisite: ENGL 203

PDHP 240 PROJECT RESIDENCY**5.0: 5 cr. E**

An individualised project designed, planned, executed, written and presented by the student on a topic of their choice related to Health Promotion. An essential course in the major, each student is expected to complete a minimum of two months (8 hours/day), under the supervision of a Faculty member, within the context of an organization or institution involved with addressing needs related to health, social welfare and development.

Prerequisite: permission of the student's advisor.

PDHP 252 THEMES IN HEALTH PROMOTION**3:0:3 cr. E**

This course gives students the opportunity to expand their research skills while exploring in depth a topic of relevance to health promotion. Students are expected to conduct a literature review, collect data from primary sources in the community in Lebanon, as well as secondary sources, use electronic software for data analysis, and write an extended paper based on their work.

Pre-requisite: FHSC 288

DUAL BS DEGREE PROGRAM
IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES
AND HEALTH PROMOTION

Students interested in gaining a broader perspective of the fields of Public Health can choose to take both a degree in Public Health and Development Sciences and a degree in Health Promotion in sequence over a four year period, in a Dual Degree program. This permits them to graduate with two BS degrees.

In order to fulfill University and Faculty requirements for the Dual Degree program, students should complete all credit requirements for the first degree (either Health Promotion or Public Health and Development Sciences).

Following completion of the first degree, an additional 36 credits are then taken for the second degree. This is done over a minimum period of an additional three full semesters (including summer). Notwithstanding, students may take up to 6 credits during the first degree and have them count towards the second degree. This is providing that these credits are in addition to credit requirements for the first degree, and that they satisfy requirements for the second degree.

The second degree may be taken on a fulltime or a part-time basis. Students are advised to consult with their advisor.

BACHELOR OF SCIENCE IN NUTRITIONAL SCIENCES
BACHELOR OF SCIENCE IN NUTRITION AND DIETETICS

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 280	Information Technology and Health Sciences	2
ENGL 203	English Communication Skills III	3
LISP 200	Library Use and Research Techniques	1
		14

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 200	Basic Human Nutrition *	3
FHSC 203	Basic Human Physiology	4
FHSC 225	Basic Organic Chemistry	3
FHSC 261	Introduction to Psychology	3
ENGL 204	English Communication Skills IV	3
		16

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 201	Human Nutrition and metabolism*	3
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
MLAB 210	Basic Biochemistry	3
FHSC 227	Organic Chemistry I- Laboratory	1
FHSC 268	Survey of Management and Marketing	3
		16

* Major course with passing grade = 65

** Major course with passing grade = 70

LISP 200 is a no-fee obligatory 1 credit course for graduation.

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 202	Life Cycle Nutrition*	3
NUSC 220	Community Nutrition I*	3
NUSC 230	Food Analysis*	2
CVSQ 217	Civilization Sequences I	3
PDHP 220	Economics Of Health And Development	3
	Suggested Elective	3
		<hr/>
		17

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 210	Food Service Management*	3
NUSC 212	Therapeutic Nutrition I*	3
NUSC 213	Therapeutic Nutrition I- Laboratory*	1
NUSC 231	Food Processing*	2
NUSC 232	Food Processing- Laboratory*	1
FHSC 282	Principles of Epidemiology and Biostatistics	3
	Free Elective	3
		<hr/>
		16

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 211	Nutrition Counseling and Communication *	3
NUSC 214	Therapeutic Nutrition II*	3
NUSC 215	Therapeutic Nutrition II- Laboratory*	1
NUSC 240	Tutorial: Special Topics in Nutrition and Food*	2
CVSQ 218	Civilization Sequence II	3
FHSC 288	Research in Health Care Sciences	
		<hr/>
		15

TOTAL**94**

List of Suggested Electives:

NUSC 234	Food Science and Technology I
NUSC 236	Food Quality Assurance Principle I
FHSC 281	Community Health Education and Mobilization
PDHP 213	Marketing Design and Development of Media Tools

* Major course with passing grade = 65

** Major course with passing grade = 70

BACHELOR OF SCIENCE IN NUTRITION AND DIETETICS

(PREMEDICAL TRACK)

The PREMED Program in the NUSC department presents unique opportunities:

- It allows capable students to complete PREMED requirements in a period of three years in addition to the B.S. in Nutrition and Dietetics
- It prepares students for the MCAT examinations
- It qualifies students for the early admission to the Medical School

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 240	Mathematics for Applied Sciences	3
ENGL 203	English Communication Skills III	3
		14

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 200	Basic Human Nutrition*	3
FHSC 203	Basic Human Physiology	4
FHSC 226	Organic Chemistry I	3
FHSC 280	Information Literacy and Health Sciences	2
ENGL 204	English Communication Skills IV	3
LISP 200	Library Use and Research Techniques	1
		16

FIRST YEAR

Summer

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 224	Basic Analytical Chemistry	2
FHSC 227	Basic Organic Chemistry Laboratory	1
FHSC 228	Organic Chemistry II	3
		6

* Major course with passing grade = 65

** Major course with passing grade = 70

LISP 200 is a no-fee obligatory 1 credit course for graduation.

SECOND YEAR**Semester 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 201	Human Nutrition and metabolism*	3
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
MLAB 210	Basic Biochemistry	3
FHSC 241	Fundamentals of Physics I	3
FHSC 242	Fundamentals of Physics I Laboratory	1
		<hr/>
		16

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 202	Life Cycle Nutrition*	3
NUSC 220	Community Nutrition I*	3
NUSC 230	Food Analysis*	2
MLAB 243	Fundamentals of Physics II	3
MLAB 244	Fundamentals of Physics II Laboratory	1
FHSC 268	Survey of Management and Marketing	3
		<hr/>
		15

SECOND YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CVSQ 217	Civilization sequence I	3
FHSC 281	Introduction to Psychology	3
		<hr/>
		6

* Major course with passing grade = 65

** Major course with passing grade = 70

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 210	Food Service Management*	3
NUSC 212	Therapeutic Nutrition I*	3
NUSC 213	Therapeutic Nutrition I- Laboratory*	1
NUSC 231	Food Processing*	2
NUSC 232	Food Processing- Laboratory*	1
FHSC 282	Principles of Epidemiology and Biostatistics	3
		<hr/>
		13

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 211	Nutrition Counseling and Communication *	3
NUSC 214	Therapeutic Nutrition II*	3
NUSC 215	Therapeutic Nutrition II- Laboratory*	1
NUSC 240	Tutorial: Special Topics in Nutrition and Food*	2
CVSQ 218	Civilization Sequence II	3
FHSC 288	Research in Health Care Sciences	
		<hr/>
		15
TOTAL		101

* Major course with passing grade = 65

** Major course with passing grade = 70

BACHELOR OF SCIENCE IN COMMUNITY NUTRITION

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 280	Information Technology and Health Sciences	2
ENGL 203	English Communication Skills III	3
LISP 200	Library Use and Research Techniques	1
		<hr/>
		14

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 200	Basic Human Nutrition *	3
FHSC 203	Basic Human Physiology	4
FHSC 225	Basic Organic Chemistry	3
FHSC 261	Introduction to Psychology	3
ENGL 204	English Communication Skills IV	3
		<hr/>
		14

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 201	Human Nutrition and metabolism*	3
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
MLAB 210	Basic Biochemistry	3
FHSC 227	Organic Chemistry I- Laboratory	1
FHSC 268	Survey of Management and Marketing	3
		<hr/>
		14

* Major course with passing grade = 65

** Major course with passing grade = 70

LISP 200 is a no-fee obligatory 1 credit course for graduation.

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 202	Life Cycle Nutrition*	3
NUSC 220	Community Nutrition I*	3
NUSC 234	Food Science and Technology I*	3
FHSC 268	Community, Health Education and Mobilization	3
	Suggested Elective	3
		15

FIRST YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 240	Project Residency **	3
		3

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 212	Therapeutic Nutrition I*	3
NUSC 213	Therapeutic Nutrition I- Laboratory*	1
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 284	Project Planning and Evaluation*	3
CVSQ 217	Civilization Sequence I	3
PDHP 214	Family Health*	3
		16

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 221	Community Nutrition II *	3
CVSQ 218	Civilization Sequence II	3
FHSC 288	Research in Health Care Sciences*	3
PDHP 222	Public Administration in Lebanon*	3
	Free Elective	3
		15

TOTAL**95**

* Major course with passing grade = 65

** Major course with passing grade = 70

List of Suggested Electives:

PDHP 213	Marketing Design and Development of Media Tools
PDHP 220	Economics of Health and Development
PDHP 225	Issue in community Health
PDHP 232	Educational strategy and Health Promotion
PDHP 242	Public Health and Urban Environments

BACHELOR OF SCIENCE IN FOOD SCIENCE AND QUALITY ASSURANCE

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 200	Introduction to Biology I	3
FHSC 201	Introduction to Biology I- Laboratory	1
FHSC 222	Basic Chemistry	3
FHSC 223	Basic Chemistry Laboratory	1
FHSC 240	Mathematics for Applied Sciences	3
FHSC 280	Information Technology and Health Sciences	2
ENGL 203	English Communication Skills III	3
		<hr/>
		16

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 200	Basic Human Nutrition *	3
FHSC 226	Organic chemistry I	3
FHSC 261	Introduction to Psychology	3
MLAB 213	General Microbiology	3
ENGL 204	English Communication Skills IV	3
LISP 200	Library Use and Research Techniques	1
		<hr/>
		16

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
NUSC 233	Introduction to Food Engineering*	3
MLAB 210	Basic Biochemistry	3
FHSC 227	Organic Chemistry I- Laboratory	1
FHSC 268	Survey of Management and Marketing	3
		<hr/>
		16

* Major course with passing grade = 65

** Major course with passing grade = 70

LISP 200 is a no-fee obligatory 1 credit course for graduation.

SECOND YEAR**Semester 4**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 230	Food Analysis*	2
NUSC 234	Food Science and Technology I*	3
NUSC 242	Food Laws and regulations*	3
CVSQ 217	Cultural Studies I	3
PDHP 220	Economics of Health and development	3
	Free Elective	3
		<hr/>
		14

SECOND YEAR**Summer**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 238	Internship in Food establishment **	3
		<hr/>
		3

THIRD YEAR**Semester 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 231	Food Processing*	2
NUSC 232	Food Processing- Laboratory*	1
NUSC 235	Food Science and Technology II*	3
NUSC 236	Food Quality Assurance Principles I*	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
CVSQ 217	Civilization Sequence I	3
		<hr/>
		15

THIRD YEAR**Semester 6**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 205	Food and Nutritional Toxicology *	3
NUSC 237	Food Quality Assurance Principles II*	3
NUSC 241	Tutorial: Special Topics in Nutrition and Food*	3
CVSQ 218	Civilization Sequence II	3
FHSC 288	Research in Health Care Sciences*	3
		<hr/>
		14

TOTAL**94**

* Major course with passing grade = 65

** Major course with passing grade = 70

COURSE DESCRIPTIONS

CVSQS 217 CIVILISATION SEQUENCE I

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

CVSQ 218 CIVILISATION SEQUENCE II

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Civilization Sequence Program.

ENGL 203 ENGLISH COMMUNICATION SKILLS III

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

ENGL 204 ENGLISH COMMUNICATION SKILLS IV

3.0: 3 cr. E

Refer to Faculty of Arts and Social Sciences, Department of English Language and Literature.

LISP 200 LIBRARY USAGE AND RESEARCH TECHNIQUES

1.1: 1 cr. E

Refer to Faculty of Arts and Social Sciences, Department of Library and Information Service.

FHSC 200, FHSC 201

Refer to Faculty of Sciences, Department of Biology and to Faculty of Health Sciences Service Courses.

FHSC 203, FHSC 280, FHSC 281, FHSC 282, FHSC 288

Refer to Faculty of Health Sciences Service Courses.

FHSC 222, FHSC 223, FHSC 224, FHSC 225, FHSC 226, FHSC 227, FHSC 228

Refer to Faculty of Health Sciences Service Courses.

FHSC 240, FHSC 241, FHSC 242, FHSC 243, FHSC 244, FHSC 261, FHSC 268

Refer to Faculty of Health Sciences Service Courses.

MLAB 210, MLAB 213

Refer to Faculty of Health Sciences, Medical Laboratory Sciences Program.

PDHP 214, PDHP 220, PDHP 222

Refer to Faculty of Health Sciences, Public Health and Development Sciences, and Health Promotion program.

NUSC 200 BASIC HUMAN NUTRITION

3 cr E

This course introduces basic human nutrition. It covers the study of carbohydrates, fats, proteins, vitamins and minerals. It also covers basic metabolic processes (digestion, absorption...) and includes an introduction to healthy nutrition.

Pre-requisite: FHSC 200.

NUSC 201 HUMAN NUTRITION AND METABOLISM

3 cr E

This course covers human physiological needs for energy, carbohydrates, fat, proteins, vitamins and minerals. It also includes advanced metabolism of the different nutrients and an overview of methods of nutritional assessment and a brief introduction of the different nutritional diseases (Renal diseases, gastrointestinal diseases and inborn errors of the metabolism...).

Pre-requisites: NUSC 200, FHSC 203.

NUSC 202 LIFECYCLE NUTRITION

3 cr E

This course covers nutritional needs throughout the lifespan including infancy, childhood, adolescence, adulthood and elderly. It also includes special requirements for pregnancy and lactation.

Prerequisite: NUSC 201.

NUSC 203 FOOD MICROBIOLOGY

3 cr E

This course is designed to give students an understanding of the role of microorganisms in food processing and preservation; relation of microorganisms to food spoilage, food borne illness and intoxication, general food quality, and role of microorganisms in health promotion. Weekly laboratory sessions give the student a practical understanding of the laboratory methods used in the microbiological analysis of foods, and with the identifying characteristics of the major groups of microorganisms associated with food spoilage, food borne disease, and food fermentations.

Prerequisite: FHSC 200

NUSC 204 FOOD CHEMISTRY

3 cr E

This course explores the structure, properties, and chemical composition of food systems and the changes they undergo during processing and under storage. Basic chemical/biochemical reactions of carbohydrates, lipids, proteins, and other constituents in fresh and processed foods are discussed with respect to various food qualities (color, flavor, texture, nutrition, and safety).

Prerequisite: FHSC 222

NUSC 205 FOOD AND NUTRITIONAL TOXICOLOGY

3 cr E

Introduction to the toxicology of foods, and food borne chemicals and organisms. Major classes of food toxicants, their importance, properties, detection, metabolism, control and regulation; and basic issues in food/diet safety and toxicology. Environmental safety of the food supply from the farm to the fork is also discussed.

Prerequisites: NUSC 203

NUSC 210 FOOD SERVICE MANAGEMENT

3 cr E

The course explores various aspects of foodservice operations including management functions, food production and scheduling, marketing, cost controls, sanitation and safety, facility and equipment design, service concepts and menu planning.

NUSC 211 NUTRITION COUNSELING AND COMMUNICATION

3 cr E

This course introduces the basic patient counseling techniques in hospital and clinical settings. It also includes an in-depth overview of nutritional assessment methods (Applied and theoretical). The course will require students to implement real life consultations and follow ups with patients.

Prerequisite: NUSC 200.

NUSC 212 THERAPEUTIC NUTRITION I

3 cr E

This course examines selected metabolic diseases (including chronic diseases like CVD, Diabetes, hypertension and obesity as well as cancers and HIV/AIDS.), their etiology, metabolic pathways and specific medical nutrition therapy for their prevention and treatment.

Prerequisites: NUSC 201, NUSC 202. Co-requisite: NUSC 213

NUSC 213 THERAPEUTIC NUTRITION I LAB**1 cr E**

Practical applications and case studies for concepts and theories covered in NUSC 221.

Co-requisite: NUSC 212

NUSC 214 THERAPEUTIC NUTRITION II**3 cr E**

This course examines selected metabolic diseases (including renal diseases, gastrointestinal diseases, pulmonary, and inborn errors of metabolism), their etiology, metabolic pathways and specific medical nutrition therapy for their prevention and treatment. The course also covers the basic principles of total parenteral nutrition and enteral nutrition.

Prerequisites: NUSC 212, NUSC 213. Co-requisite: NUSC 215

NUSC 215 THERAPEUTIC NUTRITION II LAB**1 cr E**

Practical applications and case studies for concepts and theories covered in NUSC 224.

Co-requisite: NUSC 214

NUSC 220 COMMUNITY NUTRITION I**3 cr E**

This course examines the role of nutrition in promoting, maintaining and improving health in the community. It covers community assessment methods, basic principles of epidemiology, an introduction to food security, policy making and nutrition education.

Prerequisites: NUSC 200, NUSC 202.

NUSC 221 COMMUNITY NUTRITION II**3 cr E**

This course examines the practical application of nutrition information for improvement of health and nutritional status of communities. It details the role of nutritionists in the community within different target populations (mothers and infants, children and adolescents, elderly...). It also deals with methods of communicating and marketing nutrition messages and the basic principles of nutrition program development.

Prerequisite: NUSC 220.

NUSC 230 FOOD ANALYSES**3 cr E**

Principles and applications of the chemical, physical, and instrumental methods used to determine the constituents of foods. Weekly laboratory sessions give the student a practical understanding of the theory and help in conducting and evaluating a scientific experiment and presenting the data in technical written form.

NUSC 231 FOOD PROCESSING**2 cr E**

Food processing as a scientific and technological activity covers a broader area than food preparation and cooking. It involves the application of scientific principles to slow down the natural processes of food spoilage, and to provide convenience and a safe marketplace. This course introduces conventional and novel processing and preservation technologies. The sensory and nutritional implications of food processing and preservation will also be discussed.

Co-requisite: NUSC 232

NUSC 232 FOOD PROCESSING LAB**1 cr E**

Laboratory exercises in the Pilot Plant in food preservation and processing as well as field visits to various food industries. Reports of findings and observations due after each exercise.

Co-requisite: NUSC 231

NUSC 233 INTRODUCTION TO FOOD ENGINEERING**3 cr E**

Study of basic concepts of engineering principles, their application in the processing of food and importance in solving problems in food science and technology.

NUSC 234 FOOD SCIENCE AND TECHNOLOGY I**3 cr E**

This course covers the basic fundamentals of food science and underlying technology associated with providing a safe, nutritious, and abundant supply of fresh and processed foods to humans. It explores key food commodities (meat, fish, dairy, cereal, fruits and vegetables, oils and seeds) with an emphasis on their production and processing methods. Traditional and local food products are also discussed.

Prerequisite: NUSC 233

NUSC 235 FOOD SCIENCE AND TECHNOLOGY II**3 cr E**

This course continues exploring food commodities such as beverages, confectionary and chocolate products. This is followed by introducing the students to various aspects of food science and technology including food additives, food packaging, sensory science, food product development, fermentation and enzyme technology and food biotechnology. Nutraceuticals and functional foods are also discussed.

Prerequisite: NUSC 234

NUSC 236 FOOD QUALITY ASSURANCE PRINCIPLES I**3 cr E**

Basic principles of food safety, quality control and quality assurance in food service establishments and food industries. Emphasis on good agricultural practices (GAP), Good manufacturing practices (GMP), food safety and sanitation, and HACCP and its prerequisite programs.

NUSC 237 FOOD QUALITY ASSURANCE PRINCIPLES II**3 cr E**

The course introduces students to the importance of quality management in the food industry, and the need for an orientation towards total quality management (TQM). It reviews the differences and components of food quality and food safety, explains quality programs and systems such as ISO 9001 and ISO 22000. In addition, this course provides students with tools on how to write standard operating procedures (SOP), conduct internal audits, and use statistical quality control tools with applications in the food industry.

Prerequisite: NUSC 236

NUSC 238 INTERNSHIP IN FOOD ESTABLISHMENTS**3 cr E**

Approved and supervised professional broad-based work experience in food establishments. Written report and oral presentation due at completion.

Prerequisite: permission of the student's advisor

NUSC 240 PROJECT RESIDENCY**3 cr E**

An Individual project designed, planned, executed, written and presented by the student on a topic of their choice related to community nutrition. An essential course in the Major, each student is expected to complete a minimum of two months (8 hours/ day), under the supervision of a faculty member, within the context of an organization or institution involved with addressing community nutrition needs.

Prerequisite: permission of the student's advisor

NUSC 241 TUTORIALS: SPECIAL TOPICS IN NUTRITION AND FOOD

2 cr E

Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses. A final annotated paper is due at project completion.

NUSC 242 FOOD LAWS AND REGULATIONS

3 cr E

This course covers the importance and development of food legislation, food standards, codes of practice and specification (codex alimentarius), formulation of legal food standards (national and international) as well as labeling requirements.

**COURSES TO BE TAKEN BY HEALTH PROMOTION GRADUATES REGISTERED
FOR A SECOND DEGREE IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES**

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 203	Basic Chemistry for Public Health: Lab	1
PDHP 206**	Occupational Hygiene and Toxicology	3
PDHP 207	Physics for Health Care Sciences	2
PDHP 212	Introduction to Ecology	3
PDHP 222**	Public Administration	3
x	Humanities Elective	3
		<hr/>
		15

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 208**	Clean Technology and Pollution Control	3
PDHP 209**	Municipal Sanitation	3
PDHP 223**	Seminars in Development	3
PDHP 242	Public Health and Urban Environments	3
FHSC 286**	Financial Management in Health and Development	3
		<hr/>
		15

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
x	Elective	3
PDHP 250**	Themes in Public Health and Development	3
		<hr/>
		6

Total number of credits to be completed for the second BS degree = 36 credits.

** Major course requiring a passing grade of 70 (21 credits)

Note: Students may take up to 6 of the above credits during their first degree, provided these are in addition to requirements for the first degree.

**COURSES TO BE TAKEN BY PUBLIC HEALTH AND DEVELOPMENT SCIENCES
GRADUATES REGISTERED FOR A SECOND DEGREE IN HEALTH PROMOTION**

FIRST YEAR

Semester 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 218 **	Principles of Health Promotion I	3
PDHP 211 **	Kinesiology in Health	2
PDHP 216 **	Lifestyle, Illness and Disease	2
PDHP 213	Marketing, Design and Development of Media Tools	3
x	Humanities Elective	3
x	Social Sciences Elective	3
		16

FIRST YEAR

Semester 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 228**	Principles of Health Promotion II	3
PDHP 232**	Educational Strategies in Health Promotion	3
PDHP 236	Health and Human Rights	2
PDHP 242	Public Health and Urban Environments	3
PDHP 252**	Themes in Health Promotion	3
		14

SECOND YEAR

Semester 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
x	Elective	3
PDHP 234**	Health Communications	3
		6

Total number of credits to be completed for the second BS degree = 36 credits.

* Major course requiring a passing grade of 70 (19 credits)

Note: Students may take up to 6 of the above credits during their first degree, provided these are in addition to requirements for the first degree.

SEED COURSES

IN THE PUBLIC HEALTH AND DEVELOPMENT SCIENCES PROGRAM, AND THE HEALTH PROMOTION PROGRAM

Students are encouraged to participate in the University Program of SEED: Service Experience: Education through Doing.

(Refer to the catalogue page for University regulations governing SEED courses)

Seed courses are optional and give students the opportunity to develop applied skills through service to the community. Each SEED course is 1 credit, and attached to an appropriate and related 3 credit classroom course. Interested students are advised to consult their advisor or program director.

Currently, students registered in courses in the Public Health and Development Sciences and Health Promotion programs may take SEED courses connected with the following courses in their curricula, following consultation with their advisor:

- FHSC 260 Introduction to Sociology
- PDHP 210 Environment, Health and Development
- PDHP 205 Public Health Nutrition and Food Hygiene
- PDHP 206 Occupational Hygiene and Toxicology
- PDHP 212 Introduction to Ecology
- PDHP 208 Clean Technology and Pollution Control
- PDHP 220 Epidemiology in Public Health Practice
- PDHP 214 Family Health
- PDHP 223 Seminars in Development
- PDHP 225 Issues in Community Health
- PDHP 213 Marketing, Design and Development of Media Tools
- PDHP 215 Lifestyle Illness and Disease
- PDHP 232 Educational Strategies in Health Promotion
- PDHP 236 Health and Human Rights
- PDHP 234 Health Communications

FACULTY SERVICE COURSES

ENGL 203 ENGLISH COMMUNICATION SKILLS III

3.0: 3 cr. E

ENGL 203 is a sophomore level course that exposes students to academic texts taken from a variety of sources and disciplines, thus preparing them for the more advanced English and research courses. The focus of English 203 is to teach students how to write argumentative essays, how to conduct debates, and how to analyze argumentative texts/essays/articles.

ENGL 204 ENGLISH COMMUNICATION SKILLS IV

3.0: 3 cr. E

ENG 204 provides a variety of academic texts as material for reading and critical analysis. The course focuses on a number of articles and essays that can be used for summarizing, paraphrasing, outlining, synthesizing and critique writing. These skills, in addition to research techniques, are implemented in the writing of a term paper (10 typed pages) which students are required to submit during week 15 and to present orally in class.

FHSC 200 INTRODUCTION TO BIOLOGY I

3.0: 3 cr. E,F

Principles of biology, including the cellular basis of life; evolution, energy transfer through living organisms and introduction to systematic.

FHSC 201 INTRODUCTION TO BIOLOGY I - LABORATORY

0.3: 1 cr. E

Required laboratory includes techniques such as microscopy, biochemical analysis, and use of the scientific method.

Co-requisite: FHSC 200

FHSC 202 INTRODUCTION TO HUMAN ANATOMY

2.0: 2 cr. E,F

An introductory course in basic gross anatomy and histology designed for students in health-oriented programs. It provides a basic understanding and working knowledge of tissues, organs and systems of the human body.

FHSC 203 BASIC HUMAN PHYSIOLOGY

4.0: 4 cr. E,F

Overviews the basic cell structure, functions and genetic framework. It elaborates on the biological control systems including hemostatic, neural, sensory, hormonal, muscular and others. Finally it covers the physiology of the body organs and respective functions.

FHSC 204 PRINCIPLES OF GENETICS

2.0: 2 cr. E

The course presents the general principles of classical and molecular genetics. It deals with the subjects of cytogenetics and pharmacogenetics emphasizing the role of biomonitoring and analysis of genetic elements and mechanisms.

FHSC 205 INTRODUCTION TO MICROBIOLOGY

2.0: 2 cr. E,F

Introduction to the biology of microorganisms emphasizing the infectious diseases they cause and the related immune response.

FHSC 206 MICROBIOLOGY FOR HEALTH SCIENCES

Introduction to the biology of microorganisms emphasizing the microbial structure, metabolism and infectious diseases they cause and the related immune response. This course introduces the students to the world of microorganisms and covers medical and environmental issues related to Microbiology.

Prerequisite: FHSC 200 or FHSC 207

FHSC 207 PRINCIPLES OF HUMAN BIOLOGY**3.0: 3 cr. E**

Principles of Human Biology provide a basic overview of human biology, starting from the most elementary fabrics of life and moving up to the organ systems that make up the sophisticated living marvel, the human body. This is an ideal bridging course for students from all backgrounds. The course cannot be counted as completing requirements towards a Premedical program.

FHSC 220 GENERAL CHEMISTRY**3.0: 3 cr. E**

This course of chemistry is designed primarily for first year students in various health-related programs as nursing, laboratory technology, medical assisting, dental assisting...Emphasis is placed on practical aspects of inorganic chemistry, organic chemistry and biochemistry. Theoretic topics will be given in three parts: Part I "Biochemistry". Among these related topics and processes-acids bases and electrolytes, solutions and redox reactions. Part II "Organic chemistry" introduces the various classes of organic compounds. Part III "Biochemistry" deals with the chemical and molecular basis of life itself.

FHSC 221 BASIC CHEMISTRY FOR HEALTH SCIENCES**3.0: 3 cr. E**

Designed for the Health Sciences, this course introduces students to the basic concepts of chemistry and encourages them to appreciate the significance of chemical reactions (changes) in everyday life.

FHSC 222 FHSC BASIC CHEMISTRY**3.0: 3 cr. E**

Origin of the atomic theory. Determination of atomic weights and formulae. The mole concept. The chemical equation. Acid-base and oxidation-reduction concepts. Properties of gases gas laws. Liquids and solutions. Types of solutions: ideal and non-ideal solutions. Chemical equilibrium. Ionic equilibrium in aqueous solutions. Solubility. Quantum theory of the atom. Electronic structure of atoms. The chemical bond: ionic and covalent bonds, Hybridization. The valence-Shell Electron-Pair Repulsion (VSEPR) Model.

FHSC 223 FHSC BASIC CHEMISTRY LABORATORY**0.3: 1 cr. E**

The aim of this introductory laboratory course is to introduce the students to the basic techniques and equipment of common use in a chemistry lab

FHSC 224 FHSC BASIC ANALYTICAL CHEMISTRY**2.0: 2 cr. E**

A brief discussion of: Gravimetric Methods of Analysis, Titrimetric Methods of Analysis. Aqueous solution neutralization Titration. Complex Acid-Base Systems, Complex -formation titration, electrochemistry.

Prerequisite: FHSC 222

FHSC 225 BASIC ORGANIC CHEMISTRY**3.0: 3 cr. E**

This course outlines the combined theories and fundamental concepts of organic chemistry, including structure, shape, IUPAC nomenclature, stereoisomerism, optical activity absolute configurations such as halogen configuration and properties of the following and synthetic organic compounds, and physical methods used in structure determination.

Prerequisite: FHSC 222

FHSC 226 BASIC ORGANIC CHEMISTRY I**3.0: 3 cr. E**

Atomic and molecular orbitals; hybridization and bonding between two carbon atoms. Electronegativity and Resonance. Inductive effect. Stereochemistry: Optical and geometrical isomerism. Substitution, elimination and addition reaction. Properties of alkane, alkene, and alkyne. Chemistry of the aromatic hydrocarbons.

Prerequisite: FHSC 222.

FHSC 227 BASIC ORGANIC CHEMISTRY LABORATORY**0.3:1 cr. E**

Experiments are intended to introduce students to basic techniques inorganic chemistry, synthesis and extraction, chromatography and identification of functional groups.

Prerequisite: FHSC 222, FHSC 223, FHSC 226. Co-Requisite FHSC 225, FHSC 228

FHSC 228 BASIC ORGANIC CHEMISTRY II**3.0: 3 cr. E**

Study of the main functional groups: alcohol, phenols, ethers, and epoxides aldehydes and ketones, carboxylic acids and derivatives, amine and amides, Spectroscopy and structure. Carbanions. Aryl halides.

Prerequisite: FHSC 226

FHSC 229 PHARMACOLOGY**2.0: 2 cr. E,F**

This course introduces the student to basic concepts in pharmacology. The different groups of drugs are studied in a body systems approach with special emphasis on associated nursing implications.

FHSC 240 MATHEMATICS FOR APPLIED SCIENCES**3.0: 3 cr. E**

Infinite series. Polar coordinates. Function of several variables. Partial derivatives. Chain rules. multiple integrals with applications.

FHSC 241 FUNDAMENTALS OF PHYSICS I**3.0: 3 cr. E**

This course introduces some of the basic fundamentals of physics including: Kinematics of a particle, relative motion, analysis, Newton's laws of motion, work, energy, center of mass, linear impulse and momentum, collision torque, elasticity, gravity, properties of fluids simple harmonic motion, transverse and longitudinal waves, resonance sound waves, Doppler effect thermal expansion, first and second laws of thermodynamics, entropy.

FHSC 242 FUNDAMENTALS OF PHYSICS I LABORATORY**0.3:1 cr. E**

This laboratory introduces students to the types of basic apparatus used in physics. Experiments are designed to demonstrate the meaning and applications of the physical concepts included in the "Fundamental of Physics I" course.

Co-Requisite: FHSC 241

FHSC 243 FUNDAMENTALS OF PHYSICS II**3.0: 3 cr. E**

The course introduces some of the basic fundamentals of physics including: electric charge, Coulomb's law, electrostatic force. Electric field, electric potential, Gauss' Law, capacitors, capacitance, electric current, resistance, Ohm's law, power emf, internal resistance, magnetic field, magnetic force magnetic materials, alternating currents, rms voltage and current polarization, reflection, refraction, mirrors thin lenses, interference, diffraction, photoelectric effect blackbody radiation, hydrogen atom, fluorescence, atomic and mass numbers, isotopes, alpha, beta and gamma decays, nuclear fission and nuclear fusion.

FHSC 244 FUNDAMENTALS OF PHYSICS II LABORATORY**0.3: 1 cr. E**

This laboratory introduces students to the types of basic apparatus used in physics. Experiments are designed to demonstrate the meaning and applications of the physical concepts included in the "Fundamental of Physics II" course.

Co-Requisite: FHSC 243

FHSC 260 INTRODUCTION TO SOCIOLOGY**3.0: 3 cr. E**

Students are introduced to basic theories and concepts in the study of society, including the evolution of human societies, culture, socialization, family, gender, aging, deviance, urbanization, globalization, mass media and stratification. The course encourages students to critically apply insights gained in the classroom to the social contexts around them.

Prerequisite: ENGL 203

FHSC 261 INTRODUCTION TO PSYCHOLOGY**3.0: 3 cr. E**

This course is general overview of the subject matter of psychology. It covers basic biological and perceptual processes, development over the life span, learning, memory, consciousness, personality, stress and coping, psychopathology, social cognition and interpersonal dynamics. Illustrations come from current research, pointing out cross-cultural findings. Special emphasis is placed on the scientific method as a mode of thinking.

FHSC 262 INTRODUCTION TO BUSINESS**3.0: 3 cr. E.**

This is an introduction to the major fields in business administration. It includes principles of economics, management, marketing, finance, accounting and information systems. Not open to business majors.

Prerequisite: ENGL 101

FHSC 263 HUMAN RESOURCES MANAGEMENT**3.0: 3 cr. E.**

An analysis of the policies and practices relating to job analysis, human resource planning, staffing, performance appraisal, training and development, wage and salary administration, and collective bargaining.

FHSC 264 HUMAN GROWTH AND DEVELOPMENT**2.0: 2 cr. E,F**

A survey of principal cognitive, social and behavioral processes that operate across the life span.

Pre-requisite: PY 205/ FHSC 261

FHSC 266 ANTHROPOLOGY AND HEALTH**2.0: 2 cr. E**

This course explores some of the important concepts, methods and perspectives that have been developed by anthropologists and their relevance for health care sciences. Among the topics considered are: culture, qualitative methods, cultural relativity and ethics, gender, family, political structures, symbolic systems.

Pre-requisite: FHSC 260

FHSC 268 SURVEY OF MANAGEMENT AND MARKETING**3.0: 3 cr. E**

An introductory course for non-business students. Topics in Management include the functions of management (Planning, organizing, directing and controlling) and their implementation. Topics in Marketing include the evolution of the marketing concept, segmentation and positioning, strategic decisions involving product, price, promotion and distribution.

FHSC 269 HEALTHCARE MANAGEMENT**3 cr. E**

This course introduces students to management practice in health care settings. It provides a solid foundation of managerial knowledge within the health care industry, covering the competencies, professional skills and challenges related to offering and sustaining quality health services to the community.

FHSC 280 INFORMATION TECHNOLOGY AND HEALTH SCIENCES**1.2: 2 cr. E,F**

An introduction to information technology and its applications in the field of Health Sciences, through lectures and applied sessions in the computer laboratory.

FHSC 281 COMMUNITY HEALTH, EDUCATION AND MOBILISATION **3.0: 3 cr. E**

An introduction to the background, concepts and practices associated with community health and the different forces and determinants that affect the health status and behavior of communities. Students will be introduced to the history, general principles, scope of practice, ethics, work settings, professions, and the role of interdisciplinary teams in community health. Students will have the opportunity to meet with and learn from working professionals in the health sector in Lebanon.

Prerequisite: FHSC 280

Pre or co-requisite: ENGL 102

FHSC 282 PRINCIPLES OF EPIDEMIOLOGY AND BIostatISTICS **3.0: 3 cr. E,F**

An integrated course that introduces the basics in Epidemiology and Biostatistics. Topics include concepts and measures of vital events, health, disease, disability and death, and the risk factors which determine these events in human populations. Methods of presenting health-related data probability models and assessment of causal associations and differences are also covered. Special attention is given to the Lebanese context.

FHSC 284 PROJECT PLANNING AND EVALUATION **3.0: 3 cr. E**

This course aims at introducing the student to the principles of project planning and programming, implementation and evaluation. It walks the students through the process with emphasis on the acquisition of specific skills and use of software.

Pre-requisite: FHSC 262 or permission of the instructor

FHSC 285 /PDHP 229 EPIDEMIOLOGY IN PUBLIC HEALTH PRACTICE **3.0: 3 cr. E**

This course addresses the different concepts and methodologies of the study of epidemiology utilized in the field of public health. It also provides an overview of some of the different sub-disciplines within the broad remit of this field, such as occupational and molecular epidemiology, which have evolved during the past several decades, in order to upgrade the analytical and problem solving skills of the students.

Pre-requisite: FHSC 282

FHSC 286 FINANCIAL MANAGEMENT OF HEALTH AND DEVELOPMENT PROGRAMS **3.0: 3 cr. E**

Introduces the student to the principles and practices important for appropriate financial management of health and development programs. This includes accounting, costing, inventory control, depreciation, alternative mechanisms of financing, etc.

FHSC 287 BIOTECHNOLOGIE ET SANTÉ HUMAINE **3.3 : 3 cr. F**

Ce cours traite certains aspects du monde végétal, animal et alimentaire et leur relation directe avec la santé et les risques qui leur sont associés. Il contient également de l'information au sujet des plantes et leur utilité médicinale, nutritionnelle et cosmétique. Il vise la promotion de la santé par un processus d'évaluation et d'application de conseils pratiques pour protéger sa santé et assurer son bien-être.

FHSC 288 RESEARCH IN HEALTH CARE SCIENCES **3.0: 3 cr. E,F**

This is a senior level course which explores the necessary skills to design, undertake and disseminate research. The course considers the basic steps, methods and strategies of the research process; problem identification, hypothesis development, literature review, research design and methodology, data analysis and results communication. Issues of ethics, funding and research policies at institute, national and international levels are discussed.

Prerequisite FHSC 282, ENGL 204.

FHSC 290 NUTRITION AND DIET THERAPY**2.0: 2 cr. E,F**

Introduces the science of human nutrition, the energy derived from dietary sources, the nutritional needs of humans as well as the assessment of nutritional status across the life span. Special therapeutic diets are discussed within the context of a patient teaching plan.