FACULTY OF HEALTH SCIENCES

2025/2026

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 Sciences 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 Huijer, Huda	Dean
Chaar, Mira	Chair, Medical Laboratory Sciences Department
Azar, Mathil	Director, Nursing Program
Saliba, Jessica	Chair, Public Health Department
Rizk, Maud	Chair, Nutritional Sciences Department
Aoun, Habbouba	Director, Department of Community Engagement
Chahine, Rana	Registrar

FACULTY STAFF

Atallah, David	IT Assistant
Chaddad, Rita	Student Services Officer
Constantine, Catherine	Executive Officer
Khalil, Mayssa	Secretary
Khamis, Youssef	Office Assistant
Khater, Paul	IT Supervisor
Khoury, Joelle	Financial Project Coordinator
Lahoud, Cecile	Executive Secretary
Makhoul, Sethrida	Receptionist

FACULTY MEMBERS

Abbas, Nivine	Ph.D., Social Sciences and Environmental Studies, University of Twente, Netherland
Abdel Rahman, Abir	Ph.D., Public Health & Psychological Sciences, University of Strathclyde, Scotland
Abdo, Elias	Ph.D., Molecular Microbiology University of Montpellier, France.
Abou Lteif, Ghada	M.S., Biology, American University of Beirut, Lebanon
Abu-Saad Huijer, 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	Ph.D., Health Sciences, University of Dundee, U.K.
Azar, Christine	PhD, Public Health & Epidemiology Paris-Est University, France

Baysari (AL), Charbel	Ph.D., Medical Microbiology, Lebanese University, Ph.D., Human Pathology Infectious Disease, Aix Marseille, France
Chabbani, Sana	Ph.D. in Education, Universite Saint Joseph, Lebanon
Daccahe, Caroline	Ph.D., Health technology Assessment Maastricht University
Daher, Mira	Ph.D., Agricultural & Food Sciences, Université Saint Esprit, Kaslik, Lebanon
Dassouki, Zeina	Ph.D., Hematology & Oncology, Université Paris Diderot, France
Deghel (EL), Maria	M.S., Microbiology, Université Saint Joseph, Lebanon
Dib, Liza	M.S., Microbiology, Lebanese University, Lebanon
El Chaar, Mira	Ph.D., Molecular Microbiology, University of Cambridge, U.K.
Finianos, Jessica	Ph.D., Health Psychology, University Rovira, Spain
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
Hourani, Rabab	Master Business Administration, Ecole Supérieure des affaires ESA, Lebanon
Jaalouk, Lina	M.S., Health Promotion Management, Marymount University, U.S.A.
Saada, Jurdi	Ms., Epidemiology & Biostatistics, American University of Beirut, Lebanon
Kazzi, Samir	MS, Microbiology University of Balamand
Kobrossy, Micheline	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, France
Mnayer, Dima	Ph.D., Safety & Quality of Natural Plant Products Université d'Avignon et des pays de Vaucluse, France
Maysam, Moussa	PhD, Regenerative Medicine Université St Joseph, Lebanon
Rouaiheb (El), Hiba	M.S., Food Technology, American University of Beirut, Lebanon
Rizk, Maud	Ph.D., Medicine, Cancerology, Genetics & Hematology University of Burgundy, France
Saliba, Jessica	Ph.D. in Biology and Chemistry for Health Sciences (Pharmacochemistry and Biomolecules) Université Montpellier I, France
Skaff, Diana	DBA University of Balamand

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
Tohme, Jessy	MS Medical Laboratory Sciences, University of Balamand, Lebanon
Wakim, Zeina	D.E.A., Social Sciences, Lebanese University, Lebanon
Whaibeh, Emile	Ph.D., Public Health, University of Balamand, Lebanon

PROGRAMS OF STUDIES

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

•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	3 years
* TS-BSN Program	1 year and a half
•BS in Nutritional Sciences	3 years
•Diploma in Clinical and Dietetics internship	1 year
•BS in Public Health and Development Sciences	3 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, 45 hours and each lab work credit is equivalent to 30 hours. 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	**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

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. 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). However, the transportation for the clinical training is ensured for the Main and Souk El Gharb Campuses' students.

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

Course Code	Course Title	Credit
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
Total		**14**

SEMESTER 2

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

SECOND YEAR

SEMESTER 3

Course Code	Course Title	Credit
MLAB 211	Clinical Chemistry 1	3
MLAB 213	General Microbiology	3
BIOL 251	Basic Biochemistry	3
MLAB 245	Organic Chemistry I Lab	1
	General Elective	3
	Business and Social Sciences –Elective	3
Total		**16**

SEMESTER 4

Course Code	Course Title	Credit
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
MLAB 233	Toxicology	2
Total		**15**

SUMMER

Course Code	Course Title	Credit
	Clinical Training	4
Total		**4**

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credit
CSPR[2]	Cultural Studies Courses	3
FHSC 271[1]	First Aid	1
MLAB 226	Histotechnology Applications	2
MLAB 214	Basic and Clinical Immunology	3
MLAB 232	Medical Virology	2
	Clinical Training	4
Total		**15**

SEMESTER 6

Course Code	Course Title	Credit
CSPR [2]	Cultural Studies Course	3
MLAB 230	Molecular Biology	3
MLAB 224	Medical Parasitology & Mycology	2
FHSC 288	Research in Health Care Sciences	3
MLAB 260	Advanced Topics in Quality Assurance	1
	General Elective	4
Total		**16**
Total Credits		**94**

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 no-fee course
2- Students may choose any CSPR course

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES-PREMEDICAL TRACK

FIRST YEAR

SEMESTER 1

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
ENGL 204	English Communication Skills IV (or equivalent)	3
FHSC 203	Basic Human Physiology	4
CHEM 242	Organic Chemistry I	3
FHSC 282	Epidemiology and Biostatistics	3
SOCL 202	Sociology	3
Total		**16**

Total

SUMMER

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
CHEM 245	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
MLAB 249	Phlebotomy, Blood Bank and Transfusion Medicine	2
Total		**14**

SUMMER

Course Code	Course Title	Credit
	Clinical Training	2
Total		**2**

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credit
CSPR [2]	Cultural Studies Course	3
MLAB 226	Histotechnology Applications	2
MLAB 214	Basic and Clinical Immunology	3
MLAB 232	Medical Virology	2
FHSC 271[1]	First Aid	1
	Clinical Training	4
Total		**15**

SEMESTER 6

Course Code	Course Title	Credit
CSPR [2]	Cultural Studies Course	3
MLAB 230	Molecular Biology	3
MLAB 224	Medical Parasitology & Mycology	2
FHSC 288	Research in Health Care Sciences	3
MLAB 260	Advanced Topics in Quality Assurance	1
MLAB 233	Toxicology	2
	Clinical Training	2
Total		**16**
Total Credits		**98**

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 require a minimum passing grade of 65**.**
All practical training courses (MLAB 251, MLAB 252, MLAB 253, MLAB 254, MLAB 255, MLAB 256, MLAB 257,and MLAB 258) have a passing grade = 70

1- Required no-fee course
2- Students may choose any CSPR course except

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**
This course introduces the basic principles and practices of clinical chemistry. It thoroughly covers the function and metabolism of carbohydrates, lipids, amino acids, and proteins. Key topics also include clinical enzymology, blood gases, water, and electrolytes, and nutritional assessment. A major focus is placed on understanding the relationship between disease states and chemical variations, emphasizing the clinical significance and interpretation of laboratory data.
Pre-requisite: FHSC 203.
Co-requisite: BIOL 251.

MLAB 213 GENERAL MICROBIOLOGY **2.2: 3 cr. E**
The course introduces clinically relevant microorganisms and their role in human disease. The course covers microbial structure, growth, genetics, pathogenesis, normal flora, and diagnostic microbiology techniques used in the clinical laboratory. Key infection control principles are integrated, including standard and transmission-based precautions, biosafety, and major healthcare-associated infections. Laboratory sessions provide hands-on experience in essential microbiological methods for accurate and safe clinical practice.
Pre-requisite: BIOL 201.

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

This course introduces the immune system and its role in health and disease, with emphasis on concepts essential to clinical laboratory science. Students learn the principles of antigens, antibodies, complement, humoral and cellular immunity, hypersensitivity, autoimmunity, transplantation, and immune responses to infection. The course also includes a 1-credit serology component, in which the theoretical content is directly linked to clinical laboratory practice. Immunological mechanisms are explained in relation to diagnostic assays such as agglutination, precipitation, complement testing, ELISA, and immunofluorescence, demonstrating how these tools are used in the investigation of autoimmune conditions, infectious diseases, and other immune-mediated disorders.

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 include complete blood count, slide preparation and staining, ESR determination, blood grouping, and basic morphological assessment.

Pre-requisite: FHSC 203.

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

This course is a complementary course of MLAB 211. It provides an in-depth study of the endocrine system, focusing on the function, metabolism, and regulation of major hormones (e.g., thyroid, adrenal, and gonadal). It examines the biochemical assessment of key organ systems, including the liver, pancreas, GI tract, heart, and kidneys, emphasizing functional tests. The central goal is to interpret chemical variations for the diagnosis and assessment of disease states

Co-requisite: MLAB 211.

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

This course focuses on bacteria of medical importance, emphasizing methods for their isolation, identification, and clinical interpretation. Students learn the principles, advantages, and limitations of diagnostic techniques used in clinical bacteriology, with attention to specimen selection, culture strategies, biochemical identification, and antimicrobial susceptibility testing. The course highlights the clinical implications of bacterial pathogens in infectious diseases and their relevance to patient management. Students also actively engage in clinical case presentations, where they analyze real or simulated patient scenarios, interpret laboratory findings and correlate microbiological results with clinical manifestations.

Pre-requisite: MLAB 213.

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

This course introduces medically important parasites and fungi, focusing on their biology, transmission, clinical manifestations, diagnosis, treatment, and prevention. Emphasis is placed on host–parasite relationships, life cycles, and laboratory identification methods. Students gain foundational understanding of parasitic and fungal diseases and their relevance in clinical laboratory practice.

Pre-requisite: BIOL 201.

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

This laboratory course provides hands-on training in clinical bacteriology, focusing on the isolation, identification, and antimicrobial susceptibility testing of pathogens from clinical specimens. Working in groups, students follow the full diagnostic workflow used in real clinical settings, including specimen processing, culture techniques, Gram staining, biochemical testing, and result interpretation.

Pre-requisite: MLAB 213.

Co-requisite: MLAB 223.

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

This course is divided into theoretical and practical components. The theoretical part introduces the pathological basis of disease, including reversible cellular adaptations, cell injury and death, inflammation and tissue repair, hemodynamic disorders, immune-mediated hypersensitivity reactions, and neoplasia.

The technical component focuses on histopathology laboratory techniques for the preparation of microscopic slides, from tissue fixation and processing to sectioning and staining. Emphasis is placed on routine hematoxylin and eosin staining, as well as commonly used special stains for the identification of specific tissue components and pathologies. Students will also be introduced to the principles and applications of immunohistochemistry as an advanced diagnostic technique.

Pre-requisite: BIOL 201.

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

This course introduces key molecular biology concepts with a focus on their application in medical laboratory diagnostics. Students explore gene structure, expression, and regulation, along with the molecular basis of disease. The course emphasizes clinically relevant techniques such as PCR, real-time PCR, sequencing, hybridization, recombinant DNA methods, NGS, and basic bioinformatics. Diagnostic applications, including genetic testing, infectious disease detection, cancer biomarkers, and antimicrobial resistance, are highlighted to demonstrate the role of molecular methods in modern clinical laboratory practice.

Pre-requisite: BIOL 201.

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

This course introduces students to the principles of medical virology, providing a comprehensive understanding of viral structure, classification, replication, pathogenesis, and transmission. It emphasizes both the molecular and clinical aspects of viral infections, covering major human viruses responsible for respiratory, gastrointestinal, childhood, sexually transmitted, nervous system, and vector-borne diseases. Special focus will be placed on laboratory diagnosis, epidemiology, prevention, and therapeutic strategies.

Pre-requisite: BIOL 201.

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

This introductory course provides Medical Laboratory Science students with a foundational understanding of toxicology. It covers core principles, dose–response relationships, and the mechanisms by which toxins are absorbed, distributed, metabolized, and eliminated. Students develop the ability to critically analyze toxicological data and apply concepts through case-based discussions focusing on specific toxicities. The course prepares students to accurately interpret toxicological results and address real-world cases encountered in clinical and laboratory settings.

Pre-requisite: BIOL 201.

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

T 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 introduces the essential concepts and practices of phlebotomy, blood banking, and transfusion medicine, with emphasis on safety, laboratory policies, and patient confidentiality. It covers blood group serology, donor selection, compatibility testing, and the principles underlying blood component preparation and transfusion practices. Students gain theoretical and practical experience in phlebotomy, including proper venipuncture techniques, specimen handling, and processing. The course also provides an overview of selected laboratory procedures in clinical chemistry, hematology, and microbiology, highlighting their relevance to patient diagnosis and care.

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

This three-week clinical rotation provides students with practical experience in clinical chemistry. Students are trained to perform routine biochemical tests both manually and on automated analyzers, while applying proper quality control and troubleshooting practices. The rotation includes exposure to special chemistry procedures and the interpretation of laboratory results in relation to metabolic, endocrine, renal, hepatic, and cardiac disorders. Presentation-based lecture sessions complement the practical work by explaining each test in detail, including principles, reference values, analytical considerations, and clinical significance.

Pre-requisite: MLAB 249

Co-requisite: MLAB 211

MLAB 252 APPLIED CLINICAL HEMATOLOGY 1 cr. E

This three-week rotation provides hands-on experience in clinical hematology and phlebotomy. Students perform routine hematological procedures, including peripheral blood smear preparation, staining, differential counts, hematological indices, blood grouping, and selected special stains. In addition to laboratory practice, students participate in presentation-based lecture sessions where each test is explained in detail, including reference values, interpretation, and its association with various diseases.

Pre-requisite: MLAB 249

Co-requisite: MLAB 215

MLAB 253 APPLIED CLINICAL BACTERIOLOGY AND MYCOLOGY 1 cr. E

This three-week rotation provides practical training in clinical bacteriology and mycology, focusing on the culture, isolation, identification, and antimicrobial susceptibility testing of clinically significant microorganisms. Students gain hands-on experience with specimen processing, media selection, colony evaluation, staining techniques, biochemical testing, and interpretation of susceptibility patterns, while applying appropriate quality control and biosafety practices. Presentation-based lecture sessions reinforce the laboratory work by explaining each diagnostic step in detail, covering test principles, expected results, reference interpretations, organism-specific characteristics, and their association with infectious diseases.

Pre-requisite: MLAB 223, MLAB 249 or 250

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

This two-week rotation provides practical training in diagnosing parasitic infections, evaluating male infertility, and examining urine and body fluids microscopically. Students learn specimen preparation, microscopic identification, and interpretation of clinically significant findings. Presentation-based lectures reinforce the practical work by explaining key tests, reference values, distinguishing features, and their clinical relevance through case discussions.

Pre-requisite: MLAB 250.

Co-requisite: MLAB 224.

MLAB 255 APPLIED CLINICAL IMMUNOLOGY AND ENDOCRINOLOGY 1 cr. E

This three-week rotation includes training in serology, endocrinology, and phlebotomy. Students learn specimen processing, assay performance, and result interpretation for autoimmune, infectious, and endocrine disorders using specialized laboratory techniques and instrumentation. Presentation-based lecture sessions reinforce the practical experience by explaining test principles, reference values, and clinical correlations, helping students understand the diagnostic significance of immunological and hormonal assays in patient care.

Pre-requisite: MLAB 250.

Co-requisite: MLAB 214.

MLAB 256 APPLIED BLOOD BANKING 1 cr. E

This three-week rotation provides hands-on training in blood banking and transfusion services. Students learn donor screening, infectious disease testing, blood component preparation, compatibility testing, and essential transfusion practices, with a strong emphasis on patient safety, quality control, and regulatory standards. Presentation-based lecture sessions reinforce key concepts by explaining testing principles, interpretation of results, and clinical applications within modern transfusion medicine.

Pre-requisite: MLAB 249

Co-requisite: MLAB 215

MLAB 257 APPLIED ANATOMIC PATHOLOGY 1 cr. E

This three-week rotation provides exposure to key practices in anatomic pathology, including histology and cytology. Students participate in specimen accessioning, gross examination, tissue processing, embedding, microtomy, and H&E staining, and observe specialized techniques such as immunohistochemistry and cytopathology. Presentation-based lecture sessions reinforce the experience by explaining diagnostic workflows, interpretation principles, and quality assurance practices in anatomic pathology.

Pre-requisite: MLAB 249 or 250.

Co-requisite: MLAB 226.

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

This three-week rotation consists of two weeks of practical training in molecular biology conducted in the university laboratory, followed by one week of lecture-based learning on assisted reproduction. During the laboratory component, students are trained in core molecular techniques, including nucleic acid extraction, amplification, electrophoresis, and selected applications in clinical diagnostics. The assisted reproduction component introduces students, through lectures only, to laboratory procedures used in fertility testing and reproductive medicine, with emphasis on in vitro fertilization (IVF) workflows, quality control, and clinical interpretation. Lecture sessions throughout the rotation address advanced topics and emerging technologies in molecular diagnostics and reproductive medicine.

Pre-requisite: FHSC 203.

Co-requisite: MLAB 230.

MLAB 260 ADVANCED TOPICS IN QUALITY ASSURANCE 1 cr. E

This course focuses on the principles and practices of quality control (QC) in clinical laboratories, emphasizing methods used to ensure accuracy, precision, reliability, and standardization of analytical testing. Students learn how to design, implement, and evaluate QC programs, including the selection of control materials, establishment of reference ranges, and interpretation of QC data. Key topics include sources of analytical error, performance characteristics of laboratory assays, Westgard rules, Levey–Jennings charts, proficiency testing, and corrective/preventive actions. The course highlights the relationship between QC, analytical performance, and clinical decision-making. Students are also introduced to the role of quality assurance (QA) and accreditation standards in supporting laboratory quality systems, with emphasis on documentation, regulatory compliance, continuous improvement, and risk management strategies.

Co-Pre-requisite: MLAB 249

MLAB 350 ADVANCED CLINICAL PRACTICUM **4 cr. E**

This 8-week practicum provides students with the opportunity to engage in advanced, hands-on training within a specialized area of clinical laboratory practice. Students select the rotation in which they wish to concentrate, allowing them to deepen their skills and knowledge in a field of personal interest. The practicum emphasizes mastery of procedural methodologies, application of quality assurance measures, and integration of theoretical knowledge with practical experience. A strong focus is placed on correlating laboratory results with clinical outcomes, fostering critical thinking, professional independence, and readiness for career advancement in medical laboratory sciences.

Pre-requisites: MLAB 249

BACHELOR OF SCIENCE IN NURSING
(OFFERED IN ENGLISH AND FRENCH)

First Year
SEMESTER 1

Course Code	Course Title	Credit
ENGL 203	English Communication Skills III	3
BIOL 205	Principles of Human Biology	3
FHSC 202	Introduction to Human Anatomy	2
FHSC 280	Information Technology and Health Sciences	2
LISP 200[1]	Library Use and Research Methods	1
NURS 210	Introduction to Professional Nursing	2
PSYC 200	Introduction to Psychology	3
		16

SEMESTER 2

Course Code	Course Title	Credit
ENGL 204	English Communication Skills IV or its equivalent	3
FHSC 203	Basic Human Physiology	4
FHSC 209	Fundamentals of Microbiology	2
NURS 211	Introduction to Nursing Practice	4
NUSC 209	Basic Nutrition and Diet Therapy	3
		16

SUMMER

Course Code	Course Title	Credit
FHSC 264	Human Growth and Development	2
FHSC 271[1]	First Aid	1
NURS 212	Legislation and Nursing	1
NURS 214[2]	Service Training I	-
NURS 216	Health Assessment	2
		6

SECOND YEAR
SEMESTER 3

Course Code	Course Title	Credit
FHSC 211	Pathophysiology	3
FHSC 229	Pharmacology	2
NURS 241	Nursing Care of Adults I	5
NURS 247	Nursing Care in Perinatology and Gynecology	4
	Elective	3
		17

SEMESTER 4

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
CSPR[3]	Cultural Studies Courses	3
NURS 215[2]	Service Training II	-
NURS 246	Mental Health and Psychiatric Nursing	4
		7

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credit
CSPR[3]	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

Course Code	Course Title	Credit
NURS 250	Leadership and Management in Nursing and Health	5
NURS 251[4]	Internship	-
		5

Total number of credits **100**

1. Required no-fee course.
2. 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.
3. Students may choose any CSPR course.
4. Internship is equivalent to 450 hours of clinical training (10 Credits).

NURS 214, 215, and 251 are creditless, no-fee courses.
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 19 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
-BIOL 202 Introduction to Biology I Lab 1cr

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

•Chemistry – 9 credits:
-CHEM 202 Basic Chemistry 3cr
-CHEM 242 Organic Chemistry I 3cr
-CHEM 244 Organic Chemistry II 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 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 holder 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 candidate may join the Program after meeting the University admission requirements concerning English or French proficiency test.

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

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.

These students have to take at least 91 credits of which 26 are the mandatory courses mentioned above and the rest can be earned by examination. The curriculum is similar to the BT-BSN Program described below.

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.
MATH112 3 credits

CHEM102 3 credits

PHYS 100 3 credits

BIOL101 3 credits

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:

Course Code	Course Title	Credit
ENGL 203	English Communication Skills III	3
ENGL 204	English Communication Skills IV (or its equivalent)	3
CSPR[1]	Cultural Studies Courses	3
CSPR[1]	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[2]	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[2]	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. Students may choose any CSPR course.
2. Required no-fee course.

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

Course Code	Course Title	Credit
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		**10**

COURSE DESCRIPTIONS

CSPR CULTURAL STUDIES
Refer to the Cultural Studies Program.

ENGL 203, 204
Refer to Faculty of Arts and Sciences.

FREN 201, 202
Refer to Faculty of Arts and Sciences.

LISP 200 LIBRARY USE AND RESEARCH METHODS
Refer to Faculty of Arts and Sciences.

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.

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 / 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 care plans. 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, NURS 216.
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 214.

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**

This course helps students develop evidence-based knowledge related to the mental health problems. The first part of the course is theoretical. It emphasizes the various mental health problems, diagnosis, therapy and the principles of communication with the patient and his family. The second part is practical. It initiates the students to have an individualized clinical approach with the patients and to get familiarized with the different therapeutic modalities including psychotherapy and pharmacology. Field experience is carried out in acute and chronic care centers, with in-patients and out-patients.

Pre-requisite: FHSC 264, NURS 242, NURS 244.

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 214.

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, NURS 246.

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, NURS 245, NURS 246.

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, NURS 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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
CSPR[3]	Cultural Studies Courses	3
FHSC 271[2]	First Aid	1
Total		**4**

SECOND YEAR

SEMESTER 3

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
PDHP 260	Student Project Residency Internship**	3
Total		**3**

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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.

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.

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 examine a wide spectrum of behavior change theories and techniques, including behavior modification, social modeling, social interaction theory, information processing research, and models of behavioral self-regulation and problem solving. Lectures and applications consider different topics, such as substance abuse, hazard control, 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-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, SOCL202.

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 248 QUALITY MANAGEMENT SYSTEMS 2.0: 2 cr. E

This course introduces students to quality management systems. It allows the understanding and implementation of standards, procedures, and policies. It also gives students a background in international standards. Students are instructed about quality assurance and quality management in different types of organizations related to the field of Public Health.

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: 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.

*Elective course offerings may vary by campus and academic year, depending on instructor availability and student enrollment. Students are encouraged to consult the departmental schedule each term to confirm which electives are available.

BS IN PUBLIC HEALTH AND DEVELOPMENT SCIENCES WITH PREMEDICAL REQUIREMENTS

The Department of Public Health 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 Public Health and Development Sciences (PD). The pre-medical courses consist of:

Course Code	Course Title	Credits
BIOL 201	Introduction to Biology I	3
BIOL 202	Introduction to Biology I Lab	1
FHSC 203	Introduction to human Physiology	4
		8
CHEM 222	Analytical Chemistry I	3
CHEM 202	Basic Chemistry	3
CHEM 242	Organic Chemistry I	3
CHEM 244	Organic Chemistry II	3
		12
PHYS 211	Fundamentals of Physics I	3
PHYS 213	Fundamentals of Physics II	3
		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

Course Code	Course Title	Credits
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
		16

SEMESTER 2

Course Code	Course Title	Credits
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
		16

SUMMER

Course Code	Course Title	Credits
CHEM 244	Organic Chemistry II*	3
PSYC 200	Introduction to Psychology*	3
		6

SECOND YEAR

SEMESTER 3

Course Code	Course Title	Credits
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
		18

SEMESTER 4

Course Code	Course Title	Credits
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

Course Code	Course Title	Credits
PDHP 260	Student Project Residency Internship**	3
		3

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credits
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

Course Code	Course Title	Credits
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

MINOR DEGREE

Students from all degree backgrounds are eligible to take a Minor in Public Health, which consists of 15 credits selected from Public Health courses. Students from non-science backgrounds may be asked to complete specific prerequisites.. Eligible 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 (Health care Management and Administration) and FHSC 284 (Project Planning and Evaluation). Students are encouraged to consult with the Department Chairperson to plan their course selection .

A Minor in Public Health allows students to complement their major field of study while gaining foundational competencies related to:

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

The course selection within the minor allows students to tailor their learning towards interests such as environmental and occupational health, development and sustainability, or healthcare systems, policy and management.

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

FIRST YEAR

SEMESTER 1

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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 de Nutritional Sciences in addition to completion of the following premedical requirements (exempted from above-mentioned 9 credits UNIV SET-ELECTIVES) needed for application to medical school:

Course Code	Course Title	Credits
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		**12**

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

FIRST YEAR

SEMESTER 1

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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
		15

SEMESTER 4

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
NUSC 238	Internship in Food establishment**	3
Total		**3**

THIRD YEAR

SEMESTER 5

Course Code	Course Title	Credit
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

Course Code	Course Title	Credit
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.

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-requiste: 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

Course Code	Course Title	Credit
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

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

The course will highlight Nursing Informatics, which is a combination of computer science, information science, and nursing science. It will focus on the use of information processes and information technology in the nursing practice. It will provide the students with knowledge and skills related to healthcare decision-making for patients, healthcare consumers, and professionals. Electronic Health Records (EHR), telehealth, personal reference management software, and Evidence-Based Practice (EBP) will be emphasized.

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. It includes the identification and exploration of a research problem with its significance and rationale, the literature review, the formulation of the aims, objectives, research questions and hypotheses, the research methodology focusing on the different types of design and their interrelation with the research question, the sample characteristics and sampling strategies and the plan of analysis. Issues of research ethics are discussed and emphasized.

The course initiates the students to the importance of research in the healthcare sciences and in supporting an evidence-based practice. It helps students sharpen their critical thinking and scientific curiosity, get familiar with the search strategy and the critical selection and reading of scientific articles and develop their teamwork capacities and their listening, exchanging, and persuasive skills.

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