LEBANESE UNIVERSITY

FACULTY OF MEDICAL SCIENCES

الجامعة اللبنانية

كلية العلوم الطبية

قرار رقم ٢٥١

استحداث ماسترات علمية بحثية في كلية العلوم الطبية

ان رئيس الجامعة اللبنانية
بناء" على المرسوم رقم ٨٤١٥ تاريخ ٢٠١٩/١٠/١٣ (تعيين رئيس الجامعة اللبنانية)
بناء" على القانون رقم ٦٧/٧٥ تاريخ ١٩٦٧/١٢/٢٦(تنظيم الجامعة اللبنانية) وتعديلاته
بناء" على المرسوم رقم ١٤٢٤٦ تاريخ ١٩٧٠/٤/١٤ (النظام المالي للجامعة اللبنانية) وتعديلاته
بناء" على القانون رقم ٨١/١٢ تاريخ ١٩٨١/٥/١٣ (احكام مختلفة تتعلق ببعض أنظمة الجامعة اللبنانية)
بناء" على المرسوم رقم ١١١٨ تاريخ ١٩٨٣/١٠/١٢ (انشاء كلية العلوم الطبية) وتعديلاته
بناء" على المرسوم رقم ١١٦٧ تاريخ ١٩٧٨/٤/١٥ (تفويض رئيس الجامعة اللبنانية بت بعض المواضيع الخاضعة أصلا" لموافقة مجلس الوزراء)
بناء" على توصية مجلس كلية العلوم الطبية بجلسته بتاريخ ٢٠٢١/٣/٣
بناء" على اقتراح عميد كلية العلوم الطبية

يقرر ما يلي:

المادة الاولى: يستحدث في كلية العلوم الطبية ماسترات علمية بحثية :

-Master of science in health administration(MHA) ماستر علمي بحثي

-Master of science in clinical investigation(MSCI) ماستر علمي بحثي

-Master of sciences in Medical ethics and Bioethics. ماستر علمي بحثي

وفقا" للتالي:
أ – مدة الدراسة سنتين لكل منهما
ب – تحدد البرامج والمناهج لهذه الماسترات باللوائح المرفقة بالقرار

المادة الثانية: يعمل بهذا القرار فور صدوره ويبلّغ حيث تدعو الحاجة.

بيروت في :
رئيس الجامعة اللبنانية

البروفسور فؤاد أيوب

يبلغ الى :
امانة السر الجامعة
المصلحة الادارية المشتركة بكافة دوائرها
المراقب المالي
ديوان المحاسبة
مكتب التفتيش والانماء الاداري
دائرة القضايا
كلية العلوم الطبية

وزير التربية والتعليم العالي
عباس الحلبي
٢٠٢١/١١/٥

بناء للمرسوم رقم ٨٤١٥ تاريخ ٢٠١٩/١٠/١٣ (تعيين رئيس الجامعة اللبنانية)

٢٤ تشرين الثاني ٢٠٢١
رئيس الجامعة اللبنانية
بسام بدران

الجامعة اللبنانية
الدائرة الإدارية المشتركة

MASTER OF SCIENCE IN CLINICAL INVESTIGATION (MSCI)

Module 1: Epidemiology and Biostatistics *(30 Credits)*			
COURSES	credit	theory	TD/TP
Introduction to Epidemiology	10	8	2
Introduction to Biostatistics	20	14	6

Module 2: Foundations of Clinical Investigation *(30 Credits)*			
COURSES	credit	theory	TD/TP
Ethics of Clinical Research	10	6	4
The Scientific Method and Evidence-based medicine (EBM)	10	6	4
Introduction to EBM , 2 credits			
Types of Research in EBM , 4 credits			
Hypothesis formation and solving clinical questions, 4 credits			
Leadership and Teamwork	10	5	5
Working with, managing, and leading a clinical research team , 3 credits			
Skills and techniques for effective scientific presentations , 2 credits			
Managing conflicts in the research team, 2 credits			
Navigating institutional complexities , 3 credits			

Module 3: Mentored Research Experience *(30 Credits)*			
COURSES	credit	theory	TD/TP
Writing for publication in biomedical journals	10	6	4
How to be a successful peer reviewer	8	5	3
How to write a grant	6	4	2
Development and presentation of a research plan and proposal (with mentor)	6	3	3

Module 4: Independent Research *(30 Credits)*			
COURSES	credit	theory	TD/TP
Preparation, submission, and publication of an Original Research Article (in a PubMed indexed journal)	10	0	10
Seminar presentation of the published paper	5	0	5
Publication tutoring and research	5	0	5
Advanced research workshop	10	0	10

وافق وزير التربية والتعليم العالي

Master of Science in Clinical Investigation (MSCI)

Description

The Master of Science in Clinical Investigation (MSCI) program is primarily designed for physicians, medical residents, fellows, and faculty members who wish to receive formal training in clinical research.

The objective of the MSCI program is to produce clinical investigators who are skilled in clinical research techniques and knowledgeable about the complex issues associated with conducting sound clinical research, particularly in clinical epidemiologic patient-oriented studies. As such, all program participants are expected to be actively engaged in investigations with a mentor at the Lebanese University.

- This Degree provides an excellent transition to full-scale PhD research.

Application & Admissions Requirements

- Graduate professional degree in a healthcare-related subject area (e.g., MD, PharmD)
- Professional healthcare experience
- Proficient in English
- Statement of purpose
- Official post-secondary transcripts
- Two letters of recommendation
- History of publications or first-authored presentations at academic conferences.

Curriculum

- **Module 1: Epidemiology and Biostatistics** *(30 Credits)*
  - **Introduction to Epidemiology,** *10 credits (8 Theory, 2 TD/TP)*
    - Distribution and determinants of disease
    - Study designs in epidemiology
  - **Introduction to Biostatistics,** *20 credits (14 Theory , 6 TD/TP)*
    - T-tests
    - Regression
    - ANOVA
    - Logistic regression
    - Categorical data analysis techniques
    - COX proportional hazards regression
    - SPSS, STATA, and/or R workshops

- **Module 2: Foundations of Clinical Investigation** *(30 Credits)*
  - **Ethics of Clinical Research,** *10 credits (6 Theory , 4 TD/TP)*
    - Plagiarism
    - History and evolution of ethical research codes and regulations
    - Principles and conduct of clinical trials for medical research
    - Protection of study participants and patient privacy regulations
    - Role of physicians
    - Preparation of research protocol applications and informed consent documents

- **The Scientific Method and Evidence-based medicine (EBM),** *10 credits (6 Theory, 4 TD/TP)*
  - Introduction to EBM - 2 credits
  - Types of Research in EBM – 4 credits
    - Systematic Reviews and Meta-analysis
    - Clinical Trials
      - Phase 1 trials
      - Phase 2 trials
      - Phase 3 trials
      - Phase 4 trials
    - Cohort Studies
      - Prospective studies
      - Retrospective studies
    - Case-Control Studies
    - Cross-Sectional Surveys
    - Case Series/Reports
  - Hypothesis formation and solving clinical questions – 4 credits
    - Stating the clinical question
    - Conducting research on search engines and databases (eg. PubMed, Medline, Scopus, Web of Science, etc.)
    - Formulating the hypothesis
    - Phrasing the hypothesis
    - Choosing the right study design to test the hypothesis
- **Leadership and Teamwork,** 10 credits (5 Theory, 5 TD/TP)
  - Working with, managing, and leading a clinical research team , 3 credits
    - Roles and members of the clinical investigation team
    - Responsibilities of the Principal Investigator
    - Responsibilities of the Clinical Research Coordinator
  - Skills and techniques for effective scientific presentations , 2 credits
    - Preparing the slides
    - Connecting with the audience
    - Role of the body language (eg. posture, hand movement, tone, etc.)
  - Managing conflicts in the research team, 2 credits
    - Assuming good intentions
    - The importance of listening
    - Assessing severity
    - Openness to change (solutions)
  - Navigating institutional complexities , 3 credits
    - Role of the Institutional Review Board (IRB)
    - Role of Food and Drug Agencies
    - Introduction to Grants

- **Module 3: Mentored Research Experience** *(30 Credits)*
  - **Writing for publication in biomedical journals,** 10 credits (6 Theory, 4 TD/TP)
    - Introduction
    - Material and methods
    - Discussions
    - Results
    - Conclusion
  - **How to be a successful peer reviewer** , *8 credits (5 Theory , 3 TD/TP)*
    - Evaluation of work
    - Work to assess the validity, quality, and originality of manuscripts
    - Rating the 'readability' of the work
    - Writing and structuring the review
    - In-house exercise of peer review (workshop)
  - **How to write a grant** , *6 credits (4 Theory , 2 TD/TP)*
    - Grant exhibits in Lebanon
    - Writing the proposal summary
    - Writing the project objectives
    - Project design
    - Project evaluation
    - Future funding
    - Project budget
  - **Development and presentation of a research plan and proposal (with mentor)** , *6 credits (3 Theory, 3 TD/TP)*

- **Module 4: Independent Research** *(30 Credits)*
  - Preparation, submission, and publication of an Original Research Article (in a PubMed indexed journal) , 10 TD/TP
  - Seminar presentation of the published paper, 5 TD/TP
  - Publication tutoring and research , *5 TD/TP*
  - Advanced research workshop, *10 TD/TP*

MASTER OF SCIENCE IN HEALTH ADMINSTRATION (MHA)

Module 1: Foundations of Health Administration *(30 credits)*			
COURSES	**credit**	**theory**	**TD/TP**
Biostatistics	4	3	1
Introduction to Public Health Policy: Role of various community, environmental and policy interventions in promoting health and health equity	6	4	2
The Lebanese Healthcare System	4	3	1
Health Organization Leadership	6	4	2
Challenges of managing complex health care systems , *2 credits*			
Leadership and motivational skills relevant to performing as an effective leader , *2 credits*			
Different roles associated with managing the individual, the unit, the organization, and the larger system , *2 credits*			
Healthcare Finance	5	4	1
Law and the Healthcare System	5	3	2

Module 2: Healthcare Systems Improvement *(30 credits)*			
COURSES	**credit**	**theory**	**TD/TP**
Operations management	10	8	2
Evaluating the performance of operating units , *2 credits*			
Designing new or improved operating procedures and systems for competitive advantage , *2 credits*			
Making short-run and long-run decisions that affect operations and managing the work force , *2 credits*			
Understanding the role of operations in any organization , *2 credits*			
Managing existing resources in a healthcare setting , *2 credits*			
Marketing health services	6	5	1
Improving healthcare quality	8	6	2
High reliability , *2 credits*			
Quality improvement tools , *2 credits*			
Analytical thinking , *2 credits*			
Information technology (IT)	6	4	2
IT linkages to business, planning, and governance , *3 credits*			
Implications and impact of IT upon quality, cost, and operations , *3 credits*			

Module 3: The MHA Executive *(30 credits)*			
COURSES	**credit**	**theory**	**TD/TP**
Preceptorship/internship (field experience)	10	5	5
Runs throughout the second year of study , *2 credits*			
Students will apply for internships to shadow successful executives in healthcare institutions in a sector that is related to their professional career goals , *3 credits*			
Working with, managing, and leading teams in healthcare , *2 credits*			
Managing conflicts in the healthcare setting , *3 credits*			
Communications negotiations			
Executive Skills , *5 credits*	10	6	4
Presentation Skills , *5 credits*			

Module 4: The MHA Academic *(30 credits)*			
COURSES	**credit**	**theory**	**TD/TP**
A first-author research paper	10	0	10
Seminar presentation of the published paper	5	0	5
Publication tutoring and research , 5 credits	5	0	5
Advanced research workshop , 10 credits	10	0	10

Master of Science in Health Administration (MHA)

Description

The Master of Science in Health Administration (MHA) program is primarily designed for physicians, business executives, medical and public health administrators and faculty members who wish to receive formal academic training in healthcare administration and management.

The objective of the MHA program is to produce visionaries who aspire to transform the future of health care in Lebanon and the region through innovative and academic solutions. The curriculum provides core knowledge and concepts within the major healthcare disciplines to provide students with a blend of cutting-edge theory and the understanding of how it is applied within the healthcare sector. The program includes didactic components and interactive field experiences to enrich the learning experience. It culminates in a written component, whereby students address an actual strategic management issue in an actual health service organization.

- This degree provides a suitable transition to full-scale PhD research.

Application & Admissions Requirements

- Graduate professional degree in a healthcare-related subject area (e.g., MD, PharmD)
- Professional healthcare experience
- Proficient in English
- Statement of purpose
- Official post-secondary transcripts
- Two letters of recommendation
- History of academic or executive leadership roles in the healthcare industry.

Curriculum

- **Module 1: Foundations of Health Administration** *(30 credits)*
  - **Biostatistics** , *4 credits (3 Theory, 1 TD/TP)*
  - **Introduction to Public Health Policy: Role of various community, environmental and policy interventions in promoting health and health equity,** *6 credits (4 Theory , 2 TD/TP)*
  - **The Lebanese Healthcare System,** *4 credits (3 Theory , 1 TD/TP)*
  - **Health Organization Leadership** , *6 credits (4 Theory, 2 TD/TP)*
    - Challenges of managing complex health care systems , *2 credits*
    - Leadership and motivational skills relevant to performing as an effective leader , *2 credits*
    - Different roles associated with managing the individual, the unit, the organization, and the larger system , *2 credits*
  - **Healthcare Finance** , *5 credits (4 Theory , 1 TD/TP)*
  - **Law and the Healthcare System** , *5 credits (3 Theory , 2 TD/TP)*

- **Module 2: Healthcare Systems Improvement** *(30 credits)*
  - **Operations management** , *10 credits (8 Theory , 2 TD/TP)*
    - Evaluating the performance of operating units , *2 credits*
    - Designing new or improved operating procedures and systems for competitive advantage , *2 credits*
    - Making short-run and long-run decisions that affect operations and managing the work force , *2 credits*
    - Understanding the role of operations in any organization , *2 credits*
    - Managing existing resources in a healthcare setting , *2 credits*
  - **Marketing health services** , *6 credits (5 Theory , 1 TD/TP)*
  - **Improving healthcare quality** , *8 credits (6 Theory , 2 TD/TP)*
    - High reliability , 2 credits
    - Quality improvement tools , 2 credits
    - Analytical thinking , 2 credits
  - **Information technology (IT)** , *6 credits (4 Theory , 2 TD/TP)*
    - IT linkages to business, planning, and governance , *3 credits*
    - Implications and impact of IT upon quality, cost, and operations , *3 credits*

- **Module 3: The MHA Executive** *(30 credits)*
  - **Preceptorship/internship (field experience)** , *10 credits (5 Theory , 5 TD/TP)*
    - Runs throughout the second year of study , *2 credits*
    - Students will apply for internships to shadow successful executives in healthcare institutions in a sector that is related to their professional career goals , *3 credits*
    - Working with, managing, and leading teams in healthcare , *2 credits*
    - Managing conflicts in the healthcare setting , *3 credits*
  - **Communications negotiations** , *10 credits (6 Theory, 4 TD/TP)*
    - Executive Skills , *5 credits*
    - Presentation Skills , *5 credits*

- **Module 4: The MHA Academic** *(30 credits)*
  - **A first-author research paper** , 10 credits (10 TD/TP)
  - **Seminar presentation of the published paper** , *5 credits (5 TD/TP)*
  - **Publication tutoring and research** , 5 credits *(5 TD/TP)*
  - **Advanced research workshop , 10 credits** *(10 TD/TP)*

Master in Ethics & Bioethics

Semester 1

Fundamentals in Ethics (10 credits):

- Introduction to major branches of ethics:
  - Applied Ethics, Moral Psychology, Descriptive ethics, Meta-ethics
- Good and Evil
- Right and Wrong
- Virtue and Vice

Fundamentals in Bioethics (10 credits):

- Intro to bioethics and bioethical reasoning
- Moral status and personhood
- Autonomy and consent
- Is life worth living? Wellbeing and satisfaction (for ex: is the life of a child with a severe chronic disability worth living?)
- Environmental ethics
- Sexuality and gender

Research Ethics (10 credits):

- Guidelines and ethical principles of research
- Consent of participants and procedure clarification
- Subject recruitment
- Trials and treatments
- Privacy, confidentiality, and data protection
- Beneficence and non-maleficence
- Research (clinical research) in "vulnerable" groups and corresponding outcomes (for ex: pregnant women, children, disabled adults)

Semester 2

Medical Law and Ethics (15 credits):

- Physician's oath explanation
- Doctor-patient relationship,
- Autonomy and consent of competent and non-competent patients (also: right to accept or reject treatment)
- duty of care
- Medical malpractice and medical liability
- Relevant Case-studies & case laws

Global Health & Human Rights (15 credits):

- Health equity and equality
- Discrimination in health (demographic, socio-economic, and racial factors)
- Women rights in health
- Mental health
- Health rights of vulnerable groups and others (refugees, prisoners, etc..)
- Primary Health education and care

Semester 3:

Biotechnology and Society (15 credits):

- Introduction and definitions of major subfields: Bioinformatics, Biomedical engineering, biophysics, etc.
- Genomics and human embryo editing
- Assisted reproductive technologies
- Neuro-devices and neuro-ethics
- Telehealth and Health monitoring devices
- Artificial Intelligence and Robotic care (robotic assistants and robotic surgery)

Law and Ethics at the Beginning and End of life (15 credits):

- Human reproduction: autonomy, contraception, sterilization, surrogacy, artificial insemination, wrongful conception/pregnancy
- Death: terminology, stages of death, certifying death, removal from life-support
- Organ transplantation
- Futile medical care
- End of life: euthanasia, physician-assisted suicide, non-treatment and pain relief, palliative sedation

Semester 4:

Dissertation / article

Module 1: (30 Credits)	Credits	Theory	TD/TP	INSTRUCTORS
Fudamentals in Ethics	10			
Introduction to major branches of ethics: (Applied Ethics, Moral Pscyhology, Descriptive ethics, Meta-ethics)				
Good and Evil				
Right and Wrong				
Virtue and Vice				
Fudamentals in Bioethics	10			
Into to bioethics and bioethical reasoning				
Moral status and personhood				
Autonomy and consent				
Is life Worth Living? Wellbeing and satisfaction				
Environemental ethics				
Sexuality and gender				
Research Ethics	10			
Guidelines and ethical principles of research				
Consent of participants and procedure clarification				
Subject recruitment				
Trails and treatment				
Privacy, confidentially, and data protection				
Beneficence and non-maleficience				
Research(clinical research) in "vulnerable" groups and corresponding outcomes				

Module 2: (30 Credits)	Credits	Theory	TD/TP	INSTRUCTORS
Medical Law and Ethics	15			
Physician's oath explanation]				
Doctor-patient relationship				
Autonomy and consent of competent patients (also: right to accept or reject treatment)				
Duty of care				
Medical malpractice and medical liability				
Relevant case-studies and case-laws				
Global Health and Human Rights	15			
Health equity and equality				
Discrimination in health (demographic, socio-economic, and racial factors)				
Women rights in health				
Mental health				
Health rights of vulnerable groups and others (refugees,prisoners,etc)				
Primary health education and care				

Module 3 (30 credits)	Credits	Theory	TD/TP	INSTRUCTORS
Biotechnology and Society	15			
Introduction and definitions of major subfields : Bioinformatics, Biomedical engineering				
Genomics and human embryo editing				
Assisted reproductive technologies				
Neuro-devices and neuro-ethics				
Telehealth and Health monitoring devices				
Artificial intelligence and robotic care (robotic assistants and robotic surgery)				
Law and Ethics at the Beginning and End of life	15			
Human reproduction:autonomy, contraception, sterilization, surrogacy, artificial insemination, wrongful conception/pregnancy				
Death: terminology, stages of death, certifying death. Removal from life support				
Organ transpantation				
Futile medical care				
End of Life: euthanasia, physician-assited suicide, non-treatment and pain relief, palliative sedation				

Module 4 (30 credits)	Credits	Theory	TD/TP	INSTRUCTORS
Dissertation / Article	30			