

# **DESCRIPTION OF THE MASTER'S PROGRAM IN PUBLIC HEALTH**

## **○ Description of compulsory courses**

### **➤ DESCRIPTION OF THE FIRST SEMESTER COURSES:**

#### **1. Description of the foundations of epidemiology course (PA-611)**

The three-credit-hour Foundations of Epidemiology course is designed to provide graduate students with the knowledge necessary to understand epidemiological concepts, principles and methods of epidemiological research, and implications for epidemiological research. This course also trains students in the basic methodological skills for designing, conducting, analyzing and interpreting epidemiological studies. This course also focuses on disease surveillance, discussing the causation of these diseases and how to control and control them to prevent their spread in the community.

#### **2. Description of the Basics of Public Health Practice Course (PA-621)**

The Fundamentals of Public Health course is designed to provide graduate students with the concepts of public health, the components and functions of health programs, their development and implementation, as well as the role of the public health professional in advancing community health and encouraging community participation. This course also discusses various aspects of public health, the history of public health, public health practices and programmes, basic public health functions, basic public health services, public health policy and interventions, public health determinants, public health informatics, public health leadership and management, and the role and responsibility of public health professionals.

#### **3. Social and behavioral sciences course description (MA-623)**

The Social and Behavioral Sciences course is concerned with providing master's students with knowledge of the rationale for studying the social and behavioral aspects of health, and the established theories of health behavior. This course also defines the social and behavioral aspects of public health, including the relationship of psychological and social factors to health, the principles of health behavior change, and the application of these principles in various health fields. Through this course, graduate students apply theories of health behavior to specific health topics of their choice (eg, exercise, diet, HIV, etc.) and examine the role of factors psychological and social problems. This course also develops students' abilities and skills to conduct interviews with health professionals to learn about applied interventions and to conduct a group project with other students.

#### **4. Description of the Basics of Health Economics Course (Maha-246)**

The Health Economics course is designed to provide students with advanced knowledge of health economics and its application to public health. This course is designed to build the capacity of MSc students to understand the broader view of health economics, the effects of supply and demand on the health care market, and population health and measures. The Fundamentals of Health Economics course also helps students understand the need for health insurance and how health insurance and other financing systems can address health disparities. Social. Also, this course helps students understand the pricing policy of health innovations and evaluate those innovations to choose the best options available to maximize the benefit to society. This course also focuses on the policies applied to maximize the health care benefits of scarce resources for a growing population. Finally, this course helps students to understand the applications of health economics with some examples of major health challenges in society.

#### **5. Description of the health systems and services course (sanatorium-625)**

The main objective of the health systems and services course is to introduce master's students to the basic characteristics of the health care system, its organizations, its structure, and its functions, and how to provide health services in general, especially in the Saudi health care system. This course also focuses on how to identify and measure the challenges facing health care services, and their inputs, ie human and financial resources, and the process. This course also focuses on the concept of health care demand and its relationship to use and results. This course also introduces the dimensions of effective, humane and fair quality principles of quality improvement and how to set standards for quality care through reviews of research evidence and the use of development techniques. This course also aims at evaluating the performance of health services in different ways, as well as evaluating a range of possible interventions to improve quality.

#### **6. Description of the Scientific Research Methods Course (Phase 631)**

The Scientific Research Methods course aims to provide graduate students with the knowledge and skills necessary to obtain a master's degree by applying modern scientific research methods that enable them to improve and develop public health research, strengthen health systems, and promote and protect population health at the regional, national and global levels. This course also provides graduate students with the basic principles of research methodologies relevant to public health research. This course also develops the enhanced ability to critically understand and evaluate data from scientific studies, and to review a range of methodologies, including randomized controlled trials, observational studies, and community participation and monitoring approach. This course also focuses on the ethical and cultural issues that underpin public health research as the overarching goal is to enable the research student to think accurately, systematically, and wisely regarding how public health is assessed or conducted.

## **7. Description of the Basics of Biostatistics Course (Maha-632)**

The basics of biostatistics course aims to understand the principles of biostatistics that are of paramount importance in public health education. Presentation and interpretation of data is the basis of evidence-based public health, and therefore it is necessary for public health practitioners to know how to use data. This course also improves the efficiency of graduate students through the use of an active learning approach, including assumptions, statistical formulas, procedures, appropriate interpretation of results, and an emphasis on the representation of important and recent public health problems. This course also provides an engaging background for students who are learning to apply and appropriately interpret the applications of biostatistics in the field of public health.

### **➤ DESCRIPTION OF THE SECOND SEMESTER COURSES:**

## **8. Description of the Communicable Diseases Course (Assay-613)**

This course aims to provide graduate students with the knowledge and skills necessary to apply the principles and practices of epidemiology and the prevention and control of common infectious diseases. This course also enables postgraduate students to study infectious diseases and how to choose and apply appropriate and useful epidemiological methods and methods in investigating and investigating outbreaks of infectious diseases and in controlling these infectious diseases, the most common locally, regionally and internationally, and their prevention and control.

## **9. Course Description for Noncommunicable Diseases (Assay-614)**

The noncommunicable diseases course describes the important health problems caused by noncommunicable diseases such as coronary heart disease, hypertension, diabetes, obesity, stroke and cancer. This course also describes the associated dangerous factors that affect public health and these chronic diseases, how they spread and what are the ways to prevent them, and how to combat and control them and all epidemics.

## **10. Basics of Health Care Administration Course Description (Asylum-622)**

The Health Care Administration Fundamentals course enables graduate students to learn concepts and theories in health care management, and to understand the management of health care organizations. This course also develops students' basic managerial skills in the use of central technology tools and the application of various key principles and practices in order to organize and deliver effective and efficient health care, and in order to also manage human, technical and financial resources as well as manage various health care services and also to work productively with others as a team.

## **11. Description of the health education & health promotion course (Assay-627)**

The Health Education and Health Promotion course provides public health program students with the essential knowledge and skills needed to make a high-quality professional contribution to health promotion within the broader public health practice

in a range of global contexts and to develop skills in lifelong learning including the ability to adapt and respond to changing public health environments. This course also empowers students with the necessary skills and abilities through training them to give teaching experiences specific to various environments and sectors of society, as well as to do self- and group assessment through learning with each other and from each other, which broadens their horizons in the field of public health and health promotion.

➤ **DESCRIPTION OF THE THIRD SEMESTER COURSES:**

**12.Characterization of planning &evaluation of public health programs (sanatorium-615)**

The Public Health Program Planning and Evaluation Course aims to empower students of the Master of Public Health program with the necessary skills used in the planning and implementation of public health programs as well as the skills that make them able to evaluate public health programs, especially in the public health sector. This course enables the student to understand the basic concept of health planning and its benefits and effective use in the field and sectors of public health. This course also empowers the student with the knowledge necessary to make him/her able to understand the different types of planning, implementation and evaluation.

**13.Description of public health ethics, policies, and laws (Association 628)**

Public health ethics, policies and laws course that contributes to providing the graduate student with all information related to science, policies, laws, ethics, concepts and principles of health professions, and realizing the great value of adopting Islamic ethics with the patient and society. This course also contributes to providing students with the skills and abilities necessary to manage and evaluate the various problems and situations that they will face as a public health specialist with the public, which leads to critical self-evaluation and lifelong learning.

**14.Description of the Basics of Scientific Writing & Publishing Course (Assignment -633)**

The Foundations of Scientific Writing and Publishing course equips competent graduate students with the skills and abilities to write scientific articles, research proposal, project proposal and reports, executive summary writing, research grant and systematic reviews etc. according to standard protocols as part of the completion. This course also contributes to the students learning how to publish international scientific methods and how to present various scientific presentations in scientific forums/platforms. Also, this course develops the skills necessary for students to write and summarize the background of their research, the literature related to it, the results of their study in tabular form with statistical significance, discuss and compare the results with relevant previous studies, conclusions and recommendations as well as a bibliography etc.

### **15. Advanced Biostatistics Course Description (MA-634)**

The objective of the Advanced Biostatistics course is to provide students of the Master of Public Health program with the knowledge and skills necessary to use advanced techniques in biostatistics. This course also introduces students to other more advanced statistical methods relevant to health research, so that they are aware of their availability for application to specific problems in public health research. Also, this course focuses and highlights the role of the computer in knowledge of contemporary statistics and its role in learning different research techniques with all the assumptions that lie behind these covered techniques, their purposes, advantages, and disadvantages.

### **16. Description of the International Health Course (PA-638)**

The International Health course provides graduate students with the necessary knowledge related to defining the principles and objectives of global health, the components of modern global health, and all activities of international agencies. This course also contributes to knowledge of global data on health, as well as epidemiological features of global health and disease, as well as determinants of health and social inequality and how to globalize trade, work and health. This course also provides students with the necessary and basic skills to organize the health care system.

### **17. Description of the Occupational & Environmental Health Course (MA-641)**

This course describes to graduate students various environmental and occupational health risks and methods of preventing and controlling them. This course also describes environmental and occupational health legislation and the various types of compensation resulting from environmental and occupational risks. Also, this course helps students to understand the concept of environmental exposure to various physical, chemical, biological and other hazards. The course also discusses with master's students the different ways to prevent these risks, including medical, engineering and environmental methods.

### **18. Description of the Public Health Emergency Preparedness Course (Sanatorium - 642)**

The public health emergency preparedness course aims to give graduate students the necessary knowledge related to disasters and how to prepare for them. This course also enables students to understand the role of public health in disaster management, response, recovery and reconstruction, and also helps students learn about the various health management institutions and structures responsible for disaster response. This course also contributes to the students' knowledge of the emergency information system and how it works, and the various assessments used in disaster management. In addition, this course provides students with the necessary skills to enable them to understand the various methods of assessment of public health and medical response to disasters.

## ○ Description of elective courses

### **1. Description of the advanced epidemiology course (MA-612)**

This course is designed to develop the understanding, knowledge, and skills of basic principles of epidemiological methods that are essential to the analysis and interpretation of public health statistical data as well as the critical evaluation of all public health studies. This course also interprets and applies research methods, policies and practices in the context of public health. With this course, we will explore ways to protect population health and prevent communicable and non-communicable diseases and hazards through appropriate interventions. This course is also taught with an emphasis on understanding epidemiological methods and then Apply it through a set of applied learning activities and critical evaluation of various public health studies.

### **2. Description of the Public Health Nutrition Course (PA-616)**

The Nutrition in Public Health course introduces students to the concepts of nutrition in the context of public health and discusses various aspects of nutrition and their relationship to health and disease. This course covers the functions and requirements of water, food classification such as carbohydrates, proteins, fats, vitamins and minerals, their source and functions, metabolism, protein energy malnutrition, obesity, and micronutrient deficiencies. This course also provides graduate students with the skills needed to perform nutritional assessment for chronic diseases, to know energy requirements, and to plan diet.

### **3. Description of the course management and leadership in public health (sanatorium-629)**

The management and leadership in public health course was prepared to identify the concept, principles and practices of management and leadership in health organizations. This course also analyzes current theories of leadership with attention to methods, practices, tasks, and models for resolving conflicts and issues of leadership and negotiation in a healthcare organization through the interaction between theory and practice. Students will also acquire the skills necessary for effective communication and for managing diverse and culturally complex workplaces.

### **4. Description of the Evidence-Based Practice Course (PA-635)**

The Evidence-Based Practice course provides students with practical and scientific guidance on how to select, implement, and evaluate evidence-based programs and policies in public health settings. This course not only addresses how to create and use scientific evidence but also provides students with how to implement and evaluate interventions that produce scientific evidence. New to effective patient care and community services.

### **5. Description of the demographics course (sanatorium-636)**

This course is designed to provide students with an overview of the field of population studies, also known as demography. In this course, we will explore the main concepts and steps used to study statistical changes in population and the techniques needed to describe different population characteristics. This course will also discuss the centrality of demography and its relevance to social, political, and economic issues around the world.

## **6. Description of the Public Health Informatics Course (Masah-637)**

Public Health Informatics focuses heavily on developing the competencies of graduate students to face current threats and future challenges to public health in the field of health informatics for the population inside and outside the country. This course also provides students with the skills to develop and use interoperable information systems used to perform a range of public health functions such as disease outbreak management, vital monitoring, and disease prevention. Essentially, the field of public health informatics is tasked with improving public health, and increasing the overall quality of life for large populations around the world through the use of data analytics, information systems, technological tools, devices, and new technologies.

## **7. Course Description of Disease Vectors (PA-643)**

The vectors course is designed to provide public health masters students with knowledge, understanding and awareness of the classification of arthropod vectors and the pathogens they transmit to both human and animal hosts. This course also focuses on studying the biology of vectors such as mosquitoes, sexually transmitted viruses, house flies, lice, bed bugs, sand flies, fleas, ticks, and mites infected with a transmissible disease.

## **8. General health toxicology course description (Association 644)**

The Public Health Licensing course includes educational lessons related to toxicology, its relationship and its impact on public health. This course aims to understand the basic principles of toxicity, types of poisoning, toxicology, toxicology genomics, and toxicity testing. This course also provides students with the skills necessary to assess risks,



toxicants, environmental toxins, environmental carcinogenesis and how Assessment and management of drug addiction risks.

## **9. Maternal and Child Health Course Description (Associate 645)**

The Mother and Child Health Course has been prepared to graduate health professionals in the health sector in the Kingdom of Saudi Arabia who are able to plan, organize and manage various programs, activities and research in the field of maternal and child health care, as it deals with important topics related to maternal, child, adolescent and sexual health care.