

FACULTY OF HEALTH SCIENCES

MISSION

The mission of the Faculty of Health Sciences is to be a Center of Excellence in Health Sciences that is locally relevant and globally competitive; to educate health professionals in different health fields to provide ethical, -culturally relevant and evidence-based care; and to undertake research and community development projects relevant to the needs of society.

VISION

The vision of the Faculty of Health Science is to be a world-class Faculty transforming health education and health care and responsive to the needs of the population.

FACULTY LIST

OFFICERS OF THE FACULTY

Warrak, Elias	President of the University
Bahr, Georges	Provost
Abu-Saad Huijjer, Huda	Dean
Abdel Rahman, Abir	Chair, Medical Laboratory Sciences Department
Abdallah, Bahia	Director, Nursing Program
Mrad, Myriam	Chair, Public Health Department
Serhan, Mireille	Chair, Nutritional Sciences Department
Aoun, Habbouba	Director, Department of Community Engagement
Chahine, Rana	Registrar

FACULTY STAFF

Atallah, David	IT Assistant
Chaddad, Rita	Executive Secretary
Constantine, Catherine	Executive Secretary
Khalil, Mayssa	Secretary
Khamis, Youssef	Office Assistant
Khater, Paul	IT Assistant
Lahoud, Cecile	Executive Secretary
Mardini, Rita	Librarian
Nseir, Micheline	Executive Secretary

FACULTY MEMBERS

Abbas, Nivine	Ph.D., Social Sciences and Environmental Studies, University of Twente, Netherland
Abdallah, Bahia	PhD, Nursing and Health Sciences, University of Dundee, UK
Abdel Rahman, Abir	Ph.D., Public Health & Psychological Sciences, University of Strathclyde, Scotland
Abdel Samad, Rana	Ph.D., Biology/Health – Cancer Cell Biology University of Montpellier II, France
Abou Lteif, Ghada	M.S., Biology, American University of Beirut, Lebanon
Abu-Saad Huijjer, Huda	Ph.D., Curriculum & Instruction, Nursing Science, University of Florida, Gainesville
Aoun, Habbouba	Doctorate of Public Health, Atlantic International University, U.S.A.
Azar, Mathil	PhD, Health Sciences, University of Dundee, U.K.
Baboudjian Nayiri	M.A., English Literature, American University of Beirut, Lebanon
Barazi, Rana	Doctorate in Business Administration University of Jean Moulin Lyon III, France
Berro, Abdo	Ph.D., Medical Microbiology and Immunology, Creighton University, U.S.A.
Broumana, Jessy	B.S., Medical Laboratory Sciences, University of Balamand, Lebanon

Chabbani, Sana	M.A., School Counseling, Lebanese American University, Lebanon
Dano, Dominique	Ph.D., Health and Life Sciences Lorraine University, France.
Daoud, Rachelle	Doctor of Physiotherapy, M.P.H., Saint Joseph University, Lebanon
Dib, Liza	M.S., Microbiology, Lebanese University, Lebanon
El Chaar, Mira	Ph.D., Molecular Microbiology, University of Cambridge, U.K.
Georges, Vicky	M.S., Nursing, St. Joseph University, Lebanon
Germanos, Peggy	M.S., Nursing, St. Joseph University, Lebanon
Greige, Layal	M.S., Immunology and Microbiology, American University of Beirut, Lebanon
Habib, Hiba	M.S., Nursing, St. Joseph University, Lebanon
Haddad, Lara	Ph.D., Immunology, University of Aix-Marseille II, France
Jaalouk, Lina	M.S., Health Promotion Management, Marymount University, U.S.A.
Karhily, Roubina	M.P.H., Health Management and Policy, American University of Beirut, Lebanon
Kobrossy, Michline	M.S., Occupational Health, University of Birmingham, England
Maarawi, Thérèse	M.S., Chemistry, University of Balamand, Lebanon
Mrad, Myriam	Ph.D., Epidemiology & Public Health, Université Pierre et Marie Curie- Paris VI
Rahi(El), Stephanie	M.S., Nutrition, American University of Beirut, Lebanon
Rouaiheb (El), Hiba	M.S., Food Technology, American University of Beirut, Lebanon
Said, Manal	B.S.N., M.P.H., Liege University, Belgium
Serhan, Mireille	Ph.D., Food Engineering and Biotechnology, National Polytechnic Institute of Lorraine, France
Shoucair, Gretta	M.S., Food Technology, American University of Beirut, Lebanon
Tawk, Lina	Ph.D., Health Sciences, Université de Montpellier, France
Wakim, Zeina	D.E.A., Social Sciences, Lebanese University, Lebanon

PROGRAMS OF STUDIES

The Faculty of Health Sciences encompasses the following academic departments / programs:

•BS in Health Promotion	3 years
•BS in Medical Laboratory Sciences	3 years
•BS in Nursing (offered in English and French)	3 years
•Ladder Program in Nursing (offered in English and French)	3 years
* BT-BSN Program	
* TS-BSN Program	
•BS in Nutritional Sciences	3 years
•Diploma in Clinical and Dietetics internship	1 year
•BS in Public Health and Development Sciences	3 years
•Dual Degree in Public Health and Development Sciences and Health Promotion, leading to two BS degrees	4 years
•Dual Degree in Medical Laboratory Sciences and Public Health and Development Sciences, leading to two BS degrees	4 years
•Minor in Public Health	1 year
•Minor in Nutritional Sciences	1 year
•Premedical Program	

The Academic Programs are supported by a wide range of Community Engagement 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.

Codes	Description	Codes	Description
FHSC	Faculty Courses	CSPR	Cultural Studies Courses
MLAB	Medical Laboratory Sciences Courses	ENGL	English Language and Literature Courses
NURS	Nursing Courses	FREN	French Language and Literature Courses
NUSC	Nutritional Sciences Courses	LISP	Library and Information Science Courses
PDHP	Public Health and Development Sciences/ Health Promotion Courses	CHEM	Chemistry Courses
BIOL	Biology Courses	SOCL	Sociology Courses
PSYC	Psychology 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 / program curricula).

Non – major courses: Students 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 programs 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

Refer to the University Rules and Regulations

3. ACADEMIC RULES AND REGULATIONS

Refer to the University Rules and Regulations

A- ACADEMIC PERFORMANCE

Refer to the 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 at the Main Campus have access to the University dorms (refer to the “General Information Section” in this catalogue). Reservations must be made upon acceptance for admission.

5. FINANCIAL AID

The University offers financial aid.

- Scholarships are offered by SGHUMC at the Dekouaneh Campus for Nursing students
- Nursing and Public Health and Development Sciences students are offered a special scholarship of 30 % in addition to up to 20% financial aid starting the first semester they join the University
- Nutritional Sciences students are offered a special scholarship of 25%

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 clinical settings 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

Dekouaneh and Souk El Gharb Campuses' students are responsible for providing their own transportation. Students at the Main Campus can use the University Shuttle service (refer to the "General Information Section" in this catalogue).

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 Health Promotion, Medical Laboratory Sciences, Nursing, Nutritional Sciences and Public Health and Development Sciences. For other graduation requirements refer to the "General Information Section" in this catalogue.

BACHELOR OF SCIENCE IN **MEDICAL LABORATORY SCIENCES**

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 203	English Communication Skills III	3
BIOL 201	General Biology I	3
BIOL 202	General Biology I- Laboratory	1
CHEM 202	Basic Chemistry	3
CHEM 203	Basic Chemistry Laboratory	1
	Business and Social Sciences - Elective	3
		14
Total		14

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204	English Communication Skills IV (or its equivalent)	3
FHSC 203	Basic Human Physiology	4
CHEM 240	Basic Organic Chemistry	
or		
CHEM 242	Organic Chemistry I	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
LISP 200 ¹	Library Use and Research Methods	1
		14
Total		14

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 233	Toxicology	2
		2
Total		2

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 211	Clinical Chemistry 1	3
MLAB 213	General Microbiology	3
BIOL 251	Basic Biochemistry	3
MLAB 224	Medical Parasitology & Mycology	2
CHEM 245	Organic Chemistry I Lab	1
	General Elective	3
		15
Total		15

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 215	Basic and Clinical Hematology	4
MLAB 221	Clinical Chemistry II	3
MLAB 223	Clinical Bacteriology	3
MLAB 225	Clinical Bacteriology Lab	1
MLAB 249	Phlebotomy, Blood Banking and Transfusion Medicine	2
	Business and Social Sciences - Elective	3
Total		16

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
	Clinical Training	4
Total		4

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural Studies Courses	3
MLAB 226	Histotechnology Applications	2
MLAB 214	Basic and Clinical Immunology	3
	Clinical Training	4
Total		13

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural Studies Courses	3
FHSC 271 ¹	First Aid	1
FHSC 288	Research in Health Care Sciences	3
MLAB 230	Molecular Biology	3
MLAB 232	Medical Virology	2
MLAB 260	Advanced Topics in Quality Assurance	1
MLAB 350 ³	Advances in clinical training	4
Total		17
Total Credits		95

Clinical Training:

MLAB 251	Applied Clinical Chemistry	1
MLAB 252	Applied Clinical Hematology	1
MLAB 253	Applied Clinical Bacteriology and Mycology	1
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

All major courses have a passing grade = 65

All practical training courses (MLAB251, MLAB252, MLAB 253, MLAB254, MLAB255, MLAB256, MLAB 257 and MLAB258) and MLAB 350 have a passing grade = 70

1- Required ne-fee course

2-Students may choose any C SPR course except C SPR 205 and C SPR 206

3-Directed Elective.

BACHELOR OF SCIENCE IN MEDICAL LABORATORY

SCIENCES-PREMEDICAL TRACK

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
BIOL 201	General Biology I	3
BIOL 202	General Biology I Laboratory	1
CHEM 202	Basic Chemistry	3
CHEM 203	Basic Chemistry Laboratory	1
ENGL 203	English Communication Skills III	3
PSYC 200	Introduction to Psychology	3
LISP 200 ¹	Library Use and Research Methods	1
Total		15

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CHEM 222	Analytical Chemistry I	3
CHEM 242	Organic Chemistry I	3
ENGL 204	English Communication Skills IV or its Equivalent	3
FHSC 203	Basic Human Physiology	4
FHSC 282	Principles of Epidemiology & Biostatistics	3
Total		16

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 204	Principles of Genetics	2
PHYS 211	Fundamentals of Physics I	3
Or		
PHYS213	Fundamentals of Physics II	
Total		5

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CHEM 244	Organic Chemistry II	3
MLAB 211	Clinical Chemistry I	3
MLAB 213	General Microbiology	3
BIOL 251	Basic Biochemistry	3
PHYS 211	Fundamentals of Physics I	3
Or		
PHYS 213	Fundamentals of Physics II	
Total		15

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CHEM245	Organic Chemistry Laboratory I	1
MLAB 215	Basic and Clinical Hematology	4
MLAB 221	Clinical Chemistry II	3
MLAB 223	Clinical Bacteriology	3
MLAB 225	Clinical Bacteriology Laboratory	1
MLAB249	Phlebotomy, Blood Bank and Transfusion Medicine	2
SOCL 202	Sociology	3
Or		
CSPR	Cultural Studies Courses	
Total		17

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 230	Molecular Biology	3
	Clinical Training	2
Total		5

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
MLAB 214	Basic and Clinical Immunology	3
MLAB 224	Medical Parasito & Mycology	2
MLAB 226	Histotechnology Applications	2
SOCL202	Sociology	3
OR		
CSPR ²	Cultural Studies Courses	
	Clinical Training	3
Total		13

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 271 ¹	First Aid	1
FHSC 288	Research in Health Care Sciences	3
MLAB 232	Medical Virology	2
MLAB 233	Toxicology	2
MLAB 260	Advanced Topics in Quality Assurance	1
SOCL202	Sociology	3
OR		
CSPR ²	Cultural Studies Courses	
	Clinical Training	3
Total		15

Total Credits **101**

Clinical Training:

MLAB 251	Applied Clinical Chemistry	1
MLAB 252	Applied Clinical Hematology	1
MLAB 253	Applied Clinical Bacteriology and Mycology	1
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

All major courses have a passing grade = 65

All practical training courses have a passing grade = 70

1- Required no-fee course

2- Students may choose any CSPR course except CSPR205 and CSPR206

COURSE DESCRIPTIONS

CSPR CULTURAL STUDIES COURSES

Refer to the Cultural Studies Program.

ENGL 203, 204, (or its equivalent)

Refer to the Division of English Language & Literature.

LISP 200 LIBRARY USE AND RESEARCH METHODS

Refer to the Department of Library and Information Science.

FHSC 203, 204, 219, 251, 267, 268, 271, 280, 282, 288

Refer to the Faculty of Health Sciences Service Courses.

BIOL 201, 202 - CHEM 202, 203, 240, 242, 244, 245 - PHYS 211, 213 - PSYC 200 - SOCL 202

Refer to the Faculty of Arts and Sciences

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.

Pre-requisite: FHSC 203.

Co-requisite: BIOL 251.

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: BIOL 201.

MLAB 214 BASIC & CLINICAL IMMUNOLOGY**3.0: 3 cr. E**

The purpose of basic Immunology is to provide fundamental knowledge of the immune response and its involvement in health and disease. Elementary concepts of immunity, structure and function of the immune system, antigens and antibodies, complements, genetic basis of the immune response, humoral and cellular immunity, immunological tolerance, organ and tissue transplantation, allergy and autoimmunity are discussed. The clinical laboratory part of the course covers topics pertaining to antigen-antibody interactions, precipitation/agglutination techniques, complement fixation pathways and immune-techniques such as RIA, ELISA, immune-fluorescence and their clinical ramifications, in addition to autoimmune/infectious diseases and clinical applications. Pre-requisite: FHSC 203.

MLAB 215 BASIC & CLINICAL HEMATOLOGY**4.0: 4 cr. E**

The course covers principles of blood cell production and functions. The first part introduces the basic practice and procedure with emphasis on normal hematopoiesis, morphology and on peripheral blood and bone marrow, in addition to normal hemostasis. The second part of the course covers hematological anomalies with focus on anemia and leukemia in addition to platelet disorder. Laboratory sessions cover complete CBCD, smearing and staining, determination of erythrocyte sedimentation rate, blood grouping, manual determination of hematocrit and hemoglobin, in addition to introductory blood filming.

Pre-requisite: FHSC 203.

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.

Co-requisite: MLAB 211.

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: BIOL 201.

MLAB 225 CLINICAL BACTERIOLOGY LABORATORY**0.3: 1 cr. E**

The course introduces various test procedures routinely applied in clinical bacteriology with an emphasis on the isolation, identification and antimicrobial susceptibility testing of pathogenic microorganisms isolated from clinical specimens.

Pre-requisite: MLAB 213.

Co-requisite: MLAB 223.

MLAB 226 HISTOTECHNOLOGY APPLICATIONS**2.1: 2 cr. E**

This course concentrates on the structure of human tissues and organs. Students will study theory and basic techniques in immunohistochemistry. The laboratory component of the course involves the classic microscopic study of different normal and diseased human tissue microscopic specimens.

Pre-requisite: BIOL 201.

MLAB 230 MOLECULAR BIOLOGY**3.0: 3 cr. 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: BIOL 201.

MLAB 232 MEDICAL VIROLOGY**2.0: 2 cr. 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: BIOL 201.

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: BIOL 201.

MLAB 240 ADVANCES IN MEDICAL LABORATORY SCIENCES**2.0: 2 cr. E**

This course provides students with an overview and basic principles on quality management system. The objective is to emphasize on main components of QMS which could affect the accuracy of analytical measurements. Additionally, discussion on requirements from international standard for quality as well as Lebanese standard for accreditation of health care institutes will be discussed which are aiming to prove the credibility and the good performance of an facility.

Pre-requisite: MLAB 249 or 250.

MLAB 249 PHLEBOTOMY, BLOOD BANK AND TRANSFUSION MEDICINE**2.0: 2 cr. E**

This course provides students with an overview of general activities within the different clinical laboratory departmental sections. The course tackles issues such as phlebotomy techniques theoretical and practical, laboratory policies, safety, patient confidentiality, integrity and compliance, emergency preparedness. It also covers guidelines for proper tests, preparation of blood units and performance, and introduces the basic concepts of transfusion Medicine.

Pre-requisite: FHSC 203.

MLAB 250 INTRODUCTION TO MEDICAL LABORATORY**1 cr. E**

This course provides students with an overview of general activities within the different clinical laboratory departmental sections. The course involves general orientations sessions, and tackles issues such as laboratory policies, safety, patient confidentiality, integrity and compliance, emergency preparedness. It also covers guidelines for proper test preparation and performance, and introduces students to phlebotomy.

Pre-requisite: FHSC 203

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

Practical experience of 3 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. Students are trained to perform most routine tests manually and using automated analyzers. The clinical routine is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 249

Co-requisite: MLAB 211

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

Practical experience in clinical hematology and phlebotomy of 3 weeks duration, offers the students the possibility to get familiar with the majority of procedures performed in the hematology section. This includes smearing, staining differential and in addition to special stains done in this department. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 249

Co-requisite: MLAB 215

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

Practical experience of 3 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 student is also responsible to learn about new developments, procedures and techniques in microbiology. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 223, MLAB 249 or 250

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

This corresponds to a hands-on experience in a hospital operation and to integrate theoretical knowledge with practical application for the laboratory diagnosis and human diseases related to parasitic infections, male infertility and disorders detectable by microscopic examination of urine specimens. The duration extends for 3 weeks. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 250.

Co-requisite: MLAB 224.

MLAB 255 APPLIED CLINICAL IMMUNOLOGY AND ENDOCRINOLOGY**1 cr. E**

Practical experience in the Endocrinology (1 week) and Serology (1 week) departments allows students to perform special procedures. This includes 1 week of phlebotomy in the respective section of the clinical Laboratory Medicine department. The student is exposed to the different procedures performed in this branch. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective fields.

Pre-requisite: MLAB 250.

Co-requisite: MLAB 214.

MLAB 256 APPLIED BLOOD BANKING**1 cr. E**

Practical experience in Blood banking of 3 weeks duration enables students to experience routine and special procedures in Blood Banking. Students will pass in the donor room and the blood working area. They will be acquainted with the procedures related to infectious screening, pre-transfusion, compatibility testing; diagnosis testing; component preparation and storage. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 249

Co-requisite: MLAB 215

MLAB 257 APPLIED ANATOMIC PATHOLOGY**1 cr. E**

Practical experience in the Pathology department of the hospital of 3 weeks duration offers the student the opportunity to acquaint with histology and cytology procedures. Students will understand better the importance of all steps from receiving specimen to the release of final report. The rotation includes specimen reception, grossing, cassetting and processing of specimens. In addition, the rotation includes embedding and sectioning of tissue blocks. Students will perform whenever possible H & E staining and mounting of slides. They will also observe techniques related to immunohistochemistry and cytopathology. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective field.

Pre-requisite: MLAB 249 or 250.

Co-requisite: MLAB 226.

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 (1 week) offers the student the opportunity to be trained to the main procedures used in section. The clinical rotation is complemented by 4 lecture hours covering advanced topics in the respective fields.

Pre-requisite: MLAB 249 or 250.

Co-requisite: MLAB 230.

MLAB 260 ADVANCED TOPICS IN QUALITY ASSURANCE

1 cr. E

This course provides students with an overview and basic principles on quality management system. The objective is to emphasize on main components of QMS which could affect the accuracy of analytical measurements. Additionally, discussion on requirements from international standard for quality as well as Lebanese standard for accreditation of health care institutes will be discussed which are aiming to prove the credibility and the good performance of a facility.

Pre-requisite: MLAB 249

MLAB 350 ADVANCED CLINICAL PRACTICUM

4 cr. E

This course provides 15 weeks of extended hands-on specialized laboratory training in one of the testing laboratories in the Department of Clinical Laboratory at Saint George Hospital University Medical Center. The training includes a thorough review of procedural methodologies while emphasizing the association between laboratory testing and patient care.

Pre-requisites: MLAB 249

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 203 ¹	English Communication Skills III	3
BIOL 205	Principles of Human Biology	3
FHSC 280	Information Technology and Health Sciences	2
LISP 200 ²	Library Use and Research Methods	1
NUSC 209	Basic Nutrition and Diet Therapy	3
NURS 210	Introduction to Professional Nursing	2
PSYC 200	Introduction to Psychology	3

17

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204 ¹	English Communication Skills IV or its equivalent	3
FHSC 202	Introduction to Human Anatomy	2
FHSC 203	Basic Human Physiology	4
FHSC 209	Fundamentals of Microbiology	2
NURS 211	Introduction to Nursing Practice	4

15

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 264	Human Growth and Development	2
FHSC 271 ²	First Aid	1
NURS 212	Legislation and Nursing	1
NURS 214	Service Training I ³	-
NURS 216	Health Assessment	2

6

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 211	Pathophysiology	3
FHSC 229	Pharmacology	2
NURS 241	Nursing Care of Adults	5
NURS 247	Nursing Care in Perinatology and Gynecology	4
	Elective	3

17

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
SOCL 202	Sociology	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
NURS 242	Nursing Care of Adults II	5
NURS 244	Nursing Care of Children	5
NURS 245	Nursing Care of the Elderly	2

18

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ⁴	Cultural Studies Courses	3
NURS 215 ³	Service Training II	-
NURS 246	Mental Health and Psychiatric Nursing	4

7

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ⁴	Cultural Studies Courses	3
FHSC 288	Research in Health Care Sciences	3
NURS 248	Nursing Care of Adults in Critical Condition	4
NURS 249	Nursing in the Community	5

15

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NURS 250	Leadership and Management in Nursing and Health	5
NURS 251 ⁵	Internship	-

5

Total number of credits

100

1. In the French Track, FREN 201 and FREN 202 respectively replace ENGL 203 and ENGL 204
 2. Required no-fee course.
 3. Service Training I and II are required for graduation. Each is equivalent to 90 hours (2 Credits). Students are evaluated as P= Pass or F= Fail.
 4. Students may choose any CSPR course. Each should be from a different stream.
 5. Internship is equivalent to 450 hours of clinical training. (10 Credits)
- All NURS courses passing grade is 70. Other courses passing grade is 60.

Nursing Pre-med Track:

A nursing student may choose the Pre-med track. Accordingly, she/he has to take 16 additional credits to the basic Nursing curriculum. This is the minimum number of credits needed.

The required courses are:

•Biology – 8 credits distributed as follows:

-BIOL 201 Introduction to Biology I 3cr Instead of BIOL 205 or FHSC 207

-BIOL 202 Introduction to Biology I Lab 1cr

-FHSC 203 Introduction to human Physiology 4cr (It is a required Nursing course)

•Chemistry – 12 credits:

-CHEM 202 Basic Chemistry 3cr

-CHEM 242 Organic Chemistry I 3cr

-CHEM 244 Organic Chemistry II 3cr

-CHEM 222 Analytical Chemistry I 3cr

•Physics – 6 credits:

-PHYS 211 Fundamentals of Physics I 3cr

-PHYS 213 Fundamentals of Physics II 3cr

LADDER PROGRAMS IN NURSING

The Nursing Program offers a Ladder Program that upgrades a TS and BT degree holders in nursing to the level of Bachelor of Science in nursing.

TS-BSN PROGRAM

The decrees that were issued to regulate technical education and open opportunities for graduates of technical programs to join university education (Decree # 8590 and Decision # 35/2012) are summarized as follows:

- A TS graduate who scores 12/20 in the official final exams may join a university program to pursue a university degree.

- The accepted candidate should successfully complete at least 50% of the total number of required BSN credits.

Accordingly, a TS - BSN student should successfully complete 52 credits to receive a BSN.

The nurse may join the Program after meeting the University admission requirements concerning English or French.

The number of mandatory credits that a student should successfully complete is equal to 26 credits. The remaining 26 credits can be earned by examination i.e. CBE.

Students are capable of completing the requirements within three regular semesters and one summer.

The new curriculum or list of courses:

MANDATORY COURSES:

CSPR ¹	Cultural Studies courses	3
CSPR ¹	Cultural Studies courses	3
ENGL 203 ²	English Communication Skills III	3
ENGL 204 ²	English Communication Skills IV or its equivalent	3
FHSC 282	Principles of Epidemiology and BioStatistics	3
FHSC 288	Research in Health Care Sciences	3
LISP 200 ³	Library Use and Research Methods	1
NURS 216	Health Assessment	2
NURS 250	Leadership and Management in Nursing and Health	5

Sub-Total

26 credits

CBE (CREDIT BY EXAMINATION) COURSES

FHSC 211	Pathophysiology	3
FHSC 229	Pharmacology	2
NURS 241	Nursing Care of Adults I	5
NURS 242	Nursing Care of Adults II	5
NURS 245	Nursing Care of the Elderly	2
NURS 246	Mental Health and Psychiatric Nursing	4
NURS 249	Nursing in the Community	5

Sub-Total

26 credits

1-Students may choose any CSPR course except CSPR205 and CSPR206

2-In the French Track, FREN 201 and FREN 202 respectively replace ENGL 203 and ENGL 204

3-Required no-fee course.

All other holders of TS in nursing who had scored less than 12/20 in the official exams may join the BSN program after meeting the University admission requirements concerning English or French, in addition to 12 credits remedial courses.

The student has to take at least 91 credits of which 26 are the courses mentioned above mandatory and the rest can be earned by examination. The program is the same as that of the BT-BSN.

BT-BSN PROGRAM

A. BT holders with No Working Experience:

A holder of a BT in nursing from 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. 100 credits, in addition to 12 credits remedial courses. (Chemistry, Biology, Mathematics, and physics).

B. BT holders with Working Experience:

A holder of BT in nursing from a government accredited BT program with at least 1 year of experience may join the BSN program after meeting the University admission requirements concerning English or French, in addition to 12 credits remedial courses

The student has to take at least 91 credits. His/her 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>
ENGL 203 ¹	English Communication Skills III	3
ENGL 204 ¹	English Communication Skills IV (or its equivalent)	3
CSPR ²	Cultural Studies Courses	3
CSPR ²	Cultural Studies Courses	3
FHSC 202	Introduction to Human Anatomy	2
FHSC 203	Basic Human Physiology	4
FHSC 209	Fundamentals of Microbiology	2
FHSC 211	Pathophysiology	3
FHSC 229	Pharmacology	2
FHSC 264	Human Growth and Development	2
FHSC 271 ³	First Aid	1
FHSC 280	Information Technology and Health Sciences	2
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 288	Research in Health Care Sciences	3
LISP 200 ³	Library Use and Research Methods	1
NURS 210	Introduction to Professional Nursing	2
NURS 211	Introduction to Nursing Practice	4
NURS 212	Legislation and Nursing	1
NURS 216	Health Assessment	2
NURS 241	Nursing Care of Adults I	5
NURS 242	Nursing Care of Adults II	5
NURS 244	Nursing Care of Children	5
NURS 245	Nursing Care of the Elderly	2
NURS 246	Mental Health and Psychiatric Nursing	4
NURS 247	Nursing Care in Perinatology and Gynecology	4
NURS 248	Nursing Care of Adults in Critical Condition	4
NURS 249	Nursing in the Community	5
NURS 250	Leadership and Management in Nursing and Health	5
PSYC 200	Introduction to Psychology	3
SOCL 202	Sociology	3
TOTAL		91

1. In the French Track, FREN 201 and FREN 202 respectively replace ENGL 203 and ENGL 204
2. Students may choose any C SPR course except C SPR205 and C SPR206
3. Required no-fee course.

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 209	Fundamentals of Microbiology	2
FHSC 280	Information technology and Health Sciences	2
NURS 210	Introduction to Professional Nursing	2
NURS 211	Introduction to Nursing Practice	4
Total number of credits		10

COURSE DESCRIPTIONS

C SPR CULTURAL STUDIES

Refer to the Cultural Studies Program.

ENGL 203, 204

Refer to the Division of English Language & Literature.

FREN 201, 202

Refer to the Department of French Language and Literature.

LISP 200 LIBRARY USE AND RESEARCH METHODS

Refer to the Department of Library and Information Science.

FHSC 202, 203, 204, 209, 264, 271, 280, 282, 288

Refer to Faculty of Health Sciences Service Courses.

BIOL 201, 202, 205 - CHEM 202, 203, 242, 244, 245, 247 - PHYS 211, 213 - PSYC 200 - SOCL 202

Refer to the Faculty of Arts and Sciences

FHSC 211 PATHOPHYSIOLOGY

3.0: 3 cr. E/F

The course addresses the effect of the disease process on the physiological functioning of the adult and the related adaptation process. It highlights on the multi-system interaction of the body to illness or injury, and covers the most common pathophysiological disorders.

Pre-requisites: FHSC 203.

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.

Pre-requisite: FHSC 203.

NUSC 209 BASIC NUTRITION AND DIET THERAPY

Refer to the Nutritional Sciences Program courses.

NURS 210 INTRODUCTION TO PROFESSIONAL NURSING**2.0: 2 cr. E/F**

The course introduces the student to the framework of UOB nursing curriculum. It focuses on nursing as a caring profession. It emphasizes role development of the professional nurse as well as the major historical events that shaped the nursing profession. Content includes concepts of health and disease, critical thinking, evidence based practice, ethical principles and moral issues which arise in health care practice. Theories and concepts related to the profession and discipline of nursing are highlighted. In addition, students will be exposed to the health care system and nursing education in Lebanon.

NURS 211 INTRODUCTION TO NURSING PRACTICE**6 : 4 cr. E/F**

This course introduces the principles of communication, the components of the nursing process and basic practice issues. In the laboratory as well as in the clinical setting, students practice skills in safety, hygiene, infection control, communication and basic physical assessment. In addition to hands-on application in elderly home.

Pre-requisite: NURS 210.

Pre / Co-requisite: FHSC 202/203.

NURS 212 LEGISLATION AND NURSING**1.0: 1 cr. A**

This course enhances students' awareness and increases students' understanding of the legal aspects of nursing in Lebanon.

NURS 214 SERVICE TRAINING I***6.0: 2cr. E/F**

This clinical training aims at enhancing students' basic nursing skills in a hospital setting.

Pre-requisite: NURS 211.

NURS 215 SERVICE TRAINING II ***6.0: 2cr. E/F**

This clinical training aims at enhancing students' nursing skills, clinical judgment, management, and teaching skills, they would have acquired as students in their second year.

Pre-requisite: NURS 242.

NURS 216 HEALTH ASSESSMENT**2.0: 1 cr. E/F**

This course is designed to build students' capacities in performing a comprehensive health assessment for adult clients. It also develops their skills in interviewing and health and social history taking in order to formulate initial careplans. The course offers students an understanding of the different examination techniques in an organized and proper fashion for each body system. Practical training on simulated models and real clients provides students with hands-on experience in head to toe health examination.

Pre-requisite: NURS 211.

Co-requisite: NURS 214.

NURS 241 NURSING CARE OF ADULTS I**10: 5 cr. E/F**

This course builds upon the nursing concepts introduced in (NURS 211). It enables students to understand the assessment and management of patients with specific diseases and surgical conditions of the Respiratory, Cardiovascular, Musculo-skeletal, Endocrine and Immune systems. Practical training provides students with the opportunity to assess, plan, implement and evaluate nursing care of adult patients. Holistic nursing care that attends to the physical, psycho-social and spiritual needs of the patient and his/her family is emphasized. Patient teaching that supports the continuum of care is highlighted.

Pre-requisite: NURS 214.

Pre or Co-requisite: FHSC 211.

NURS 242 NURSING CARE OF ADULTS II**10: 5 cr. E/F**

This course builds upon the nursing concepts introduced in (NURS 211). It enables students to understand the assessment and management of patients with specific diseases and surgical conditions of the Urinary, Gastrointestinal, Hematology-oncology and Nervous systems. Practical training provides students with the opportunity to assess, plan, implement and evaluate nursing care of adult patients. Holistic nursing care that attends to the physical,

psycho-social and spiritual needs of the patient and his/her family is emphasized. Patient teaching that supports the continuum of care is highlighted.

Pre or Co-requisite: FHSC 211.

Pre-requisite: NURS 241.

NURS 244 NURSING CARE OF CHILDREN

10: 5 cr. E/F

This course provides the student with the opportunity to learn the physical, psychomotor, social and spiritual needs of the well and ill child, from infancy through adolescence. The nursing process serves as a framework for study and application. Emphasis is placed on health promotion, restoration, and maintenance during the stages of child development. Clinical practice is planned to provide students with direct observation of the child and application of nursing care. The clinical setup ranges from primary healthcare setting, to outpatient department, to general unit and critical care areas. Family teaching that supports the continuum of care is emphasized.

Pre-requisites: NURS 247.

Pre or Co-requisite: FHSC 264.

NURS 245 NURSING CARE OF THE ELDERLY

4: 2 cr. E/F

This course focuses on developing knowledge and skills in problem-solving and clinical judgment in relation to the aging process and gerontological care. In the practical component students assess, plan, implement and evaluate nursing care of the elderly. Appropriate nursing care of older adults is discussed emphasizing the impact of illness and the aging process on the family.

Pre or Co-requisite: NURS 241, 242.

NURS 246 MENTAL HEALTH AND PSYCHIATRIC NURSING

8: 4 cr. E/F

The course includes the nursing care of the childbearing family and women in the different phases of their reproductive and menopausal life. The focus is on pre, per and postnatal care of the mother and her newborn and on the gynecology concerns/problems of women throughout their life span. Nursing care is delivered in a holistic and family centered approach considering the physical, psychosocial and spiritual needs of women. The course emphasizes on health education and promotion.

Pre-requisite: FHSC 264, NURS 242.

NURS 247 NURSING CARE IN PERINATOLOGY AND GYNECOLOGY

8: 4 cr. E/F

The course includes the nursing care of the childbearing family in the different reproductive life phases. The focus is on the delivery of pre, per and postnatal nursing care in a holistic and family centered approach considering the physical, psychosocial and spiritual needs. The course also focuses on nursing care of women with concerns and problems of the reproductive system throughout the life span. The course emphasizes on health education and promotion within a caring, safe and ethical environment.

Pre or Co-requisite: FHSC 211, NURS 241.

NURS 248 NURSING CARE OF ADULTS IN CRITICAL CONDITION

8: 4 cr. E/F

This course introduces the student to the multidisciplinary concepts needed to take care of patients experiencing complex life-threatening problems in acute critical care settings. In the practicum component, the student will have the opportunity to focus on correlating scientific body of knowledge with critical analysis to develop collaborative problem solving skills that restore patient and family stability. Focus is on advanced nursing skills, the application of biomedical technology and compassionate nursing care delivery to patient and family in crisis.

Pre-requisite: NURS 215, 242.

NURS 249 NURSING IN THE COMMUNITY**10: 5 cr. E/F**

The course provides students with the opportunity to study nursing in multiple setups, outside a hospital setting. It helps the students develop their understanding about health, psychosocial and spiritual needs of individuals, families and communities on the full health trajectory. In the practical component of the course, students gain hands-on experience in the community. They meet the challenge of transferring their skills and know-how to the client in his/her own milieu, focusing on health promotion, restoration and rehabilitation.

Pre-requisites: NURS 244, 245.

NURS 250 LEADERSHIP AND MANAGEMENT IN NURSING AND HEALTH**10: 5 cr. E/F**

This course incorporates the concepts of leadership, management, creativity, analysis, power, change and evaluation. It allows the student to explore his/her role as a beginning potential leader and change agent, throughout the different modalities of leadership utilizing nursing and management theories.

Pre-requisite: NURS 248, 249.

NURS 251 INTERNSHIP*

This course gives the student the opportunity to apply nursing practice supported by solid scientific theory, critical thinking, and analysis. It is 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. The student is placed in an area according to his/her own interest, aiming at preventing “reality shock” after graduation. Multidisciplinary interaction with the health team is emphasized.

Pre or co-requisite: NURS 250.

NURS 254 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 DEGREES IN PUBLIC HEALTH

The Faculty of Health Sciences offers several options in the fields of Public Health. Students may take a multidisciplinary, community-oriented BS degree in Public Health and Development Sciences or in Health Promotion. Either of these can be completed over a minimum period of three academic years.

Qualified students may also complete Premedical requirements with their BS degree, or take a second BS degree in a Dual Degree Program.

Information concerning the Program Mission, Objectives and Learning Outcomes is available on the Program website: <http://www.balamand.edu.lb/faculties/FHS/AcademicPrograms/Pages/PublicHealth.aspx>

BACHELOR OF SCIENCE IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES

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>
ENGL 203	English Communication Skills III	3
BIOL 201 ¹	Introduction to Biology	3
LISP 200 ²	Library Use and Research Methods	1
CHEM 208 ¹	Basic Chemistry for Public Health	3
CHEM 209	Basic Chemistry for Public Health Laboratory	1
PDHP 219	Introduction to Public Health**	3
Total		14

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204	English Communication Skills IV (or its equivalent)	3
SOCL 202	Sociology	3
FHSC 262	Introduction to Business	3
or		
CHEM 242	Organic Chemistry I	3
PDHP 200	Microbiology for Health Sciences	3
PDHP 201	Environment, Health and Development**	3
Total		15

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ³	Cultural Studies Courses	3
FHSC 271 ²	First Aid	1
Total		4

SECOND YEAR**SEMESTER 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 269	Health Care Management and Administration	3
NUSC 208	Public Health Nutrition and Food Hygiene**	3
PDHP 214	Family Health**	3
PDHP 226	Sanitation & Resource Management for Public Health**	3
PDHP 249	Toxicology and Human Health Risk Assessment **	3
Total		15

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 284	Project Planning and Evaluation**	3
PDHP 227	Occupational Health and Hygiene**	3
PDHP 247	Economics in Environment, Health and Development**	3
	Suggested elective	3
Total		15

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 260	Student Project Residency Internship**	3
Total		3

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 229	Epidemiology in Public Health Practice**	3
PDHP 231	Public Administration and Policy in Lebanon	3
PDHP 237	Public Health Communication in the Arab World	3
PDHP 238	Environmental Management in Public Health Practice**	3
PDHP 242	Public Health and Urban Environments	3
Total		15

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ³	Cultural Studies Program	3
FHSC 266	Anthropology and Health	2
FHSC 288	Research in Health Care Sciences	3
PDHP 245	Issues in Community Health and Development **	3
	Free Elective	3
Total		14
Total Credits		95

1. Students following regular Public Health track need to take BIOL 205, CHEM 208, and CHEM 209. Students following Public Health Pre-med track need to take BIOL 201, CHEM 202, and CHEM 203.
2. Required no-fee course.
3. Students may choose any CSPR course from two different streams, except for CSPR 205 and CSPR 206.

Number of Credits in Major: 39 Credits

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

Students should consult their advisor for suitable “suggested” elective

Suggested Elective:

Course Code	Course Title	Credits
BIOL 202	General Biology Lab I	1
BIOL 251	Principles of Biochemistry	3
CHEM 222	Analytical Chemistry I	3
CHEM 244	Organic Chemistry II	3
CHEM 245	Organic Chemistry I Laboratory	1
CHEM 247	Organic Chemistry Lab II	1
FHSC 202	Introduction to Human Anatomy	2
FHSC 203	Basic Human Physiology	4
FHSC 204	Principles of Genetics	2
FHSC 259	Humanitarian Aid and Emergency Response	3
FHSC 264	Human Growth and Development	2
FHSC 280	Information Technology and Health Sciences	2
FHSC 286	Financial Management in Health and Development Programs	3
MLAB 211	Clinical Chemistry I	3
MLAB 230	Molecular Biology	3
MPHP 306*	Theories of Health Promotion	3
MPHP 308*	Public Health Ethics	1
MPHP 333*	Current Issues in Public Health	3
PDHP 212	Introduction to Ecology	3
PDHP 213	Marketing, Design and Development of Media Tools	3
PDHP 218	Principles of Health Promotion I	3
PDHP 224	Gender and Development	3
PDHP 232	Educational Strategies in Health Promotion	3
PDHP 243	Stress Management and Health	3
PDHP 244	Human Rights in Health	3
PDHP 246	Illness, Disease and Lifestyles	3
PDHP 250	Themes in Public Health and Development	3
PDHP 255	Global Health	3
PHYS 211	Fundamentals Of Physics I	3
PHYS 213	Fundamentals Of Physics II	3
PSYC 200	Introduction to Psychology	3

*Undergraduate students can take one MPH course as an elective if they are in good academic standing and they receive permission from the Chairperson.

COURSE DESCRIPTIONS

CSPR CULTURAL STUDIES COURSES

Refer to the Cultural Studies Program.

ENGL 203, 204 (or its equivalent)

Refer to the Division of English Language & Literature.

LISP 200 LIBRARY USE AND RESEARCH METHODS

Refer to the Faculty of Library and Information Studies.

FHSC 259, 262, 263, 266, 269, 271, 280, 282, 284, 286, 288

Refer to the Faculty of Health Sciences Service Courses.

BIOL 201, 202, 205, 251 - CHEM 202, 203, 208, 209, 240, 242, 244, 245 - PHYS 211, 213 - PSYC 200 - SOCL 202

Refer to the Faculty of Arts and Sciences

NUSC 208 PUBLIC HEALTH NUTRITION AND FOOD HYGIENE

Refer to the Nutritional Sciences Program courses.

PDHP 200 MICROBIOLOGY FOR HEALTH SCIENCES

3.0: 3 cr. E

This course provides an introduction to the biology of microorganisms emphasizing the microbial structure, metabolism and infectious diseases they cause and the related immune response. Students are introduced to medical and environmental issues related to microbiology.

Pre-requisite: BIOL 201 or 205.

PDHP 201 ENVIRONMENT, HEALTH AND DEVELOPMENT

3.0: 3 cr. E

The 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, and efforts to overcome these challenges by introducing potential or alternative solutions and resources.

Pre-requisite: ENGL 101.

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 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.

PDHP 214 FAMILY HEALTH

3.0: 3 cr. E

The course investigates the interrelation between family dynamics and individual and community health. Topics covered include the developmental stages and needs of the growing child, maternal and child health at various stages of the life cycle, family planning, domestic violence and ageing.

Pre-requisite: SOCL 202 or PSYC 200

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 behavior change. This course examines 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, and behavioral risk factor modification, including diet, exercise, smoking, stress, safe sexual behaviors, and adherence to medical treatment.

PDHP 219 INTRODUCTION TO PUBLIC HEALTH**3.0: 3 cr. E**

This course provides an introduction to the background, concepts and practices associated with public health and the different forces and determinants that affect the health status and behavior of communities. Students are introduced to the scope of practice, ethics, professions, work settings and the role of interdisciplinary teams in public health. The course will host guest speakers and working practitioners in the health sector in Lebanon. Pre or co-requisite: ENGL101.

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

This course provides students with a basic understanding of gender relations and 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 covers a review of development policies aimed at integrating women into development policies and programs, with a focus on Lebanon, the Arab region and developing countries. Pre or co-requisite: ENGL 203.

PDHP 226 SANITATION AND RESOURCE MANAGEMENT FOR PUBLIC HEALTH**3.0: 3 cr. E**

This is an introductory course on drinking water, wastewater, and domestic and industrial solid wastes. The course addresses issues of water pollution and water quality and their burden on public and environmental health, including treatment processes and options for environmentally sustainable waste management practices. Pre-requisites: PDHP 200 and CHEM 208, or, PDHP 200 and CHEM 202.

PDHP 227 OCCUPATIONAL HEALTH AND HYGIENE**3.0: 3 cr. E**

Occupational Health is an integral component of public health. The course explores chemical and physical hazards in the workplace, using the tripod of occupational health & hygiene which are recognition, evaluation and control. Cases from Lebanon and abroad provide hard evidence. Pre or co-requisite: PDHP 249.

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

The course expands student understandings of the different concepts, methodologies and tools of epidemiology utilized in the practice of public health, with a view towards developing their competencies as future practitioners. Hands-on experience with data sets and public health scenarios are provided. Pre-requisite: FHSC 282.

PDHP 231 PUBLIC ADMINISTRATION AND POLICY IN LEBANON**3.0: 3 cr. E**

Students are exposed to the role of governance and politics in the provision and promotion of health care and development of appropriate policies. The course uses selected case studies, taking into consideration current trends in Lebanon and the Middle East.

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. Different communication methods, training methods and organizational methods are considered. Students will develop written health education materials for prototypical health promotion interventions.

Pre-requisite: PDHP 219 or PSYC 200

PDHP 237 PUBLIC HEALTH COMMUNICATION IN THE ARAB WORLD**3.0: 3 cr. E**

Students are introduced to principles and strategies of communication and some of the tools and skills required for public health education and awareness campaigns in the context of the Middle East. Exercises include letter writing, public speaking, PowerPoint presentations, research skills in Arabic databases, report writing and developing educational materials. The course is given in Arabic.

Pre-requisite: PDHP 219.

PDHP 238 ENVIRONMENTAL MANAGEMENT IN PUBLIC HEALTH PRACTICE**3.0: 3 cr. E**

The course presents an integrated approach to understanding air quality, through the recognition, monitoring, prevention and control of air pollution and its impact on health and the economy. The applied segment of the course discusses real-time global and national environmental issues and their impact on national air quality.

Pre-requisite: PDHP 227.

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-requisites: ENGL 203.

PDHP 243 STRESS MANAGEMENT AND HEALTH**3.0: 3 cr. E**

This course introduces students to a holistic approach to stress and stress management. The impact of stress in modern environments and the relationship between stress and physiological/psychological illnesses are discussed. Fundamental theories and applications of the mind-body-spirit phenomenon are introduced, such as coping strategies, relaxation techniques, etc. Students are encouraged to acquire and apply stress management skills to their personal lives and professional practice.

Pre or Co-requisite: ENGL 101.

PDHP 244 HUMAN RIGHTS IN HEALTH**3.0: 3 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.

Pre-requisite: ENGL 203.

PDHP 245 ISSUES IN COMMUNITY HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

This course offers an in-depth examination of selected challenges affecting the health and development of communities locally and worldwide, including poverty, politics, environmental changes, and globalization. The course emphasizes hot topics of current interest in Lebanon and the Middle East, and includes guest speakers, debates and critical discussions.

Pre-requisites: PDHP 201, PDHP 219, ENGL 203.

PDHP 246 ILLNESS, DISEASE AND LIFESTYLES**3.0: 3 cr. E**

This course introduces students to the biologic and behavioral bases of pathogenesis of the major diseases. Causative agents of chronic diseases are examined, including those illnesses which have been termed psychosomatic and related to stress, and related methods of adaptation and prophylaxis.

Pre-requisite: BIOL 201 or 205.

PDHP 247 ECONOMICS IN ENVIRONMENT, HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

Students are introduced to basic principles and concepts in health economics and theories of development, with a view towards expanding their understandings of the complex interrelationship between environment, health and development. Topics covered include: demand and supply in healthcare systems and insurance; methods of economic analysis such as cost-effectiveness, cost benefit analysis, environmental valuation methods; relationships between the environment and economics; macro-economic policies and their impact on development.

Pre-requisites: ENGL 203.

PDHP 249 TOXICOLOGY AND HUMAN HEALTH RISK ASSESSMENT**3.0: 3 cr. E**

A course that covers the essentials of toxicology such as absorption, distribution, biotransformation, and elimination as well as fundamentals governing the interaction between the toxicant and the target organ. Selected chemical and biological agents that adversely affect man and environmental quality are introduced as case-studies and students' presentations. The course provides also knowledge and understanding of the methods and principles used in human health risk assessment.

Pre-requisites for PDHP 249: BIOL 201 OR BIOL 205 AND CHEM 202 OR CHEM 208 AND PDHP 201

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 and secondary sources in the community in Lebanon, use electronic software for data analysis, and write an extended paper based on their work.

Pre-requisite: FHSC 288.

PDHP 255 Global Health**3.0:3 cr. E**

This course introduces students to the topic of global health and examines some of the major global health challenges. These include infectious diseases and global efforts to contain them, non-communicable & chronic diseases, challenges in delivering and managing humanitarian aid in an epoch of increasing refugee populations and other emerging priorities in global health.

Pre-requisite: ENGL 203.

PDHP 260 STUDENT PROJECT RESIDENCY INTERNSHIP**3.0: 3 cr. E**

This course consists of an individualized project designed, planned, executed, written and presented by the student on a public health topic of their choice. An essential course in the major, each student is expected to complete 2 months 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-requisites: LISP 200, PDHP 227, Permission of the Department.

BACHELOR OF SCIENCE IN HEALTH PROMOTION

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

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 203	English Communication Skills III	3
BIOL 201 ¹	Introduction to Biology	3
LISP 200 ²	Library Use and Research Methods	1
PDHP 219	Introduction to Public Health**	3
CHEM 208 ¹	Basic Chemistry for Public Health	3
Total		13

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204	English Communication Skills IV (or its equivalent)	3
SOCL 202	Sociology	3
FHSC 262	Introduction to Business	3
or		
CHEM 242	Organic Chemistry I	3
PDHP 200	Microbiology for Health Sciences	3
PDHP 201	Environment, Health and Development **	3
	Suggested Elective	2
Total		17

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ³	Cultural Studies	3
PSYC 200	Introduction to Psychology	3
FHSC 271 ²	First Aid	1
Total		6

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 269	Health Care Management and Administration	3
NUSC 208	Public Health Nutrition and Food Hygiene **	3
PDHP 211	Kinesiology in Health Promotion**	2
PDHP 214	Family Health **	3
PDHP 218	Principles of Health Promotion I**	3
	Suggested Elective	3
Total		17

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 284	Project Planning and Evaluation	3
PDHP 213	Marketing, Design and Development of Media Tools	3
PDHP 228	Principles of Health Promotion II**	3
PDHP 246	Illness, Disease and Lifestyle**	3
Total		15

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 270	Student Project Residency Internship**	3
Total		3

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 247	Economics in Environment, Health and Development**	3
PDHP 229	Epidemiology in Public Health Practices**	3
PDHP 232	Educational Strategies in Health Promotion**	3
PDHP 237	Public Health Communication in the Arab World	3
Total		15

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ³	Cultural Studies Courses	3
FHSC 266	Anthropology and Health	2
FHSC 288	Research in Health Care Sciences	3
PDHP 234	Health Communications**	3
PDHP 244	Human Rights in Health	3
PDHP 245	Issues in Community Health and Development**	3
	Elective	3
		17
Total credit		104

Number of Credits in Major: 41 Credits.

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

1. Students following regular Health Promotion track need to take BIOL 205 and CHEM 208. Students following Health Promotion Pre-med track need to take BIOL 201 and CHEM 202.
2. Required no-fee course.

3. Students may choose any CSPR course from two different streams, except for CSPR 205 and CSPR 206.

Students should consult their advisor for suitable “suggested” electives.

Suggested Elective:

BIOL 202	Introduction to Biology Lab I	1
FHSC 202	Introduction to Human Anatomy	2
FHSC 203	Basic Human Physiology	4
FHSC 204	Principles of Genetics	2
CHEM 222	Analytical Chemistry I	3
CHEM 245	Organic Chemistry I Laboratory	1
CHEM 244	Organic Chemistry II	3
FHSC 230	Organic Chemistry Lab II	1
PHYS 211	Fundamentals Of Physics I	3
PHYS 213	Fundamentals Of Physics II	3
FHSC 259	Humanitarian Aid and Emergency Response	3
FHSC 264	Human Growth and Development	2
FHSC 280	Information Technology and Health Sciences	2
FHSC 286	Financial Management in Health and Development Programs	3
BIOL 251	Basic Biochemistry	3
MLAB 211	Clinical Chemistry I	3
MLAB 230	Molecular Biology	3
MPHP 308	Public Health Ethics	1
PDHP 212	Introduction to Ecology	3
PDHP 224	Gender and Development	3
PDHP 226	Sanitation & Resource Management for Public Health	3
PDHP 227	Occupational Health and Hygiene	3
PDHP 231	Public Administration and Policy in Lebanon	3
PDHP 242	Public Health and Urban Environments	3
PDHP 243	Stress Management and Health	3
PDHP 249	Toxicology and Human Health Risk Assessment	3
PDHP 250	Themes in Public Health and Development	3
PDHP 252	Themes in Health Promotion	3
PDHP 255	Global Health	3

COURSE DESCRIPTIONS

CSPR CULTURAL STUDIES COURSES

Refer to the Cultural Studies Program.

ENGL 203, 204 (or its equivalent)

Refer to the Division of English Language & Literature.

LISP 200 LIBRARY USE AND RESEARCH METHODS

Refer to the Faculty of Library and Information Studies.

FHSC 262, 266, 269, 271, 282, 284, 288

Refer to the Faculty of Health Sciences Service Courses.

**BIOL 201, 202, 205, 251 - CHEM 202, 203, 208, 209, 242, 244, 245, 247 - PHYS 211, 213 - PSYC 200
SOCL 202**

Refer to the Faculty of Arts and Sciences

NUSC 208 PUBLIC HEALTH NUTRITION AND FOOD HYGIENE

Refer to the Nutritional Sciences Program courses.

PDHP 200 MICROBIOLOGY FOR HEALTH SCIENCES **3.0: 3 cr. E**

This course provides an introduction to the biology of microorganisms emphasizing the microbial structure, metabolism and infectious diseases they cause and the related immune response. Students are introduced to medical and environmental issues related to microbiology.

Pre-requisite: BIOL 201/205.

PDHP 201 ENVIRONMENT, HEALTH AND DEVELOPMENT **3.0: 3 cr. E**

The 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, and efforts to overcome these challenges by introducing potential or alternative solutions and resources.

Pre-requisite: ENGL 101.

PDHP 211 KINESIOLOGY IN HEALTH PROMOTION **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.

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

The course investigates the interrelation between family dynamics and individual and community health. Topics covered include the developmental stages and needs of the growing child, maternal and child health at various stages of the life cycle, family planning, domestic violence and ageing.

Pre-requisite: SOCL 202 or PSYC 200

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 behavior change. This course examines 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, and behavioral risk factor modification, including diet, exercise, smoking, stress, safe sexual behaviors, and adherence to medical treatment.

PDHP 219 INTRODUCTION TO PUBLIC HEALTH **3.0: 3 cr. E**

This course provides an introduction to the background, concepts and practices associated with public health and the different forces and determinants that affect the health status and behavior of communities. Students are introduced to the scope of practice, ethics, professions, work settings and the role of interdisciplinary teams in public health. The course will host guest speakers and working practitioners in the health sector in Lebanon.

Pre or co-requisite: ENGL101.

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 advanced and new emerging theories. These are 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.

Pre-requisite: PDHP 218.

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

The course expands student understandings of the different concepts, methodologies and tools of epidemiology utilized in the practice of public health, with a view towards developing competencies as future practitioners. Hands-on experience with data sets and public health scenarios are provided.

Prerequisite: FHSC 282.

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. Different communication methods, training methods and organizational methods are considered. Students will develop written health education materials for prototypical health promotion interventions

Pre-requisite: PDHP 219 or PSYC 200.

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.

Pre-requisites: PDHP 213, PDHP 228.

PDHP 237 PUBLIC HEALTH COMMUNICATION IN THE ARAB WORLD**3.0: 3 cr. E**

Students are introduced to principles and strategies of communication and some of the tools and skills required for public health education and awareness campaigns in the context of the Middle East. Exercises include letter writing, public speaking, power point presentations, report writing; research skills in Arabic databases and developing educational materials. The course is given in Arabic.

Pre-requisite: PDHP 219.

PDHP 243 STRESS MANAGEMENT AND HEALTH**3.0: 3 cr. E**

This course introduces students to a holistic approach to stress and stress management. The impact of stress in modern environments and the relationship between stress and physiological/psychological illnesses are discussed. Fundamental theories and applications of the mind-body-spirit phenomenon are introduced, such as coping strategies, relaxation techniques, etc. Students are encouraged to acquire and apply stress management skills to their personal lives and professional practice.

Pre or Co-requisite: ENGL 101.

PDHP 244 HUMAN RIGHTS IN HEALTH**3.0: 3 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.

Pre-requisite: ENGL 203.

PDHP 245 ISSUES IN COMMUNITY HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

This course offers an in-depth examination of selected challenges affecting the health and development of communities locally and worldwide, including poverty, politics, environmental changes, and globalization. The course emphasizes hot topics of current interest in Lebanon and the Middle East, and includes guest speakers, debates and critical discussions.

Pre-requisites: PDHP 201, PDHP 219, ENGL 203.

PDHP 246 ILLNESS, DISEASE AND LIFESTYLES**3.0: 3 cr. E**

This course introduces students to the biologic and behavioral bases of pathogenesis of the major diseases. Causative agents of chronic diseases are examined, including those illnesses which have been termed psychosomatic and related to stress, and related methods of adaptation and prophylaxis.

Pre-requisite: BIOL 201 or BIOL 205.

PDHP 247 ECONOMICS IN ENVIRONMENT, HEALTH AND DEVELOPMENT**3.0: 3 cr. E**

Students are introduced to basic principles and concepts in health economics and theories of development, with a view towards expanding their understandings of the complex interrelationship between environment, health and development. Topics covered include: demand and supply in healthcare systems and insurance; methods of economic analysis such as cost-effectiveness, cost benefit analysis, environmental valuation methods; the relationship between the environment and economics; macro-economic policies and their impact on development.

Pre-requisites: ENGL 203.

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 and secondary sources in the community in Lebanon, use electronic software for data analysis, and write an extended paper based on their work.

Pre-requisite: FHSC 288.

PDHP 255 Global Health**3.0:3 cr. E**

This course introduces students to the topic of global health and examines some of the major global health challenges. These include infectious diseases and global efforts to contain them, non-communicable & chronic diseases, challenges in delivering and managing humanitarian aid in an epoch of increasing refugee populations and other emerging priorities in global health.

Pre-requisite: ENGL 203.

PDHP 270 STUDENT PROJECT RESIDENCY INTERNSHIP**3.0: 3 cr. E**

This course consists of an individualized project designed, planned, executed, written and presented by the student on a public health topic of their choice. An essential course in the major, each student is expected to complete two months 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-requisites: LISP 200, PDHP 218, Permission of the department.

BS IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES **OR IN HEALTH PROMOTION, WITH** **PREMEDICAL REQUIREMENTS**

The Public Health and Development Sciences Program (PD) offers qualified students the opportunity to take 32 credits of courses that enable them to sit for entrance to Medical School at the same time as a BS degree in PD. The pre-medical courses consist of:

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
BIOL 201	Introduction to Biology I	3
BIOL 202	Introduction to Biology I Lab	1
FHSC 203	Introduction to human Physiology	4
		<hr style="width: 100%; border: 0.5px solid black;"/>
		8
CHEM 222	Analytical Chemistry I	3
CHEM 202	Basic Chemistry	3
CHEM 242	Organic Chemistry I	3
CHEM 244	Organic Chemistry II	3
		<hr style="width: 100%; border: 0.5px solid black;"/>
		12
PHYS 211	Fundamentals of Physics I	3
PHYS 213	Fundamentals of Physics II	3
		<hr style="width: 100%; border: 0.5px solid black;"/>
		6
SOCL 202	Sociology	
PSYC 200	Psychology	
Total humanities/ Social sciences		6
Total Pre-Med number of credits		32

The PD BS curriculum with premed requirements may be completed within three years, provided students begin the program with a level of ENGL 203.

For PD purposes, PSYC 200 and CHEM 244 may be considered as fulfilling 6 credits of PD “electives”.

NB: Pre Med students are required to register in at least one major or required PD course each semester, with the exception of summer 1 and excluding English and CS courses.

FIRST YEAR**SEMESTER 1**

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
ENGL 203	English Communication Skills III	3
BIOL 201	Introduction to Biology*	3
BIOL 202	Introduction To Biology I - Laboratory	1
CHEM 202	Basic Chemistry*	3
CHEM 203	Basic Chemistry Laboratory	1
FHSC 271 ¹	First Aid	1
LISP 200	Library Use and Research Methods	1
PDHP 219	Introduction to Public Health**	3
		<hr/>
		16

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
ENGL 204	English Communication Skills IV (or its equivalent)	3
FHSC 203	Basic Human Physiology	4
CHEM 242	Organic Chemistry I	3
PDHP 201	Environment, Health and Development**	3
PDHP 200	Microbiology for Health Sciences	3
		<hr/>
		16

SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
CHEM 244	Organic Chemistry II*	3
PSYC 200	Introduction to Psychology*	3
		<hr/>
		6

SECOND YEAR**SEMESTER 3**

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
CHEM 222	Analytical Chemistry I	3
PHYS 211	Fundamentals Of Physics I	3
FHSC 269	Health Care Management and Administration	3
NUSC 208	Public Health Nutrition and Food Hygiene**	3
PDHP 226	Sanitation & Resource Management for Public Health**	3
PDHP 249	Toxicology and Human Health Risk Assessment **	3
		<hr/>
		18

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
CSPR ²	Cultural Studies Course	3
PHYS 213	Fundamentals Of Physics II	3
SOCL 202	Sociology*	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
FHSC 284	Project Planning and Evaluation**	3
PDHP 227	Occupational Health and Hygiene**	3

18
SUMMER

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
PDHP 260	Student Project Residency Internship**	3

3
THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
PDHP 214	Family Health**	3
PDHP 229	Epidemiology in Public Health Practice**	3
PDHP 231	Public Administration and Policy in Lebanon	3
PDHP 237	Public Health Communication in the Arab World	3
PDHP 238	Environmental Management in Public Health Practice**	3
PDHP 242	Public Health and Urban Environments	3

18
SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
CSPR ²	Cultural Studies Courses	3
FHSC 266	Anthropology and Health	2
FHSC 288	Research in Health Care Sciences	3
PDHP 245	Issues in Community Health and Development**	3
PDHP 247	Economics in Environment, Health and Development**	3

14
Total number of credits**109**

* These courses fulfill both PD and premed requirements

** Major PD courses with a passing grade of 70

1.Required no-fee course.

2.Students may choose any CSPR course from two different streams, except for CSPR 205 and CSPR 206.

Other recommended, but not required, courses to prepare for the MCAT are:

FHSC 204	Genetics
CHEM 245	Organic Chemistry I Laboratory
BIOL 251	Biochemistry
MLAB 211	Clinical Chemistry
MLAB 230	Molecular Biology

DUAL BS DEGREE PROGRAM IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES & 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 (HP) or 38 credits (PD) 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 full-time or a part-time basis. Students are advised to consult with their advisor.

COURSES TO BE TAKEN BY HEALTH PROMOTION GRADUATES REGISTERED FOR A SECOND DEGREE IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES (36 credits)

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CHEM 209	Basic Chemistry for Public Health Lab	1
PDHP 226	Sanitation and Resource Management for Public Health**	3
PDHP 242	Public Health and Urban Environments	3
PDHP 247	Economics in Environment, Health and Development**	3
PDHP 249	Toxicology and Human Health Risk Assessment **	3
	Elective	3
		16
Total		16

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 227	Occupational Health and Hygiene**	3
PDHP 231	Public Administration and Policy in Lebanon	3
PDHP 238	Environmental Management in Public Health Practice**	3
	Suggested Elective	3
	Elective	2
		14
Total		14

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PDHP 250	Themes in Public Health and Development**	3
	Elective	3
		<hr/>
Total		6
Total credits		36

** Major course requiring a passing grade of 70 (18 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
(38 credits)

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
PSYC 200	Introduction to Psychology	3
PDHP 211	Kinesiology in Health**	2
PDHP 213	Marketing, Design and Development of Media Tools	3
PDHP 218	Principles of Health Promotion I**	3
PDHP 246	Illness, Disease and Lifestyle **	3
	Elective	3
Total		17

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 259	Humanitarian Aid and Emergency Response	3
PDHP 232	Educational Strategies in Health Promotion**	3
PDHP 243	Stress Management and Health	3
PDHP 244	Human Rights in Health **	3
PDHP 252	Themes in Health Promotion **	3
Total		15

SEMESTER 3

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

Total credits **38**

** Major course requiring a passing grade of 70 (20 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.

DUAL BS DEGREE PROGRAM IN MEDICAL LABORATORY SCIENCES & PUBLIC HEALTH AND DEVELOPMENT SCIENCES

Students who are graduating in or have graduated with a BS degree in Medical Laboratory Sciences (including those who have done a pre-med track) and are interested to take a second BS degree in Public Health and Development Sciences, may do so in a Dual Degree Program.

In order to fulfill University and Faculty requirements for the Dual Degree Program, students should first complete all credit requirements for the first degree (BS in Medical Laboratory Sciences).

Following completion of the first degree, an additional 37 credits are then taken for the second degree, a BS in Public Health and Development Sciences. 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 full-time or a part-time basis. Depending on scheduled course offerings, and the student's availability, more than three semesters may be required to complete the second BS degree.

Students should consult with their advisor.

The passing grade in all of the courses, with the exception of the elective, is 70.

CURRICULUM =39 CREDITS

SEMESTER 1

<u>Course Code</u>	<u>Course</u>	<u>Credit</u>
PDHP 201	Environment, Health and Development	3
PDHP 219	Introduction to Public Health	3
NUSC 208	Public Health Nutrition and Food Hygiene	3
PDHP 226	Sanitation and Resource Management for Public Health	3
PDHP 229	Epidemiology in Public Health Practice	3
PDHP 242	Public Health and Urban Environments	3

Total **18**

SEMESTER 2

<u>Course Code</u>	<u>Course</u>	<u>Credit</u>
PDHP 227	Occupational Health and Hygiene	3
PDHP 231	Public Administration and Policy in Lebanon	3
FHSC 284	Project Planning and Evaluation	3
PDHP 245	Issues in Community Health and Development	3
PDHP 249	Toxicology and Human Health Risk Assessment	3
	Elective*	3

Total **18**

SEMESTER 3

<u>Course Code</u>	<u>Course</u>	<u>Credit</u>
PDHP 260	Student Project Residency Internship**	3
Total		3
Total credits		37

***One suggested elective of 3 credits, to be chosen from:**

PDHP 214	Family Health
PDHP 238	Environmental Management in Public Health Practice
PDHP 244	Human Rights in Health
PDHP 246	Illness, Disease and Lifestyle
PDHP 255	Global Health
FHSC 259	Humanitarian Aid and Emergency Response

**PDHP 260 is a two month full-time internship at a host institution.

MINOR DEGREE

Students from all degree backgrounds are eligible to take a MINOR in PUBLIC HEALTH. This consists of 15 credits of courses in that specialty; students from non-science backgrounds may need to take prerequisites as well. These courses would need to have the specialty code (for example PDHP-coded courses for a minor in Public Health) and should not be part of the University-required courses, except for FHSC 269 (Healthcare Management and Administration) and FHSC 284 (Project Planning and Evaluation). Students should consult with the Chairperson.

A Minor in Public Health allows students to become informed and proactive in:

- Population wide social and health concerns
- The needs of vulnerable populations
- Disease prevention
- Community development

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

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 203	English Communication Skills III	3
BIOL 201	Introduction to Biology I	3
BIOL 202	Introduction to Biology I- Laboratory	1
CHEM 202	Basic Chemistry	3
CHEM 203	Basic Chemistry Laboratory	1
PSYC 200	Introduction to Psychology	3
LISP 200 ¹	Library Use and Research Methods	1
Total		15

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204	English Communication Skills IV(or its equivalent)	3
CHEM 240	Basic Organic Chemistry	3
FHSC 203	Basic Human Physiology	4
FHSC 268 or BUSN 202	Survey of Management and Marketing	3
NUSC 200	Basic Human Nutrition *	3
Total		16

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
BIOL 251	Basic Biochemistry	3
NUSC 201	Human Nutrition and metabolism*	3
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
	Elective	3
Total		15

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural Studies Courses	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
NUSC 202	Life Cycle Nutrition*	3
NUSC 220	Community Nutrition I*	3
NUSC 239	Applied Food Analysis*	3
	Elective	3
Total		18

THIRD YEAR
SEMESTER 5

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 288	Research in Health Care Sciences	3
NUSC 210	Food Service Management*	3
NUSC 212	Therapeutic Nutrition I*	3
NUSC 213	Therapeutic Nutrition I- Laboratory*	1
NUSC 240	Applied Food Processing	3
	Elective	3
Total		16

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural Studies Courses	3
NUSC 211	Nutrition Counseling and Communication *	3
NUSC 214	Therapeutic Nutrition II*	3
NUSC 215	Therapeutic Nutrition II- Laboratory*	1
NUSC 241	Tutorial: Special Topics in Nutrition and Food*	2
FHSC 271 ¹	First Aid	1
Total		13
Total credits		93

* Major course with passing grade = 65

1.Required no-fee course

2.Students may choose any CSPR course except CSPR 205 and CSPR 206

PREMEDICAL REQUIRMENTS:

The premedical track in Nutritional Sciences allows capable students to graduate with a BS degree in Nutritional Sciences in addition to completion of the following premedical requirements (exempted from the above-mentioned 9 credits UNIV SET-ELECTIVES) needed for application to medical school:

<u>Course Code</u>	<u>Course Title</u>	<u>Credits</u>
FHSC 204	Principles of Genetics	2
CHEM 222	Analytical Chemistry	3
CHEM 244	Organic Chemistry II	3
PHYS 211	Fundamentals of Physics I	3
PHYS 213	Fundamentals of Physics II	3
SOCL 202	Introduction to Sociology	3
Total		17

BACHELOR OF SCIENCE IN NUTRITIONAL SCIENCES **FOOD SCIENCE AND QUALITY ASSURANCE TRACK**

FIRST YEAR

SEMESTER 1

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 203	English Communication Skills III	3
BIOL 201	Introduction to Biology I	3
BIOL 202	Introduction to Biology I- Laboratory	1
CHEM 202	Basic Chemistry	3
CHEM 203	Basic Chemistry Laboratory	1
MATH 203	Mathematics for Applied Sciences	3
Total		14

SEMESTER 2

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
ENGL 204	English Communication Skills IV or its equivalent	3
CHEM 242	Organic Chemistry I	3
LISP 200 ¹	Library Use and Research Methods	1
MLAB 213	General Microbiology	3
NUSC 200	Basic Human Nutrition*	3
PSYC 200	Introduction to Psychology	3
Total		16

SECOND YEAR

SEMESTER 3

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 268	Survey of Management and Marketing	3
BIOL 251	Basic Biochemistry	3
NUSC 203	Food Microbiology*	3
NUSC 204	Food Chemistry*	3
NUSC 233	Introduction to Food Engineering*	3
Total		15

SEMESTER 4

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural Studies Courses	3
FHSC 282	Principles of Epidemiology and Biostatistics	3
NUSC 234	Food Science and Technology I*	3
NUSC 239	Applied Food Analysis*	3
NUSC 242	Food Laws and regulations*	3
	Free Elective	3
Total		18

SUMMER

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

THIRD YEAR**SEMESTER 5**

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
FHSC 288	Research in Health Care Sciences*	3
NUSC 235	Food Science and Technology II*	3
NUSC 236	Food Quality Assurance Principles I*	3
NUSC 240	Applied Food Processing*	3
FHSC 271 ¹	First Aid	2
Total		14

SEMESTER 6

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
CSPR ²	Cultural studies	3
NUSC 205	Food and Nutritional Toxicology *	3
NUSC 237	Food Quality Assurance Principles II*	3
NUSC 241	Tutorial: Special Topics in Nutrition and Food*	2
	Free elective	3
Total		14
Total credits		94

* Major course with passing grade = 65

** Major course with passing grade = 70

1. Required no-fee course.

2. Students may choose any CSPR course except CSPR 205 and CSPR 206

MINOR IN NUTRITIONAL SCIENCES

DESCRIPTION

The Minor in Nutritional Sciences provides students with a foundation of knowledge in nutritional sciences, food systems, and health of the population during different life stages. It will expose students to food and nutrition practices and policies that affect sustainable diets and long term health.

The Minor is offered to students in various disciplines, except Nutritional Sciences, who wish to complement their undergraduate studies with a concentration in the area of nutrition and food science. Holding a Minor in Nutritional Sciences does not entitle the individual to work as a nutritionist or a dietitian.

STRUCTURE

The Minor in Nutritional Sciences consists of a minimum of 15 credits. Some students may require pre-requisites which will not count towards the minor requirements.

Some courses are offered only in the fall or spring semester as per the regular University offerings.

A minimum of 60/100 on the courses coded “NUSC” is required to pass the course.

COURSE DESCRIPTIONS

CSPR CULTURAL STUDIES PROGRAM

Refer to the Cultural studies Program.

ENGL 203, 204 (or its equivalent)

Refer to the Division of English Language & Literature.

LISP 200 LIBRARY USE AND RESEARCH METHODS

Refer to the Faculty of Library and Information Studies.

FHSC 203, 204, 268, 271, 284, 282, 288

Refer to the Faculty of Health Sciences Service Courses.

BIOL 201, 202, 251 - CHEM 202, 203, 240, 242, 244, 245 - PHYS 211, 213 - PSYC 200 - SOCL 202

Refer to the Faculty of Arts and Sciences

PDHP 213, 214, 219, 231, 247

Refer to the Public Health and Development Sciences & Health Promotion Program.

NUSC 200 BASIC HUMAN NUTRITION

3.0: 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: BIOL 201 OR BIOL 205.

NUSC 201 HUMAN NUTRITION AND METABOLISM

3.0: 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

Pre- or Co-requisites: FHSC 203 or BIOL 203 and BIOL 204.

NUSC 202 LIFECYCLE NUTRITION

3.0: 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.

Pre-requisite: NUSC 201.

NUSC 203 FOOD MICROBIOLOGY

3.0: 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.

Pre-requisite: BIOL 201.

NUSC 204 FOOD CHEMISTRY

3.0: 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).

Pre-requisite: CHEM 202.

NUSC 205 FOOD AND NUTRITIONAL TOXICOLOGY **3.0: 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. Pre-requisites: NUSC 203.

NUSC 208 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. This course is offered to non-nutrition science majors. Pre-requisite: BIOL 201/205.

NUSC 209 BASIC NUTRITION AND DIET THERAPY **3.0: 3 cr. E-F**

This course provides a comprehensive overview of human nutrition and its role in maintaining health and promoting medical therapy for certain disease conditions. It introduces students to basic nutritional concepts, nutritional needs and assessment. It also discusses standard and therapeutic diets and meal plans for specific disease conditions from the perspective of patient education. This course is offered to non-Nutritional Sciences majors.

NUSC 210 FOOD SERVICE MANAGEMENT **3.0: 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 **3.0: 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. Pre-requisite: NUSC 200.

NUSC 212 THERAPEUTIC NUTRITION I **3.0: 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. Pre-requisites: NUSC 201, NUSC 202. Co-requisite: NUSC 213.

NUSC 213 THERAPEUTIC NUTRITION I LAB **1.0:1 cr. E**

Practical applications and case studies for concepts and theories covered in NUSC 221. Co-requisite: NUSC 212.

NUSC 214 THERAPEUTIC NUTRITION II **3.0: 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. Pre-requisites: NUSC 212, NUSC 213. Co-requisite: NUSC 215.

NUSC 215 THERAPEUTIC NUTRITION II LAB **1.0:1 cr. E**

Practical applications and case studies for concepts and theories covered in NUSC 224. Co-requisite: NUSC 214.

NUSC 220 COMMUNITY NUTRITION I**3.0: 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, policymaking and nutrition education.

Pre-requisites: NUSC 200.

Co-requisite: NUSC 202.

NUSC 233 INTRODUCTION TO FOOD ENGINEERING**3.0: 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**3.0: 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.

Pre-requisite: NUSC 233.

NUSC 235 FOOD SCIENCE AND TECHNOLOGY II**3.0: 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.

Pre-requisite: NUSC 234.

NUSC 236 FOOD QUALITY ASSURANCE PRINCIPLES I**3.0: 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**3.0: 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.

Pre-requisite: NUSC 236.

NUSC 238 INTERNSHIP IN FOOD ESTABLISHMENTS**3.0: 3 cr. E**

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

Pre-requisite: permission of the student's advisor.

NUSC 239 APPLIED FOOD ANALYSES**3.0: 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 240 APPLIED FOOD PROCESSING**3.0: 3 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. The principles and current practices of food processing technology (food engineering, food preservation and Processing) are covered as well.

NUSC 241 TUTORIALS: SPECIAL TOPICS IN NUTRITION AND FOOD**2.0: 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.

Pre-requisite: FHSC 288.

NUSC 242 FOOD LAWS AND REGULATIONS**3.0: 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.

NUSC 300 A PRACTICUM I**15.0: 15 cr. E**

The practicum course is intended to provide interns with knowledge and skills in clinical dietetics practice. Interns will have rotations in nutrition therapy, foodservice management and community settings, in addition to a wide variety of assignments and projects.

NUSC 300 B PRACTICUM II**15.0: 15 cr. E**

The practicum course is intended to provide interns with knowledge and skills in clinical dietetics practice. Interns will have rotations in nutrition therapy, foodservice management and community settings, in addition to a wide variety of assignments and projects.

NUSC 301 SEMINARS IN CLINICAL DIETETICS I**3.0: 3 cr. E**

This course is intended to increase knowledge and skills of the interns in selected aspects of dietetic practice. External lectures that are offered will deal with the process of nutrition care in clinical nutrition, community nutrition and management of foodservice and nutrition care systems.

Co-requisite: NUSC 300 A

NUSC 302 SEMINARS IN CLINICAL DIETETICS II**3.0: 3 cr. E**

This course is intended to increase knowledge and skills of the interns in selected aspects of dietetic practice. External lectures that are offered will deal with the process of nutrition care in clinical nutrition, community nutrition and management of foodservice and nutrition care systems.

Co-requisite: NUSC 300 B

CLINICAL AND DIETETICS INTERNSHIP DIPLOMA

Students graduating with a BS in Nutritional Sciences from the Faculty of Health Sciences at the University of Balamand have the opportunity to develop their skills through applied practice in hospital and community settings. This is primarily done through the Clinical and Dietetics Internship. Students are enrolled in a 6 to 9-months hospital-based internship, at the end of which they would be eligible to apply for licensure to practice the profession of Nutrition and Dietetics in Lebanon.

FALL

<u>Course Code</u>	<u>Course Title</u>	<u>Credit</u>
NUSC 300A	Practicum I	15 credits
NUSC 301	Seminars in Clinical Dietetics I	3 credits

SPRING

NUSC 300 B	Practicum II	15 credits
NUSC 302	Seminars in Clinical Dietetics II	3 credits

FACULTY SERVICE COURSES

FHSC 101 SKILLS FOR A HEALTHIER LIFESTYLE

3.0: 3 cr. E/F

This course introduces students to basic knowledge about health and healthy lifestyle choices which support their “well-being”. It examines the interdependence between health, lifestyle and social environment and provides students with practical life skills and techniques that could lead to positive changes in health behaviors and environment. Students are encouraged to apply knowledge and skills to personal and real-life situations.

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.

Pre-requisite: BIOL 201

Pre-requisite for Nursing or Public Health Students: BIOL 205.

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.

Pre-requisite: FHSC 200 or BIOL 201.

FHSC 209 FUNDAMENTALS OF MICROBIOLOGY

2.0: 2 cr. E/F

Introduction to the biology of microorganisms emphasizing the infectious diseases they cause, the related immune response, and infection control practices. Not Open to MLS students.

FHSC 210 PATHOPHYSIOLOGY & IMMUNOLOGY

4.0: 4 cr. E

This is an introductory course to the basic concepts of pathophysiology. Emphasis will be placed on the physiological factors behind various diseases, diagnosis, the basic pharmacology and treatment modalities of major illnesses. This course also covers the major topics of basic immunology. Emphasis will be placed on the immune system, immunity in relation to internal and external disease processes, innate immunity, interpretation of laboratory data., immunoglobulin structure, the major histocompatibility complex and antigen presentation.

FHSC 239 SPEAKING IN PUBLIC

3.0 :3cr. E

This is a three-credit course which introduces students to public speaking in formal/informal, informative/persuasive modes. The course promotes students’ oral skills and prepares them to speak in public in formal and informal situations

FHSC 246 LANGUAGE AND CULTURE

3.0: 3 cr.E

This course is an introduction to the relationship between language and culture. It begins with a general introduction to the concept of language and message forms. The course then discusses the semantic relations between words (such as synonyms and antonyms) and sentences (such as paraphrases, presuppositions and entailments). It also comprises an overview of speech acts (such as statements, apologies, and invitations) and the ways they are expressed in different languages. The second part of the course focuses on the complex relationship between language and identity, language and gender and that between language, power, and social class (particularly in multilingual contexts).

FHSC 259 HUMANITARIAN AID AND EMERGENCY RESPONSE**3.0: 3 cr. E**

This course addresses the impact of complex humanitarian emergencies on the health of affected populations. It covers a range of health topics including: water, sanitation and hygiene; nutrition; child health; mental health; reproductive health; communicable diseases and various cross-cutting issues in emergencies such as sexual violence, the needs of specific vulnerable groups, accountability and the role of the media. Students will be introduced to the challenges faced by public health staff working in emergency settings and the tools commonly used in relief interventions.

Pre-requisite: ENGL 203.

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.

Pre-requisite: ENGL 101.

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

This course examines development throughout life span (prenatal to death) taking into account the psychological (emotional, cognitive), biological and social aspects of development.

It introduces periods of development, theories derived from different psychological backgrounds, and research methods in the study of development. It stresses upon the biological and environmental factors and the interaction between both in shaping human development.

Pre-requisites: PSYC 200.

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 healthcare sciences. Among the topics considered are: cultural relativity and ethics, cultural competency, qualitative methods, family and gender, political structures and symbolic systems.

Pre-requisite: SOCL 202.

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 AND ADMINISTRATION**3.0:3 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, ethical concerns and challenges related to offering and sustaining quality health services to the community.

Pre-requisite or Co-requisite: ENGL102

FHSC 271 FIRST AID

This course aims at exposing students to hands-on first aid methods and acts needed to be performed before professional medical help arrives. This course offers knowledge and skills to prepare students to become first aiders. It will also familiarize students with emergencies they might encounter and the proper way to deal with them.

NB: Students who completed the Brevet (60 hours in first aid) outside the university will be asked to present their certificate and a copy will be left in their file. Students who finished the course two years back are in need for Cardiopulmonary resuscitation (CPR) only and will be asked to attend CPR sessions and will be examined for this section only.

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 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.

FHSC 286 FINANCIAL MANAGEMENT OF HEALTH & 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 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.

Pre-requisites: FHSC 282, ENGL 203, LISP 200.