

MASTER IN PUBLIC HEALTH

Concentrations:

- Health Management and Policies**
- Epidemiology and Biostatistics**
- Health and Environment**

Main Language of Instruction:

French English Arabic

Campus Where the Program Is Offered: CSM

OBJECTIVES

The program aims to train public health experts capable of effectively intervening and resolving complex public health issues, as well as improving the health of populations at the national and regional levels. The program also aims to contribute to the advancement and production of new knowledge in public health, enabling adaptation to changing contexts.

PROGRAM LEARNING OUTCOMES (COMPETENCIES)

By completing this program, students will be able to:

- Exercise leadership in the field of public health
- Elaborate public health programs and interventions that address populations' health needs
- Contribute to the elaboration and implementation of national public health policies
- Conduct research in public health that provides innovative solutions allowing to improve the health and wellbeing of the population
- Integrate ethical principles into the practice of public health
- Collaborate with different public health actors and authorities with the aim of developing a common and holistic vision for a healthy community
- Effectively communicate public health information to various audiences

ADMISSION REQUIREMENTS

This graduate program targets candidates who:

- Hold a either a bachelor's degree or a master's degree, based on the Lebanese Baccalaureate, or equivalent based on the conditions of the Ministry of Education and Higher Education
- Can prove a minimum understanding of French, English, and Arabic
- Submit a candidature file and, if shortlisted, sit for an interview

COURSES/CREDITS GRANTED BY EQUIVALENCE

Candidates who hold a diploma in medicine, dental medicine, or pharmacy, or a master's degree in one of the health disciplines may benefit from an equivalence, decided by the Equivalence Commission of USJ following a study of their files, provided their diplomas are issued as of the 2007-2008 academic year.

PROGRAM REQUIREMENTS

120 credits: Required courses (112 credits), Institution's elective courses (8 credits)

Required Courses - Common Core (82 Cr.)

Fundamentals of Public and Global Health (5 Cr.), Fundamentals of Environmental Health (5 Cr.), Fundamentals of Epidemiology (5 Cr.), Social and Behavioral Sciences in Public Health (2 Cr.), Public Health Updates in the Arab World (2 Cr.), Introduction to Biostatistics (5 Cr.), Multidisciplinary Research in Public Health (4 Cr.), Ethics in Public

Health (2 Cr.), Evidence-Based Public Health Practice (2 Cr.), Public Health Policies and Systems (5 Cr.), Public Health Internship (3 Cr.), Public Health in Emergencies (4 Cr.), Approaches to Health Education and Promotion (4 Cr.), Communication in Public Health (4 Cr.), Thesis I: Preparation for the Thesis/Practicum (10 Cr.), Thesis II: Research Proposal/Organization of Practicum Objectives (10 Cr.), Thesis III: Data Collection/Practicum Implementation (10 Cr.), Thesis IV: Thesis Writing and Defense/Practicum Report Writing and Presentation (10 Cr.).

Required Courses-Concentration: Health Management and Policies (20 Cr.)

Development and Evaluation of Public Health Interventions (4 Cr.), Health Economics (4 Cr.), Public Health Information Systems (4 Cr.), Accounting and Financial Analysis of Public health Institutions (4 Cr.), Organization and Management of Public Health Institutions (4 Cr.).

Required Courses-Concentration: Epidemiology and Biostatistics (20 Cr.)

Data Management and Analysis (4 Cr.), Epidemiology and Public Health (4 Cr.), Clinical Epidemiology (4 Cr.), Multivariate Analysis (4 Cr.), Longitudinal Data Analysis (4 Cr.).

Required Courses-Concentration: Health and Environment (20 Cr.)

Systems of Environmental Management (4 Cr.), Toxicology and Health Hazards (4 Cr.), Management of Natural Resources (4 Cr.), Occupational Health and Safety (4 Cr.), Sustainable Development and Environmental Health (4 Cr.).

Institution's Elective Courses (8 Cr.), to be chosen from the list below:

- **Health Management and Policies Concentration:** Data Management and Analysis (4 Cr.), Professional Environment and Public Health (4 Cr.).
- **Epidemiology and Biostatistics Concentration:** Development and Evaluation of Public Health Interventions (4 Cr.), Professional Environment and Public Health (4 Cr.).
- **Health and Environment Concentration:** Development and Evaluation of Public Health Interventions (4 Cr.), Data Management and Analysis (4 Cr.).

SUGGESTED STUDY PLAN

Semester 1

Code	Course Name	Credits
Required Courses - Common Core		
496FSPMM1	Fundamentals of Public and Global Health	5
496FSSPM1	Fundamentals of Environmental Health	5
496FESPM1	Fundamentals of Epidemiology	5
496SCSPM1	Social and Behavioral Sciences in Public Health	2
496AMAPM1	Public Health Updates in the Arab World	2
496PAMSM1	Thesis I: Preparation for the Thesis/Project	10
Total		29

Semester 2

Code	Course Name	Credits
Required Courses - Common Core		
496IBSPM2	Introduction to Biostatistics	5
496RESPM2	Multidisciplinary Research in Public Health	4
496EISPM2	Ethics in Public Health	2
496PSSPM2	Evidence-Based Public Health Practice	2
496STSPM2	Public Health Internship	3

496PGSPM2	Public Health Policies and Systems	5
496PROSM2	Thesis II: Research Proposal/Organization of Project Objectives	10
Total		31

Semester 3

Code	Course Name	Credits
Required Courses - Concentration: Health Management and Policies		
496EIPGM3	Development and Evaluation of Public Health Interventions	4
496ECPGM3	Health Economics	4
496SIPGM3	Public Health Information Systems	4
496LSEBM3	Data Management and Analysis	4
496PHIEM3	Public Health in Emergencies	4
496CDCPM3	Thesis III: Data Collection/Project Implementation	10
Total		30
Required Courses - Concentration: Epidemiology and Biostatistics		
496EIPGM3	Development and Evaluation of Public Health Interventions	4
496PHIEM3	Public Health in Emergencies	4
496LSEBM3	Data Management and Analysis	4
496ESEBM3	Epidemiology and Public Health	4
496AMEBM3	Multivariate Analysis	4
496CDCPM3	Thesis III: Data Collection/Project Implementation	10
Total		30
Required Courses - Concentration: Health and Environment		
496EIPGM3	Development and Evaluation of Public Health Interventions	4
496PHIEM3	Public Health in Emergencies	4
496LSEBM3	Data Management and Analysis	4
496TENVBM3	Toxicology and Health Hazards	4
496OENVM3	Systems of Environmental Management	4
496CDCPM3	Thesis III: Data Collection/Project Implementation	10
Total		30

Semester 4

Code	Course Name	Credits
Required Courses - Concentration: Health Management and Policies		
496CESPM4	Communication in Public Health	4
496AHPEM4	Approaches to Health Education and Promotion	4
496PENVM4	Occupational Safety and Health	4
496CAPGM4	Accounting and Financial Analysis of Public Health Institutions	4
496GEPGM4	Organization and Management of Public Health Institutions	4
496RSDMM4	Thesis IV: Thesis Writing and Defense/Practicum Report Writing and Presentation	10
Total		30

Required Courses - Concentration: Epidemiology and Biostatistics		
496CESPM4	Communication in Public Health	4
496AHPEM4	Approaches to Health Education and Promotion	4
496PENVM4	Occupational Safety and Health	4
496ECEBM4	Clinical Epidemiology	4
496ADEBM4	Longitudinal Data Analysis	4
496RSDMM4	Thesis IV: Thesis Writing and Defense/Practicum Report Writing and Presentation	10
Total		30

Required Courses - Concentration: Health and Environment		
496CESPM4	Communication in Public Health	4
496AHPEM4	Approaches to Health Education and Promotion	4
496PENVM4	Occupational Safety and Health	4
496NENVM4	Management of Natural Resources	4
496DENVM4	Sustainable Development and Environmental Health	4
496RSDMM4	Thesis IV: Thesis Writing and Defense/Practicum Report Writing and Presentation	10
Total		30

COURSE DESCRIPTION

496FSPMM1	Fundamentals of Public and Global Health	5 Cr.
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This course introduces students to the concepts, general theoretical frameworks, and principles of practice in public and global health. It also provides a deep understanding of the approaches of public and global health as well as an understanding of the socio-economic, political, behavioral and environmental determinants of health, and issues of health equity. Several special themes related to contemporary health problems in the world and in Lebanon are presented. Students will therefore be able to analyze a set of determinants and practices related to a public health problem and to implement interventions aimed at meeting the health needs of the population.

496FSSPM1	Fundamentals of Environmental Health	5 Cr.
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This course provides students with a deep understanding of the foundations of environmental health practice and the tools to recognize, assess, and mitigate the effects of environmental agents on public health. It also includes an understanding of the interaction between humans and the environment, including how human activities affect the quality of the environment and how environmental problems can affect human health based on local and global examples. Students will then be able to apply systems thinking and contextual assessment to social, population vulnerability, policy decision-making, and emerging global environmental health issues.

496FESPM1	Fundamentals of Epidemiology	5 Cr.
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This course covers the basic principles of epidemiology that help in assessing the health status of a population, the main determinants of this status, the effectiveness of interventions aimed at modifying it, and as well as the societal impact these interventions may have. It covers the concepts of causality and causal inference, bias, frequency measures of health events, risk estimation, association effect measures, the concept of interaction, epidemiological study design (clinical trials, cohort studies, case-control studies, cross-sectional studies), the methodology of validation studies of health-related measurement instruments, and evaluation of interventions on the health determinants.

496SCSPM1	Social and Behavioral Sciences in Public Health	2 Cr.
This course enables students to understand the contribution of social and behavioral sciences to improving public health by examining how theories of healthy behavior are used to understand and intervene in current public health problems and to design, implement and evaluate public health programs to foster community participation and empowerment. Students will then gain skills in applying behavioral science to current public health issues by affixing health behavior theories to particular local health topics and examining the role of psychological and social factors in these issues.		
496AMAPM1	Public Health Updates in the Arab World	2 Cr.
This course explores the latest advancements, challenges, and strategies within the field of public health, specifically focused on the Arab world. It delves into the dynamic landscape of public health in Arab countries, addressing key issues, emerging trends, and innovative approaches in health promotion. Students will gain a deep understanding of the unique socio-cultural, political, and economic factors that shape public health in the Arab world. Guest speakers in each session will share their expertise in various topics of interest, giving students valuable insights.		
496PAMSM1	Thesis I: Preparation for the Thesis/Project	10 Cr.
This step provides a general introduction to the thesis or internship that each student must complete at the end of the master's program. This step makes it possible to develop the tools and elements necessary for the effective advancement of research or internship subjects and the writing of reports. Particular attention will be given to the techniques of writing scientific reports and researching bibliographic sources as well as the skills of oral presentations.		
496EISPM2	Ethics in Public Health	2 Cr.
This course familiarizes students with the basic concepts of ethics and emphasizes its interdisciplinary dimension and the appropriateness of normative frameworks for intervention and research in public health. In addition, ethical dilemmas in research are identified and examined, and the legal foundations of public health services are described. Students will be able to agree, conceptualize and clarify ethical issues in public health practice.		
496IBSPM2	Introduction to Biostatistics	5 Cr.
This course introduces biostatistics in public health research. It integrates the statistical tools necessary for the collection, processing, interpretation and presentation of data. It includes descriptive statistics, point and interval confidence estimation, as well as parametric and nonparametric hypothesis testing. It introduces epidemiological study models, standardization and adjustment methods, judgment of causality, measures of effect and association, notions of bias and interaction. The course follows an operational approach using real public health problems.		
496RESPM2	Multidisciplinary Research in Public Health	4 Cr.
This course serves as an introduction to multidisciplinary public health research. The process of preparing an effective research strategy, quantitative, qualitative and mixed methods approaches are presented, as well as ethical issues in conducting research. The expected competencies are to be able to design multidisciplinary research projects, and to critique the published literature in this field by identifying the strengths and limitations of the designs and approaches used.		
496PGSPM2	Public Health Policies and Systems	5 Cr.
This course provides students with skills and knowledge of the principles and functions of public health policies and management with a primary focus on the structure, processes and outcomes of health services such as costs, financing, organization, and accessibility of care. Health systems are analyzed from organizational, managerial, epidemiological, clinical, socio-economic and political perspectives. This course therefore aims to strengthen students' ability to assess the performance of health systems and to develop strategies to improve the population's access to quality curative, preventive and promotive care.		

496PSSPM2	Evidence-Based Public Health Practice	2 Cr.
This course introduces the concept of evidence-based public health practices. This includes judging causality, estimating effect size, assessing practice efficiency, and evaluating tolerability and socio-economic context. It addresses the issue of developing practice guidelines.		
496STSPM2	Public Health Internship	3 Cr.
As part of this course, students are requested to complete a 75-hour internship related to their eventual choice of concentration. Students have three possible options for their internship: (1) assist and work on an on-going research project at ISSP's Center for Collaborative Research Initiatives in Public Health (CIRPH), (2) go on the field with a receiving entity (NGO, IGO, ministry, hospital, PHCC, etc.) to work on an assigned project, or (3) design and implement a public health intervention in their community, while gathering and analyzing pre- and post-intervention data. Students can decide on and finalize their internship with the Internship Coordinator, and will each be assigned a mentor to follow up on their progress throughout the internship. Students will have two deliverables to submit at the end of their internship: an oral presentation and a written report.		
496PROSM2	Thesis II: Research Proposal/Organization of Project Objectives	10 Cr.
This step provides students with an overview of the position of the issues, the definition of the research/internship objectives, and the development of the work plan and methods to be used. Students will be able to position the issues of their research or internship, set objectives, establish a work plan, and determine the methods to be used in the study process.		
496EIPGM3	Development and Evaluation of Public Health Interventions	4 Cr.
This course enables students to acquire a deep understanding of the skills, techniques, and tools used in the planning, implementation, and evaluation of public health programs and projects. Case studies are reviewed to assess the effectiveness of public health initiatives. Students will learn to identify population health needs, develop programs to meet these needs, and evaluate the effectiveness of public health interventions.		
496ECPGM3	Health Economics	4 Cr.
This course focuses on the fundamental concepts and methods used in the economic analysis of health services to design health policy decisions from an economic perspective. This course also includes microeconomic tools for health economics, characteristics of demand and supply of health services, costs trends, program efficiency, financing methods, and problems and challenges of healthcare markets and health insurance. Specific case studies are used to illustrate the application of theory and practice to healthcare markets and to suggest economic proposals for overcoming market failure.		
Prerequisite: Public Health Policies and Systems (496PGSPM2).		
496SIPGM3	Public Health Information Systems	4 Cr.
This course emphasizes the role of public health information systems in improving population health. It also includes system analysis, design and evaluation, selection of information resources, as well as quality improvement and management of the implementation process. Case studies of systems used in different domains such as patient care, clinical decision support, disease and population surveillance, and safety and environmental assessment are presented. Legal and ethical issues related to the security, privacy and use of information are also addressed. The concept of big data in healthcare is also discussed.		
Prerequisite: Public Health Policies and Systems (496PGSPM2).		
496CAPGM4	Accounting and Financial Analysis of Public Health Institutions	4 Cr.
This course provides students with financial and budgetary concepts and principles applied to medical services and to the management of healthcare organizations. Topics include financial management systems, capital acquisition, capital cost and structure, capital allocation, and budget planning for financial control. Practical learning is provided through the analysis of case studies specific to public health.		
Prerequisite: Health Economics (496ECPGM3).		

496GEPGM4 Organization and Management of Public Health Institutions 4 Cr.

This course introduces students to the major concepts, tools, and techniques necessary for the successful management of healthcare institutions and organizations. It also serves as an introduction to the organizational structure of healthcare institutions and agencies as well as the social, political, economic, financial and technological factors that shape the organization and operation of healthcare systems. Several topics are covered such as the ethical, legal and technological aspects of healthcare administration, strategic planning and marketing, organizational communication, motivational theories and forms of leadership and management, problem solving and conflict resolution strategies, and human resources management.

496LSEBM3 Data Management and Analysis 4 Cr.

This course introduces students to different biostatistics software for data entry, database management, descriptive statistical analysis, association and correlation tests, and parametric and non-parametric effects. Students will have access to data sets which they will work on as practical application.

Prerequisite: Introduction to Biostatistics (496IBSPM2).

496ESEBM3 Epidemiology and Public Health 4 Cr.

This course addresses the applications of epidemiology in public health. It discusses epidemiological surveillance, screening for morbid events, registers and other databases relevant to public health, risk prevention and management, and the development and evaluation of public health interventions.

Prerequisite: Fundamentals of Epidemiology (496FESPM1).

496AMEBM3 Multivariate Analysis 4 Cr.

This course covers the following topics: regression models (linear, logistic, Poisson), analysis of variance and covariance, analysis of multiple correlated measures, and management of missing data.

Prerequisite: Introduction to Biostatistics (496IBSPM2).

496ECEBM4 Clinical Epidemiology 4 Cr.

This course addresses the foundations of clinical epidemiology and aims to familiarize students with concepts such as evaluating the effectiveness of therapeutics, evaluating interventions aimed at improving the quality of care, evaluating diagnostic and prognostic tests, and developing clinical endpoints.

Prerequisites: Fundamentals of Epidemiology (496FESPM1), Epidemiology and Public Health (496ESEBM3).

496ADEBM4 Longitudinal Data Analysis 4 Cr.

This advanced course in biostatistics covers the following notions: cohort effects, age and period, person-time data, censored data and survival analysis models, repeated measures analysis, and data analysis with multiple categories (categorization, tabular analysis, dose-response analysis, trend analysis).

Prerequisite: Introduction to Biostatistics (496IBSPM2).

496TENVM3 Toxicology and Health Hazards 4 Cr.

This course presents the fundamentals of environmental toxicology, including the basic principles, mechanisms of toxicology and cellular defense, and the fundamental interactions between chemicals and biological systems. Human exposure to toxic products and its negative impacts are also addressed. Case studies are presented to give an overview of the negative effects of chemical and biological agents on human health and environmental quality, on the prevention of mortality and morbidity, and on the fundamentals of risk evaluation.

Prerequisite: Fundamentals of Environmental Health (496FSSPM1).

496OENVM4 Systems of Environmental Management 4 Cr.

This course allows students to acquire an in-depth comprehension of the principles and the systems of environmental management. It focuses on the essential tools of environmental management, such as environmental impact studies, environmental performance evaluation, environmental audit, environmental risk management, and others, as well as their direct application to the resolution of sustainable development problems. Students will

explore how these tools fit into legislative and institutional frameworks, and how to analyze a problem and suggest management strategies.

Prerequisites: Fundamentals of Environmental Health (496FSSPM1).

496PENVM4	Occupational Safety and Health	4 Cr.
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Occupational factors have been underestimated as determinants of public health for a long time, yet illnesses of occupational origins, such as cancers, hearing disorders, respiratory illnesses, dermatological and allergic disorders, cardiovascular diseases, etc., are numerous and weigh heavily on the health of populations. This course familiarizes students with the risk factors of these pathologies as well as methods for assessing the impact of work on health, and the relationship between a pathology and professional constraints. In addition, this course provides students with information on the medico-social consequences of incapacity, and the general principles of orientation and reclassification.

Prerequisite: Fundamentals of Environmental Health (496FSSPM1).

496NENVM4	Management of Natural Resources	4 Cr.
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This course offers students an overview of technologies and techniques used in order to protect natural resources and public health, and to contribute to sustainable development. Themes presented throughout this course comprise pollution control and health protection, availability and delivery of safe drinking water, treatment of used water, fight against air pollution, management of solid waste, as well as principles of environmental management applied to eco-consumption.

Prerequisite: Systems of Environmental Management (496OENVM3).

496SENV4	Sustainable Development and Public Health	4 Cr.
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This course addresses the global challenges of sustainable development, in particular those related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice. This course also provides an understanding of the Sustainable Development Goals and the barriers to achieving them, emphasizing the place of health in the sustainable development agenda. It illustrates approaches and various initiatives worldwide and in Lebanon to achieve the Sustainable Development Goals.

Prerequisite: Fundamentals of Environmental Health (496FSSPM1).

496PHIEM3	Public Health in Emergencies	4 Cr.
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This course is designed to equip students with the knowledge and skills to identify and effectively address public health challenges during emergencies. It discusses emergency preparedness, response, and recovery focusing on specific public health considerations that arise in a situation of crisis. Students will explore topics such as disease outbreak management, risk assessment, emergency communication, healthcare system resilience, and the impact of emergencies.

496CESPM4	Communication in Public Health	4 Cr.
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This course introduces students to public health communication. The subjects of collaboration and engagement of stakeholders, the development of a health communication campaign, the identification and segmentation of audiences, the selection of appropriate communication channels, the communication of risks during public health emergencies, as well as monitoring and evaluation in communication will be discussed.

496AHPEM4	Approaches to Health Education and Promotion	4 Cr.
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Health promotion is an approach that lies at the crossroads of a series of disciplines that integrate elements from different fields of knowledge. At the end of this course, students will be able to define prevention, health education and health promotion, know the main founding texts of health promotion, and identify the structures and bodies that participate in the promotion of health.

496CDCPM3

Thesis III: Data Collection/Practicum Implementation

10 Cr.

This step provides students with the knowledge and skills necessary for the successful conduct and management of research or internship projects. Data collection and analysis techniques will also be covered. Qualitative and quantitative data analysis software will be introduced and used.

496RSDMM4

Thesis IV: Thesis Writing and Defense/Practicum Report Writing and Presentation

10 Cr.

This step allows students to finalize the material details and the main requirements for proper writing and defense of the thesis or internship reports. A sustained and personalized accompaniment of the students will be maintained throughout this period.