



**LEBANESE UNIVERSITY
FACULTY OF SCIENCES
DEAN OFFICE**

Master 1 Professional Programs Description & Curriculum



Master Programs

Master Program	Pharmacology
Master Type	M1 Professional
Teaching Language	English
Place of Teaching (Campus)	Hadat
About the Program	<p>The Pharmacology graduate program consists of 1 year of course work, and is designed in collaboration with industry partners to equip biochemistry graduates with the necessary knowledge in the field of pharmacology and pharmaceutical industry.</p> <p>Enrollment in this program is a pre-requisite for biochemistry graduates to apply for M2 Pharmaceutical Industry graduate program at the Faculty of Pharmacy at the Lebanese University, and qualify graduate to apply for M2 programs at Faculty of Sciences / Public Health, etc...</p> <p>During the program the student will develop scientific and analytical skills, and learn how to design and evaluate industrial, clinical and pharmacological studies.</p>
Program Learning Outcomes	<ul style="list-style-type: none">• Learn basic principles of pharmacology (drug absorption, metabolism, distribution, and elimination) and its physiological effect.• Learn about therapeutic use of medications, and how to assess medication's complications and toxic effects.• Get theoretical knowledge and hands-on-experience in pharmaceutical industry, and the principles followed in various industry departments (manufacturing, quality control, quality assurance, microbiology, and biotechnology)• Learn how to handle research and lab data, formulating hypothesis, and analyzing and presenting experimental results using statistical inference, and to critically think about their clinical interpretation.
Fields of Work	<p>Graduates may opt for a career in pharmaceutical industries in multiple departments, where the master's degree gives an added value for biochemists to work in drug development and manufacturing. In addition, graduates may also opt for a job in pharmaceutical companies, research organizations, quality auditors, or as a biomedical science teacher in higher professional education.</p>
Admission Requirements	<p>GPA: Minimum GPA of 55/100 for students from Lebanese University Minimum GPA of 3.2 for students from outside Lebanese University</p> <p>Major: Biochemistry</p>
Coordinator of Master Program	<p>Pr. Mazen Kurdi</p> <p>Contact information: UL Email address: mkurdi@ul.edu.lb Alternative email: mazen_kurdi@hotmail.com</p>
Program Curriculum	Attached below

**Professional Master - M1
Pharmacology
2024-2025**

Semester 1	Course						
	Code	Title	Credits	C	TS	Lab	Hours
	PHRM 400	Basic Pharmacology and Pharmacokinetic	5	24	24		48
	PHRM 401	Pathophysiology	4	32			32
	PHRM 402	Toxicology of Drugs and Chemicals	4	32			32
	PHRM 403	Pharmaceutical Microbiology	3	16	12		28
	PHRM 404	Pharmaceutics	3	16	12		28
	PHRM 405	Applied Bioanalytical Procedures (Methods and Validation)	4	24		15	39
	PHRM 406	Biostatistics	4	24		15	39
	PHRM 407	English Language and Communication	3		36		36
Total			30	168	84	30	282

Semester 2	Course						
	Code	Title	Credits	C	TS	Lab	Hours
	PHRM 409	Molecular Pharmacology	5	32		15	47
	PHRM 412	Biotechnology	3	24			24
	PHRM 413	Applied Drug Spectroscopy	4	24		15	39
	PHRM 414	Biopharmaceutics	2	8	12		20
	PHRM 418	Pharmacotherapy	5	40			40
	PHRM 419	Pharmaceutical Industry and Technology	4	24	12		36
	PHRM 411	Drug Design and Synthesis	3	24			24
	PHRM 417	Principles of Quality Control	2			30	30
PHRM 420	Pharmaceutical Industry Lab	2			30	30	
Total			30	176	24	90	290



Master Programs

Master Program	Healthcare Quality Management and Technology
Master Type	<input checked="" type="checkbox"/> M1+ M2 Professional <input type="checkbox"/> M2 Professional <input type="checkbox"/> M2 Research
Teaching Language	<input checked="" type="checkbox"/> English <input type="checkbox"/> French <input type="checkbox"/> Mixed - English & French
Place of Teaching (Campus)	<input checked="" type="checkbox"/> Hadat <input type="checkbox"/> Fanar <input type="checkbox"/> Tripoli <input type="checkbox"/> Nabatieh
About the Program	This program, in partnership with Gates group, is designed to support healthcare professionals at all levels with innovative, value-added skills and tools and enable them to become leaders in their key positions. Also, this program is planned with special consideration for those whose access to learning is limited by time.
Program Learning Outcomes	<ul style="list-style-type: none"> – Build systems from inception to implementation. – Gain cutting-edge knowledge in the field of management with an emphasis on healthcare systems – Gain hands-on experience in healthcare management. – Achieve comprehensive knowledge of quality management. – Learn the latest healthcare technologies for enhanced healthcare delivery. – Learn the trends in national and international accreditation. – Foster teamwork by working with professionals from diverse healthcare disciplines. – Cultivate abilities to analyze complex issues and formulate strategic solutions. – Promote research literacy and evidence-based practice for improving healthcare outcomes. – Offer opportunities for networking, mentorship, and staying updated on industry trends and best practices.
Fields of Work	<ul style="list-style-type: none"> – Employed as senior managers in healthcare organizations in Lebanon and MENA region. – Have working opportunities as trainers on quality and healthcare management, consultants for healthcare organization management, or as internal auditors on Lebanese accreditation standards.
Admission Requirements	<p>GPA: Minimum GPA of 55/100 for students from Lebanese University Minimum GPA of 3.2 for students from outside Lebanese University</p> <p>Major: <input checked="" type="checkbox"/> Chemistry <input checked="" type="checkbox"/> Biochemistry <input checked="" type="checkbox"/> Animal Biology <input checked="" type="checkbox"/> Plant Biology <input checked="" type="checkbox"/> Math <input checked="" type="checkbox"/> Computer Science <input checked="" type="checkbox"/> Electronics <input checked="" type="checkbox"/> Physics <input checked="" type="checkbox"/> Healthcare, Public Health, Medical Sciences</p>
Coordinator of Master Program	<p>Pr. Jamal Charara (LU)</p> <p>Contact information: UL Email address: jcharara@ul.edu.lb Alternative email: xxx@xxx.com Phone number (<i>optional</i>): +961- xx - xxxxxx</p>

**Professional Master - M1
Healthcare Management
2024- 2025**

	Course					
	Code	Title	Credits	C	LS	Nb of Hours
Semester 1	HMQT 411	Healthcare Management	4	24	8	32
	HMQT 413	Financial Management in Healthcare Organizations	4	24	8	32
	HMQT 414	Governance & Leadership in Healthcare	3	16	8	24
	HMQT 415	Quality Management	5	32	8	40
	HMQT 416	Biostatistics and Epidemiology	5	40		40
	HMQT 417	Hospital's Structure & Design	4	24	8	32
	HMQT 420	Workforce & Talent Management	5	32	8	40
	Total			30	192	48

	Course					
	Code	Title	Credits	C	LS	Nb of Hours
Semester 2	HMQT 412	Healthcare Systems & Economics	5	32	8	40
	HMQT 421	Materials & Assets Management	4	24	8	32
	HMQT 423	Health Information Systems	3	24		24
	HMQT 424	Revenue Management in Healthcare	3	16	8	24
	HMQT 428	Organizational Development for Healthcare Transformation	4	24	8	32
	HMQT 429	Safety and Risk Management in Healthcare Organizations	5	32	8	40
	HMQT 430	Healthcare Business Transformation	3	16	8	24
	HMQT 431	Healthcare Law and Ethics	3	16	8	24
Total			30	184	56	240

Professional Master
M2 Healthcare Management – Quality and Technology,
Option : Quality & Accreditation
2025-2026

Semester 3	Course					
	Code	Title	Credits	C	LS	Nb of Hours
	HMQA 512	Accreditation in Healthcare	5	32	8	40
	HMQA 514	Operations Management	4	24	8	32
	HMQA 515	Clinical Practices Management	4	24	8	32
	HMQA 516	Research Methodology in Healthcare	5	32	8	40
	HMQA 517	Digital Health and Artificial Intelligence	3	16	8	24
	HMQA 518	Advanced Quality and Health Technology Management	5	32	8	40
	HMQA 519	Community Health: Promotion and Communication	4	24	8	32
Total			30	184	56	240

Semester 4	Course					
	Code	Title	Credits	C	LS	Nb of Hours
	HMQA 580	Master Thesis	30			
Total			30			



Master Programs

Master Program	NUTRITION, DIETETICS AND FOOD SERVICE
Master Type	<input checked="" type="checkbox"/> M1+ M2 Professional <input type="checkbox"/> M2 Professional <input type="checkbox"/> M2 Research
Teaching Language	<input type="checkbox"/> English <input type="checkbox"/> French <input checked="" type="checkbox"/> Mixed - English & French
Place of Teaching (Campus)	<input type="checkbox"/> Hadat <input checked="" type="checkbox"/> Fanar <input type="checkbox"/> Tripoli <input type="checkbox"/> Nabatieh
About the Program	<p>The program provides students with the information and tools to understand the future strategic, industrial and societal issues of nutrition and food and their relationships to human health. It is a question of supplementing their scientific background by a formation giving a large space to the analysis of the relationships: food-health, pathology-diet, dietetic-health, the food management and food quality control.</p> <p>This M1-M2 Master cycle includes theoretical courses, practical work, visits, seminars, internships as well as individual projects that stimulate students' sense of autonomy and entrepreneurship.</p> <p>It includes 4 semesters with a professional internship of 6 to 7 months during the fourth semester. At the end of this internship, a dissertation will be defended in front of a scientific and professional jury.</p>
Program Learning Outcomes	<ul style="list-style-type: none"> - Ethics and professionalism - Interdisciplinary work and communication - Policies of the dietetics profession - Research skills - Public health nutrition - Clinical nutrition and dietetics - Medical nutrition therapy - Food service and safety management
Fields of Work	<p>The job opportunities the Master may offer are in: dietary services of the hospital, dietary centers, food industry, public institutions, school and sports centers, international organizations, offices of advice or expertise, inspection.</p> <ul style="list-style-type: none"> ➤ Hospital ➤ Private clinic ➤ Community ➤ Consultancy ➤ Health Education ➤ Agri-food or Pharmaceutical Industry
Admission Requirements	<p>GPA: Minimum GPA of 55/100 for students from Lebanese University Minimum GPA of 3.2 for students from outside Lebanese University</p> <p>Major:</p> <p><input type="checkbox"/> Chemistry <input checked="" type="checkbox"/> Biochemistry <input checked="" type="checkbox"/> Animal Biology <input checked="" type="checkbox"/> Plant Biology <input type="checkbox"/> Math <input type="checkbox"/> Computer Science <input type="checkbox"/> Electronics <input type="checkbox"/> Physics <input checked="" type="checkbox"/> BS in Nutrition (other universities)</p>
Coordinator of Master Program	<p>Pr. ELIE HAJJ MOUSSA</p> <p>Contact information: UL Email address: ehajjmoussa@ul.edu.lb Alternative email: eliehajjmoussa@yahoo.fr Phone number (<i>optional</i>): +961- 03-523897</p>

Professional Master - M1
Nutrition, Dietetics and Food service
2024-2025

	Course							
	Code	Title	Credits	C	TS	LS	Hours	
Semester 1	NUTR 400	Quality control, safety and hygiene in food systems	4	24		15	39	
	NUTR 401	Culinary techniques	3	16		15	31	
	NUTR 402	Nutrition through life cycle	4	24		15	39	
	NUTR 403	Introduction to human nutrition and dietetics	4	24		15	39	
	NUTR 404	Nutrition physiology and advanced biochemistry	5	32		15	47	
	NUTR 412	Research methodology and communication	2		24		24	
	NUTR 413	Phytotherapy, nutraceutical and myths in food sciences	5	32		15	47	
	BIOC 403	Applied immunology	3	16		14	30	
	Total			30	168	24	104	296

	Course						
	Code	Title	Credits	C	TS	LS	Hours
Semester 2	NUTR 405	Food microbiology	4	24		15	39
	NUTR 406	Advanced food science	3	16		15	31
	NUTR 407	Community nutrition	4	24		15	39
	NUTR 408	Nutrigenetics and inborn errors of the metabolism	5	32		15	47
	NUTR 409	Dietary clinic visit and nutritional assessment	3	16		15	31
	NUTR 410	Formulation	3	16		15	31
	NUTR 411	Toxicology, pharmacology and food-drug interactions	5	24		30	54
	BIOC 425	Biostatistics	3	16		20	36
	Total			30	168		140

**Professional Master - M2
Nutrition, Dietetics and Food service
2024-2025**

	Course					
	Code	Title	Credits	C	TS	Hours
Semester 3	NUTR 500	Psychology and nutrition	2	16		16
	NUTR 501	Medical nutrition therapy	6	16	40	56
	NUTR 502	Nutritional strategies in sport and application	2	8	10	18
	NUTR 503	Epidemiology and sensory aspects of food	3	8	20	28
	NUTR 504	Food technology	3	16	10	26
	NUTR 505	Food service management : 1. cost control and feasibility, 2. marketing, 3.health care management	6	16	40	56
	NUTR 506	Law, regulation and ethics in nutrition	4	16	20	36
	NUTR 507	Seminars	2	8	10	18
	Engl 571	Scientific English	2		24	24
	TOTAL			30	104	174

	Course					
	Code	Title	Credits	C	TS	Hours
Semester 4	NUTR 580	Master Thesis	30			
	Total			30		



Master Programs

Please do not exceed one page for all the information

Master Program	Lasers and Ionizing Radiations - Safety and Protection
Master Type	<input checked="" type="checkbox"/> M1+ M2 Professional <input type="checkbox"/> M2 Professional <input type="checkbox"/> M2 Research
Teaching Language	<input type="checkbox"/> English <input type="checkbox"/> French <input checked="" type="checkbox"/> Mixed - English & French
Place of Teaching (Campus)	<input type="checkbox"/> Hadat <input checked="" type="checkbox"/> Fanar <input type="checkbox"/> Tripoli <input type="checkbox"/> Nabatieh
About the Program	Sources of Radiations- equipments in medical Field - Quantities and unites- Medical Imaging- Laser applications- Patients Dose- Radiation protection in medical field - Biology- Norms and standards- Quality Assurance program- Quality control. Nuclear security - Authorization- calculation of dose. Research Radiotherapy - Radiology - nuclear Medicine -lasers in medical filed- Diagnoses and treatments
Program Learning Outcomes	<ul style="list-style-type: none"> Quality control - calculation of dose- authorization development the new equipment for new technology .
Fields of Work	Medical physicist- Radiation protection officer- quality control management- auditor- inspector in radiation medical filed authority body
Admission Requirements	<p>GPA: Minimum GPA of 55/100 for students from Lebanese University Minimum GPA of 3.2 for students from outside Lebanese University</p> <p>Major: <input type="checkbox"/> Chemistry <input type="checkbox"/> Biochemistry <input type="checkbox"/> Animal Biology <input checked="" type="checkbox"/> Plant Biology <input type="checkbox"/> Math <input type="checkbox"/> Computer Science <input type="checkbox"/> Electronics <input checked="" type="checkbox"/> Physics <input checked="" type="checkbox"/> Radiology (Health Faculty)</p>
Coordinator of Master Program	<p>Pr. Hanna EL BALAA</p> <p>Contact information: UL Email address: hanna.elbalaa@ul.edu.lb Alternative email: hanna_balaa@yahoo.fr Phone number (optional): +961- 03 -138193</p>

**Professional Master - M2
Lasers and Ionizing Radiations: Safety, Protection
2024-2025**

	Course					
	Code	Title	Credits	C	TS	Hours
Semester 3	LRSP 500	Nuclear security	3	16	12	28
	LRSP 501	Emergency plan in case of radiological accident	3	16	12	28
	LRSP 502	Laser therapy and procedures (ophthalmology and vascular)	4	24	12	36
	LRSP 503	External and internal exposition	3	16	12	28
	LRSP 504	Medical exposition	3	16	12	28
	LRSP 505	Professional exposition	5	24	24	48
	LRSP 506	Public exposition	3	16	12	28
	LRSP 507	Simulation and modeling	2	16		16
	LRSP 508	Antennas and Systems	2	16		16
	LRSP 509	Results operating methods	1	12		12
	ENGL 591	Scientific English & Communication skills	1		20	20
	Total			30	172	116

LRSP 570 Seminars, scientific workshops and visits (0 Credits, 12 H)

	Course					
	Code	Title	Credits	C	TS	Hours
Semester 4	LRSP 580	Master Thesis	30			
	Total			30		