1. Introduction

1.1 Background: Health in Kuwait

Protection of the health of Kuwait’s population is enshrined in the public health mandate of its Constitution: “The State shall care for public health through measures of precaution and cure of diseases and epidemics.”

Over the past two generations, Kuwait has experienced a rapid improvement in the health of its population, with an increase in life expectancy by about 30 years, with attendant transitions in economic development and in the major causes of death from infectious diseases to a predominance of non-communicable diseases (NCD’s) and injuries. The globalization of health-related issues and unhealthy behaviors constitutes another transition that has affected all countries through the same time period.

Despite the many important advances in health, Kuwait still faces a range of important public health challenges such as providing safer and more health-promoting environments at the workplace, reduction of environmental hazards, improving the effectiveness of health policies in all government sectors, more efficient management of its healthcare institutions, prevention of non-communicable diseases, promoting healthy lifestyles and behaviors, increasing well-being, empowerment of communities, assessment of genetic diseases, control of globally-emerging infectious diseases such as the Zika virus, and addressing the health of vulnerable populations.

1.2 Environmental and Occupational Health in Kuwait

Much of the economic development and health improvements in Kuwait have occurred without adequate development and enforcement of the environmental and occupational laws and regulations. Indeed, the UNDP’s 2012 report on Kuwait described a significant level of “environmental degradation” in Kuwait: defined as reduction of the capacity of the environment to meet social and ecological objectives, and needs. The types of human-induced degradation include land misuse, soil erosion and loss, desertification, oil fires, loss of biodiversity, land, water and air pollution, climate change, sea level rise and ozone depletion. Such environmental degradation has had substantial impact on human health with a resulting increase of non-communicable diseases and injuries. The situation with occupational health and safety is also of concern. Kuwait needs to significantly strengthen the workforce trained (at the graduate level) in addressing these complex issues in Environmental and Occupational Health and Safety.

2. Vision, Mission, and Core Values

2.1 Vision

The vision of this professional, interdisciplinary MPH program in Environmental and Occupational Health is to be a leading program in the Gulf region, recognized for its effect on safeguarding and improving Kuwait’s environment, occupational health, worker safety and well-being of Kuwait’s population; achieving this by providing a professional degree, the graduates from which will possess the environmental health and occupational health knowledge, attitudes and skills that can effectively address the environmental and occupational health and safety challenges facing Kuwait.

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2.2 Mission

The mission is to produce academically qualified environmental health and occupational health professionals: preparing them with the knowledge and skills base needed to perceive, understand, and assess, and address the environmental and occupational health and safety needs in Kuwait’s natural and built environments and its homes, workplaces, and recreational facilities; equipping them with the ability to form effective policies and interventions to address those needs; providing an environment of interdisciplinary teaching, research, and community service; and inculcating professional public environmental health values, concepts of social responsibility, and ethical practice; and the perspective of Health in All Policies (HiAP) as it relates to environmental and occupational health and safety issues. The program will prepare graduates to pursue careers in the Ministry of Health, private healthcare organizations, the oil sector, other industries, insurance companies, KISR, KFAS, the GCC Health Council, environmental and occupational regulatory agencies, and local and international non-governmental organizations such as UN agencies (WHO, UNDP, UNICEF, ILO).

2.3 Core Values

The underlying core value of the MPH program is “Health as a Human Right,” as set forth in Article 15 of the Constitution of Kuwait which states, “Right to Healthcare: The State shall care for public health through measures of precaution and cure of diseases and epidemics,” and the United Nations’ Universal Declaration of Human Rights. There will be specific commitments to the values of community partnership and empowerment, cultural sensitivity, social responsibility, truthful and clear dissemination of information, collaboration and teamwork, ethics and integrity in research and practice, excellence in education and training, professionalism, and evidence-based approaches to public health problems.

3. Overall Program Competencies

Postgraduate students who have completed the MPH program in Environmental and Occupational Health will be able to:

1. Develop and lead inter-disciplinary teams that will assess environmental and occupational hazards, assess their impact on health-related outcomes, propose effective solutions for hazard abatement, and manage and assess effectiveness of such programs.

2. Assess the environmental and occupational causes of human diseases, applying the genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental and occupational hazards.

3. Conduct research in areas of environmental and occupational health, applying the results to inform public health policies related to environmental & occupational health.

4. Assess levels of pollution and/or contamination that affect air quality, water quality, food quality and soil quality, which have negative effects on human health.

5. Design and implement the functions and duties of environmental and occupational personnel during a declared disaster under the incident command system.

6. Establish workplace wellbeing programs, with an emphasis on empowerment of workers for improvement of their health and wellbeing, and the economic evaluation of occupational safety and health (OSH) prevention efforts that preserve the health of the populations living in the proximity of the major industries in Kuwait; including oil, petrochemicals, cement, shipbuilding and repair, water desalination, food equipment industry, and building materials.

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4. Target Student Population

Public health is an interdisciplinary field which has applications in all sectors of society, government, and business, not just in the healthcare sector. Most MSc programs provide a direct track from the BSc program into a related MSc program (e.g., Chemistry, Biology, or Physics). In contrast, the MPH degree is considered a professional degree program, such that the usual target student population includes individuals who are already working in a specific field, and who want to bring a Public Health perspective to that field. Preference for admission to the MPH program is therefore given to individuals with some workplace experience which they can use to integrate what they learn in the MPH program.

It is true that MPH programs often attract students from various health-related backgrounds, including medicine, dentistry, and nursing. However, individuals with a background in law, environmental science, engineering, economics, business, and policy with experience or enthusiasm concerning public health are also targeted as potential MPH students. For example, environmental scientists who may want to broaden their focus to improvement of the environment for the health of Kuwait’s population would benefit from an MPH in Environmental and Occupational Health, as would an Occupational Health nurse or Safety Officer in Kuwait Oil Company. Public health tasks require multidisciplinary health teams that are trained in a wide range of areas.

5. Curriculum and Major Sheets

5.1 Minimum Graduation Requirements

Students will have two options for graduation. A Thesis option or a Capstone Project option, both of which require students to complete 45 semester CH. Both programs will initially be offered as full-time four-semester degrees. However, in the future, a part-time configuration for professionals may be offered.

**MPH program (Capstone Project Option):**
- 18 CH core coursework
  - (For non-health professions: 20 CH)
- 9 CH in the EOH concentration area
- 5 CH Compulsory Applied Courses
- 10 CH electives
  - (For non-health professions: 8 CH)
- 3 CH Capstone Project (0 Thesis)
- Total: 45 Credit Hours

**MPH program (Thesis Option):**
- 18 CH core coursework
  - (For non-health professions: 20 CH)
- 9 CH in the EOH concentration area
- 5 CH Compulsory Applied Courses
- 4 CH electives
  - (For non-health professions: 2 CH)
- 9 CH Thesis
- Total: 45 Credit Hours

Note regarding non-health professionals: MPH students who do not have a background in a health profession will be required to substitute 2 CH of elective courses for a course in “Public Health Biology.”
5.2 Major Sheets for MPH Curricula – Environmental and Occupational Health Concentration

5.2.1 Major Sheets, Capstone Option (45 CH)

5.2.1.1 Capstone Option, according to Semester

YEAR 1  (21 CH in Year 1)

Semester 1 (12 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920-501</td>
<td>Principles of Health Policy and Management</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1950-501</td>
<td>Introduction to Environmental and Occupational Health</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>0565-540</td>
<td>Epidemiology I (CMBS course)</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>0565-550</td>
<td>Biostatistics I (CMBS course)</td>
<td>3</td>
<td>None</td>
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</table>

Semester 2 (11 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940-501</td>
<td>Social and Behavioral Foundations of Public Health</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1910-501</td>
<td>Introduction to Public Health Practice and Ethics</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1900-501</td>
<td>Public Health Biology <em>(for non-health professionals)</em></td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>1900-591</td>
<td>Research Project Design</td>
<td>1</td>
<td>0565-540/0565-550</td>
</tr>
<tr>
<td>Elective</td>
<td><em>(for health professionals)</em></td>
<td>2</td>
<td>None</td>
</tr>
</tbody>
</table>

YEAR 2  (24 CH in Year 2)

Semester 3 (12 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>1910-581</td>
<td>Public Health Practicum</td>
<td>4</td>
<td>All Core Courses</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>5</td>
<td>None</td>
</tr>
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</table>

Semester 4 (12 CH)

<table>
<thead>
<tr>
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<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-503</td>
<td>Environmental Health Management</td>
<td>3</td>
<td>1950-501</td>
</tr>
<tr>
<td>1950-504</td>
<td>Worker Health and Safety</td>
<td>3</td>
<td>1950-501</td>
</tr>
<tr>
<td>1950-593</td>
<td>Capstone Project</td>
<td>3</td>
<td>All Core Courses</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Core courses are highlighted in purple
Concentration courses are highlighted in green
5.2.2  Major Sheets, Thesis Option (45 CH)

5.2.2.1  Thesis Option, according to Semester

YEAR 1  (21 CH in Year 1)

Semester 1 (12 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920-501</td>
<td>Principles of Health Policy and Management</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1950-501</td>
<td>Introduction to Environmental and Occupational Health</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>0565-540</td>
<td>Epidemiology I (CMBS course)</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>0565-550</td>
<td>Biostatistics I (CMBS course)</td>
<td>3</td>
<td>None</td>
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</tbody>
</table>

Semester 2 (11 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940-501</td>
<td>Social and Behavioral Foundations of Public Health</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1910-501</td>
<td>Introduction to Public Health Practice and Ethics</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>1900-501</td>
<td>Public Health Biology (for non-health professionals)</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>1900-591</td>
<td>Research Project Design</td>
<td>1</td>
<td>0565-540/0565-550</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective (for health professionals)</td>
<td>2</td>
<td>None</td>
</tr>
</tbody>
</table>

YEAR 2  (24 CH in Year 2)

Semester 3 (7 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910-581</td>
<td>Public Health Practicum</td>
<td>4</td>
<td>All Core Courses</td>
</tr>
<tr>
<td>1950-597</td>
<td>Thesis Project</td>
<td>0</td>
<td>All Core Courses</td>
</tr>
</tbody>
</table>

Semester 4 (17 CH)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-503</td>
<td>Environmental Health Management</td>
<td>3</td>
<td>1950-501</td>
</tr>
<tr>
<td>1950-504</td>
<td>Worker Health and Safety</td>
<td>3</td>
<td>1950-501</td>
</tr>
<tr>
<td>1950-598</td>
<td>Thesis Project</td>
<td>0</td>
<td>All Core Courses</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course name</th>
<th>CH</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis (Credit given upon completion)</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Core courses are highlighted in purple
Concentration courses are highlighted in green
5.3 The MPH Practicum

The MPH Practicum is offered in Semester 1, Year 2 (4 credits). This course is a preceptor-guided experience in a public health organization, providing an opportunity for MPH students to bridge the gap between theory and practice. The main purpose of this practical experience is to allow the student to apply knowledge and theory to a particular area of public health practice and demonstrate capabilities to enter the profession. The Practicum consists of a minimum of 180 hours of experience in an approved public health setting, under the guidance of a qualified preceptor. The student, Program Director, and preceptor will sign an agreement that will guide the practicum experience. The student will prepare a comprehensive portfolio to describe all activities. This portfolio will include a listing of the competencies that have been demonstrated and a paragraph describing how the practicum work supports this.

5.4 Electives and Potential KU Graduate Course Cross-Listings

The Table below presents electives planned by FOPH faculty members (contingent on availability of faculty members).

<table>
<thead>
<tr>
<th>Course No</th>
<th>Descriptions</th>
<th>CH's</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-530</td>
<td>Health Impacts of Land Soil Water &amp; Air Pollution</td>
<td>3</td>
<td>1950-501</td>
</tr>
<tr>
<td>1950-531</td>
<td>Injury Epidemiology and Prevention</td>
<td>3</td>
<td>1950-501 &amp; 0565-540</td>
</tr>
<tr>
<td>1950-532</td>
<td>Exposure Assessment for Env &amp; Occ Epidemiology</td>
<td>3</td>
<td>1950-501 &amp; 0565-540</td>
</tr>
<tr>
<td>1950-533</td>
<td>Public Health Aspects of Foodborne Diseases</td>
<td>3</td>
<td>1950-501 &amp; 0565-540</td>
</tr>
<tr>
<td>1920-502</td>
<td>Health Economics and Financing</td>
<td>3</td>
<td>1920-501</td>
</tr>
<tr>
<td>1920-503</td>
<td>Human Resource Management in Healthcare</td>
<td>3</td>
<td>1920-501</td>
</tr>
<tr>
<td>1920-504</td>
<td>Health Planning and Evaluation</td>
<td>3</td>
<td>1920-501</td>
</tr>
<tr>
<td>1920-530</td>
<td>Advanced Health Economic Evaluation</td>
<td>2</td>
<td>1920-501 &amp; 1920-502</td>
</tr>
<tr>
<td>1920-531</td>
<td>Casemix System for Quality and Efficiency</td>
<td>3</td>
<td>1920-501 &amp; 1920-502</td>
</tr>
<tr>
<td>1920-532</td>
<td>Managing Quality Assurance in Health Care</td>
<td>2</td>
<td>1920-501</td>
</tr>
<tr>
<td>1920-533</td>
<td>Seminar in Health Policy and Management</td>
<td>2</td>
<td>1920-501</td>
</tr>
<tr>
<td>1930-530</td>
<td>Qualitative Research</td>
<td>2</td>
<td>0565-540</td>
</tr>
<tr>
<td>1930-531</td>
<td>Data Management and Informatics</td>
<td>3</td>
<td>0565-550</td>
</tr>
<tr>
<td>1910-530</td>
<td>Issues in Global Health</td>
<td>3</td>
<td>1910-501</td>
</tr>
<tr>
<td>1940-530</td>
<td>Mental Health Promotion</td>
<td>2</td>
<td>1940-501</td>
</tr>
<tr>
<td>1940-531</td>
<td>Understanding Stress and Health</td>
<td>2</td>
<td>1940-501</td>
</tr>
</tbody>
</table>

The FOPH encourages students to take electives from other KU faculties, in order to broaden their educational experience. The upper-level concentration courses in the CMBS MPH program in Epidemiology and Biostatistics can serve as electives for the FOPH MPH students, and vice-versa. Additionally, the FOPH will coordinate with other faculties, including but not limited to the other HSC faculties and the faculties of Business, Social Sciences, Arts, Life Sciences, and Law; to provide the needed electives.
6. Administrative Policies

6.1 College of Graduate Studies Policies
The MPH program in Environmental and Occupational Health initiated in the FOPH will follow the College of Graduate Studies By-Laws. All policies adopted will conform to the COGS policies and procedures.

6.2 Admission Policy and Requirements
6.2.1 Applicants should have a B.Sc. degree or its equivalent conferred by Kuwait University or by other institutions approved by Kuwait University. Students entering the MPH program will be graduates from a health-related Bachelor program such as Medicine, Dentistry, Pharmacy, Nursing, Allied Health, Veterinary Medicine, or related health sciences. In addition, graduates with B.Sc. degrees with relevance to Public Health practice from other fields such as law, business administration, engineering, life sciences (e.g., nutrition, environmental sciences), social sciences (e.g., sociology, demography) will also be considered. Priority will be given to those with experience in the area of Public Health or with high education qualifications in a related area.

6.2.2 Applicants should have a minimum overall GPA of 2.67 points and a minimum specialization GPA of 3.00 points on a scale of 4.00. Applicants with a Bachelor degree in Medicine and Surgery, or in Dentistry or an equivalent degree awarded by Kuwaiti University may be exempted from the foregoing GPA requirements.

6.2.3 Applicants should have a minimum TOEFL score of 500.

6.3 Admission Types
6.3.1 Full-time students (two-year program)
6.3.2 Non-degree students:

Non-degree students are those who register for graduate courses in accordance with the conditions stipulated in Article 11 of the Graduate College’s by-laws.

6.4 Examination and Grading Policies and Procedures
All examination and grading policies and procedures will be implemented according to the College of Graduate Studies By-Laws.

6.5 Minimum Graduation Requirements for the MPH Program with or without Thesis
The students should fulfill all the requirements as per the College of Graduate Studies by-laws. Students will be required to complete 45 semester credit hours (CH) over 4 semesters, for both the Capstone Project and Thesis options, as follows:

**MPH program (Capstone Project Option):**
- 18 CH core coursework
  - (For non-health professions: 20 CH)
- 9 CH in the HPM concentration area
- 5 CH Compulsory Applied Courses
- 10 CH electives
  - (For non-health professions: 8 CH)
- 3 CH Capstone Project (0 Thesis)
- **Total: 45 Credit Hours**

**MPH program (Thesis Option):**
- 18 CH core coursework
  - (For non-health professions: 20 CH)
- 9 CH in the HPM concentration area
- 5 CH Compulsory Applied Courses
- 4 CH electives
  - (For non-health professions: 2 CH)
- 9 CH Thesis
- **Total: 45 Credit Hours**

Note regarding non-health professionals: MPH students who do not have a background in a health profession will be required to substitute 2 CH of elective courses for a course in “Public Health Biology.”
### 7. Course Catalog Descriptions

#### Core, Practicum, and Capstone/Thesis Project Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Credit Hours</th>
<th>Year</th>
<th>Semester</th>
<th>Prerequisite</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Public Health Practice and Ethics</td>
<td>1910-501</td>
<td>3</td>
<td>1</td>
<td>None</td>
<td>Provides the core concepts required of a Public Health practitioner to identify issues of importance to Public Health, assess the population needs for health, plan interventions, execute the interventions, and assess the impact of the programmes. The course will focus on aspects of communication as it relates to public health practice. Issues relating to ethics in public health practice, global health, and the landmark historical achievements in public health practice will also be covered. The course will provide the conceptual framework for the incorporation and integration of the skills and knowledge presented in later modules.</td>
</tr>
<tr>
<td>Epidemiology I (Course from Community Medicine Department)</td>
<td>0565-540 (CMBS Course)</td>
<td>3</td>
<td>1</td>
<td>None</td>
<td>Introduction to the principles and basic methods of Epidemiology for public health and clinical practice, including study designs (ecologic, cross-sectional, case-control, cohort, and randomized controlled trials), measures of disease frequency and association, sources of error (bias, confounding, and random error), diagnostic test validation, causation, disease prevention, and outbreak investigation.</td>
</tr>
<tr>
<td>Biostatistics I (Course from Community Medicine Department)</td>
<td>0565-550 (CMBS Course)</td>
<td>3</td>
<td>1</td>
<td>None</td>
<td>This course aims to provide students with an introduction to statistical concepts and their use and relevance in public health. It covers descriptive analyses to summarize and display data; concepts underlying statistical inference; basic statistical methods for the analysis of continuous and binary data; and statistical aspects of study design. Students will be required to perform analyses using statistical SPSS software and other simpler internet based sample size calculators.</td>
</tr>
</tbody>
</table>
### Public Health Biology

**Course Number:** 1900-501  
**Credit Hours:** 2  
**Year:** 1  
**Semester:** 1  
**Prerequisite:** None

**Course Description:** This course, designed for MPH students without a background in a health profession, will examine the concept of ‘health’ and how it is defined and operationalized in the public health context, and will provide students with the necessary foundations to understand the biological basis of disease. The key issues to be examined are: What is a ‘disease’? What is health and is it more than ‘absence of disease’? Using a biological systems approach, the course will integrate biological concepts as they relate to public health. There is an emphasis on protecting physical and mental function and health, especially at the interface with the environment, as well as understanding the vulnerabilities and susceptibilities that can disrupt it.

### Social and Behavioral Foundations of Public Health

**Course Number:** 1940-501  
**Credit Hours:** 3  
**Year:** 1  
**Semester:** 2  
**Prerequisite:** None

**Course Description:** This module introduces MPH students to the social and behavioral factors related to human health and disease (social determinants of health) across the life course. The course covers community and individual aspects of health promotion, the principles of social epidemiology, demography and ethical issues related to the social and behavioral aspects of the human experience. It provides an introduction to the theories of behavioral and social sciences, health and illness behaviors, models of behavior change, and the social reactions to and implications of “disease.” It covers health disparities, psychosocial stress, and public health issues related to different age groups. The course will enable the students to participate in health promotion planning, especially at the community level. Finally, this course focuses on mental health, prevention of non-intentional injuries, and how to deal with violence from a public health perspective.

### Principles of Health Policy and Management

**Course Number:** 1920-501  
**Credit Hours:** 3  
**Year:** 1  
**Semester:** 2  
**Prerequisite:** None

**Course Description:** This course introduces the basic managerial concepts as they apply to healthcare organizations, with a focus on health care structures, policy development, the roles of the healthcare manager within a health system and the main function of management. The course will provide the insight to patients on concepts of healthcare systems the healthcare workforce, quality assurance, cost considerations, human resource management, health care administration systems, and related ethical issues. The course will also cover the basic concept of health policy, the process of policy formulation and determining forces behind policy decisions, as well as health policy as a form of Health Promotion. The roles of state, political system and other public and private sector key players development of health policy will be covered in this course.
Introduction to Environmental and Occupational Health

**Course Description:**
This course introduces students to the fundamental concepts of Environment and Occupational Health. It differs from the study of how humans affect the environment, because this course focuses on people’s health. Human health depends on the surrounding environment. The course integrates basic public health concepts as they relate to disease causation and prevention including environmental and occupational health effects, water supply, water pollution control, solid waste management (hazardous wastes), air pollution control, general environmental regulations, and related ethical issues. Hazards that lead to carcinogenesis are stressed. Population and occupational health, emerging diseases and the implications of population growth are discussed. Available techniques of preventive practices, such as controlling the quality of air, water, and consumer products, are described for both the workplace and the general environment. The impact of the workplace environment on the health and well-being of workers will be discussed.

Research Project Design

**Course Description**
In this Research Project Design course the student begins the process of identifying a public health question and development of all aspects of a research project protocol, under the supervision of faculty. By the end of this course, the student will produce a research proposal to be approved by the MPH Program Committee, the FOPH Ethics Committee, and the MOH Ethics Committee (as appropriate. The initial draft of the data collection instrument will be included in an Appendix of the research proposal. Regardless of the format, all students are required to take the online course in Protection of Human Subjects in Research, designed by US National Institutes of Health Office of Extramural Research and required of all NIH grant recipients.

Capstone Project

**Course Description**
The Capstone Project (non-Thesis option) serves as the culminating experience and the final assessment of the public health competencies required of MPH graduates. The comprehensive paper is a synthesis of the student’s practicum or work experience and knowledge and skills gained through coursework. The Capstone project can take on many different formats, including, but not limited to 1) A standard public health research project in a human population, 2) Health situation analysis of a specific public health problem, 3) A health policy analysis of a public health problem, implications and recommendations, 4) A systematic review and meta-analysis of a public health problem or intervention. The report will include a description of the public health problem they are working on, a literature review including current peer reviewed research, and a description of the products or data that have resulted from their work, and an analysis of the public health significance and recommendations based on the findings. The capstone project should provide evidence that the MPH graduate can prepare a substantial and rigorous contribution to a field of public health.
Thesis Project

**Course Numbers:** 1950-597/1950-598  
**Credit Hours:** 0 [Upon completion, 9 CH of Thesis credit will be ascribed to 2000-599]  
**Year:** 2  
**Semesters:** 1 and 2  
**Prerequisites:** All Core Courses

**Course Description:**
The Thesis Project serves as the culminating research experience and the final assessment of the research competencies required of MPH graduates who choose the Thesis option. The main output is a scientific report including a rigorous literature search, background, detailed methodology, analysis, results, and discussion. All work will be performed under the guidance of a supervising faculty member.

Practicum in Public Health

**Course Numbers:** 1910-581  
**Credit Hours:** 4  
**Year:** 2  
**Semester:** 1  
**Prerequisites:** All core MPH courses

**Course Description:**
This course is a preceptor-guided experience in a public health organization, providing an opportunity for MPH students to bridge the gap between theory and practice. The main purpose of this practical experience is to allow the student to apply knowledge and theory to a particular area of public health practice and demonstrate capabilities to enter the profession. The Practicum consists of a minimum of 180 hours of experience in an approved public health setting, under the guidance of a qualified preceptor. The student, Program Director, and preceptor will sign an agreement that will guide the practicum experience. The student will prepare a comprehensive portfolio to describe all activities. This portfolio will include a listing of the competencies that have been demonstrated and a paragraph describing how the practicum work supports this.

Environmental and Occupational Health Concentration Courses

Environmental & Occupational Health Risk Assessment

**Course Number:** 1950-502  
**Credits:** 3  
**Year:** 2  
**Semester:** 1  
**Prerequisites:** 1950-501: Introduction to Environmental & Occupational Health

**Course Description:**
The main goal of this advanced course is to explore the risk(s) to the population of exposures to harmful environmental and occupational agents and conditions; and to present the tools for assessment and management of these risks. This course involves the integration of environmental and occupational health, epidemiology, toxicology, and the chemical and biological disciplines to understand the health risks for a given level of exposure to hazardous agents. The course will present the techniques and models for estimating the risks of physical, biological, and chemical agents that can have an impact on human health and well-being, as well as lifestyle and other factors which can modify these effects. Application of these concepts to government, industry and the population will also be covered. The course also covers critical risk calculation and assessment by exploration of underlying assumptions, use of exposure assessment models, and ascertainment of uncertainties. The relationship between risk assessment, characterization and management; and implications on public health policy are also discussed.
Environmental Health Management

Course Number: 1950-503
Credit Hours: 3
Year: 2  Semester: 2
Prerequisites: 1950-501: Introduction to Environmental & Occupational Health

Course Description:
The course explores the impact of human activities on the environment and the strategies that are used by international organizations, national and local governments in response. The course will explore the roles of the World Health Organization, United Nations Environmental Protection Agency, and the International Organization for Standardization and governments in setting regulatory frameworks, and the responsibilities of individual agencies/organizations to comply with regulations. The environmental issues surrounding climate change will be addressed. Strong emphasis is placed on the legal, political, and economic structures and systems that are used by governmental and individual organizations to combat and reduce a wide range of environmental problems. The course covers the management of environmental health aspects including quality of life, physical, chemical, biological, social and psychosocial factors in the environment. Also covered are the assessment, correction, control, and prevention of factors in the environment that can adversely affect health.

Worker’s Health & Safety

Course Number: 1950-504
Credit Hours: 3
Year: 2  Semester: 2
Prerequisites: 1950-501: Introduction to Environmental & Occupational Health

Catalogue Description:
This course covers occupational hazards, injuries, and diseases; and the principles of occupational safety and health (OSH). Covered topics include safety regulations and standards; models of injury and occupational disease causation; accident investigation procedures; and strategies for control of occupational injuries and diseases. The course explores the protection of workers against work-related diseases and injury, the conventions of the UN International Labor Organization, and the need to achieve sustained decent working conditions and a strong preventive safety culture in the workplace. The course also covers the principles of safety engineering, industrial hygiene, industrial ergonomics, and some aspects of occupational medicine.

Elective Courses

Health Impacts of Land Soil Water & Air Pollution

Course Number: 1950-530
Credit Hours: 3
Prerequisites: 1950-501: Introduction to Environmental & Occupational Health

Course Description:
The course covers the health impacts of air, water and land/soil pollution which is the addition to the ecosystem of something that has a detrimental effect on it. The course will cover the important causes of air, water, and land pollution, including the high rate of energy usage by modern growing populations, and the impact pollution has on human health and public health. Sources of pollution, including industry, business, road transport, incinerators, waste disposals, agriculture and households, will be covered. The course will also cover main pollutants in the environment, such as particulate matter, PAHs, lead, ground-level ozone, heavy metals, sulphur dioxide, benzene, carbon monoxide and nitrogen oxides. The course will discuss the range of illnesses caused by pollution (e.g., lung cancer, cardiovascular and respiratory diseases, chronic bronchitis, acute respiratory illness, and impairment of lung function).
Injury Epidemiology & Prevention

Course Number: 1950-531
Credits: 3
Prerequisites:
- 1950-501: Introduction to Occupational & Environmental Health
- 1930-501: Epidemiology I

Catalogue Description:
This course provides instruction on a diverse array of topics specific to injuries (both unintentional and intentional) which are clearly a major threat to the public’s health and well-being. The Epidemiology of Injuries will be covered, including international and local trends, along with the Haddon Matrix and various common types of unintentional and intentional injury. The public health importance of injuries in Kuwait will be emphasized, as a leading cause of death, particularly among the young population. The role of regulation and law in the work and living spaces and environment will be covered; in addition to common risk-taking behaviors and the means for change in such behaviors using strategies such as the European Union “Zero-Accident-Vision.” The course will cover the important role of health promotion in terms of the individual, the community, society, and regulatory agencies in the prevention of injuries.

Exposure Assessment for Environmental & Occupational Epidemiology

Course Number: 1950-532
Credits: 3
Prerequisites:
- 1930-501: Epidemiology I
- 1930-502: Biostatistics I
- 1950-501: Introduction to Environmental & Occupational Health

Catalogue Description:
The overall goal of this course is to familiarize students with general concepts in assessing human exposures to environmental & occupational contaminants. The course will provide information on different sources and routes of exposures, the various methods applied to assess these exposures and the challenges faced by population-based studies that relate such exposures to health outcomes. A variety of methods of exposure assessment will be discussed, including environmental measurements, personal exposure assessment, questionnaires, and job exposure matrices. Statistical analysis and modeling of exposure assessment data including Job Exposure Matrices (JEM), Geographical Information Systems (GIS), and Source Dispersion and Micro-environment models will be introduced.

Public Health Aspects of Foodborne Diseases

Course Number: 1950-533
Credits: 3
Prerequisites: 1950-501: Introduction to Occupational and Environmental Health;
1930-501: Epidemiology I

Catalogue Description:
The focus of this course is the surveillance of foodborne diseases designed for public health practitioners and other students interested in the safety of food. It describes how information from surveillance is used to improve public health policy and practice in ways that contribute to the safety of food. Emphasis is on the microorganisms and chemical agents responsible for foodborne diseases, analyzing their cause, the pathogenesis, clinical manifestations, reservoirs, modes of transmission, and epidemiology. The course will also address the transport, survival, and fate of pathogens in the environment, the concept of indicator organisms as surrogates for pathogens, and the removal and inactivation of pathogens and indicators by water and wastewater treatment processes that are closely associated with foodborne diseases. It will also examine the public health impact of quality assurance programs, such as Hazard Analysis and Critical Control Points, and regulatory agencies to control foodborne diseases.
Environmental & Health Impact Assessment

Course Number: 1950-534
Credits: 3
Prerequisites: 1950-501: Introduction to Occupational & Environmental Health
1950-532: Exposure Assessment for Environmental & Occupational Epidemiology
1950-530: Health Impacts of Land Soil Water & Air Pollution

Catalogue Description:
This course describes the function of health impact assessment (HIA); its role in identifying activities and policies likely to have major impacts on the health of a population; and its function as a means of evidence based policy making for improvement in health. The course discusses the relevant combination of methods whose aim is to assess the health consequences of policies, projects, or programs in any sector of society or the environment – not just the “health” sector – with an emphasis on “Health in All Policies” (HiAP). Examples of transportation, land use, agriculture, water, energy, and forestry projects will be examined. This course aims at developing skills in reviewing and conducting HIA within the context of fostering an integrated understanding of how public policies and decisions influence the determinants of population health.

Health Economics and Financing (HPM Concentration Course)

Course Number: 1920-502
Credit Hours: 3
Year: 2 Semester: 1
Prerequisite: 1920-501: Principles of Health Policy and Management

Course Description: This course is an introduction to health economics and a description of the current financial environment in which healthcare organizations function. Basic economic concepts of demand and supply and their applications in financial assessment of health organizations for critical and sound financial decisions will be covered. The course will provide the skills on economic evaluation methods in assessing new and existing technology covering both cost-effectiveness and cost-benefit analysis. The course will cover the application of financial management principles to health care organizations for effective and efficient health care administration; the health financing aspect of healthcare services; marketing of healthcare services; the role of public, non-profit, and private sector roles in funding; and different methods provider’s payment and allocating health services.

Human Resource Management in Healthcare (HPM Concentration Course)

Course Number: 1920-503
Credit Hours: 3
Year: 2 Semester: 2
Prerequisite: 1920-501: Principles of Health Policy and Management

Course Description: This course will provide the foundations for all aspects of human resource management, planning and development that are crucial for effective and efficient functioning of health organizations. The challenges facing health organizations to manage human resources for delivery of high quality services to users will be explored in this course. It covers theories and practices in defining, evaluating and controlling behavior and atmosphere in a health service organization. Emphasis will be given to leadership aspects, motivation, communication and group dynamics in a health organization. The course will also discuss the relationship of healthcare organization with the employee, which includes job analysis, forecasting of human resource needs, and training and development of the health workforce. The key issues in health human resources will be further studied through reviews of published journal articles, case studies and student presentations.
Health Planning and Evaluation (HPM Concentration Course)

Course Number: 1920-504
Credit Hours: 3
Year: 2 Semester: 2
Prerequisite: 1920-501: Principles in Health Policy and Management

Course Description: This course will help to develop knowledge and skills to undertake a systematic approach in the cycle of planning, implementation, monitoring and evaluation of health programmes covering promotive, preventive and curative services in health care. The issues of Public Health Law and the legal frameworks for health policy and management will be considered. Both the conceptual model of programme planning as well as the pragmatic approach in undertaking the planning process will be covered in this course. The roles of the health management information system and different sources of data for health planning and evaluation will be discussed in this course, as will be the use of routinely collected morbidity and mortality data for structural, process and outcome evaluation. Both qualitative and quantitative techniques in program evaluation will be covered in this course.

Advanced Health Economic Evaluation

Course Number: 1920-530
Credit Hours: 2
Prerequisite: Principle in Health Policy and Management & Health Economic and Financing

Course Description:
This course will provide the students with an understanding of the concepts, application and advanced analytical methods in conducting health economic evaluation. Students will develop hands-on skills to conduct economic evaluations with practical experiences in working on real health economic data. The specific areas covered in this course include economic modeling, costing analysis, budget impact analysis, cost-effectiveness analysis and cost-benefit analysis. Methods of conducting simple and complex sensitivity analysis, interpreting and presenting results of economic evaluations will be covered.

Casemix System for Quality and Efficiency

Course Number: 1920-531
Credit Hours: 3
Prerequisite: Principle of Health Policy and Management & Health Economic and Financing

Course Description:
This course is designed to introduce the concept of casemix system and its application in enhancement in quality and efficiency of healthcare services. The course will provide an overview of casemix system, its evolution from the first version introduced in 1980’s to the present day where the system has been implemented in more than one hundred countries worldwide. The minimum data set for casemix systems will be discussed in detail including requirements for diagnoses and procedures coding using the ICD classification system. Benefits of using Casemix System as a tool to support quality assurance programme will be discussed, as will the advantages of using it for prospective provider payment mechanisms. Students will perform hands-on exercises using the Grouper software programs available to support implementation of casemix systems world wide. A pragmatic approach to planning for implementation of casemix system at hospitals, organizations and national level programs will be presented in this course.
Managing Quality Assurance in Health Care

Course Number: 1920-532  
Credit Hours: 2  
Prerequisite: Principle in Health Policy and Management

Course Description:  
Improvement in quality of health care services is one of the expected roles of healthcare managers. In this course the technical aspect of designing and implementing effective and efficient strategies for monitoring quality and correcting deficiencies in health delivery systems will be covered. Methods to ensure optimal delivery of quality services through comprehensive use of human and financial resources will be discussed. Students attending this course will have the understanding the overall concept of quality assurance in health care services including various dimensions of quality, quality assurance process and development of indicators to measure and monitor quality of care in healthcare organization. Topics covered include risk management, total quality management and the methods to ensure patient safety. Aspects of planning, implementing and evaluation of quality assurance programme will be covered in detail in this course.

Seminar in Health Policy and Management

Course Number: 1920-533  
Credit Hours: 2  
Prerequisite: Principle of Health Policy and Management

Course Description:  
Health policy and management issues evolve depending on the current challenges and changes in the health system. The main emphasis of this course is to expose MPH students to the debates regarding the contemporary issues which affect local and international health systems. In this self-learning course, the students are required to prepare a seminar that will be presented at the end of the course. Students will be required to work in a group to select a topic of their interest, search for information from local and international literatures on the proposed topic for the content of the seminar. Following the Seminar, the students are required to submit a written report taking into accounts comments and feedback given by academic staff.

Mental Health Promotion

Course Number: 1940-530  
Credit Hours: 2  
Prerequisite: 1940-501: Social and Behavioral Foundations of Public Health

This course will focus on the principles of mental health, its indicators and social determinants. It will cover the prevalence of common mental health problems across life span, and in different communities. The course will emphasize on the relationships between mental and physical health and illness, and why mental health promotion and prevention is considered as a public health priority. An account about strategies of mental health promotion, the evidence of effective interventions, and the development of sustainable programs in mental health promotion will be covered also. The course will discuss mental health from human rights perspective.
Understanding Stress and Health
Course Number: 1940-531
Credit Hours: 2
Prerequisites: 1940-501: Social and Behavioral Foundations of Public Health

Course Description: This course introduces Master students to stress, including its causes, the body’s reactions to excessive stress, and symptoms and signs that develop following stress. The course focuses on the effects of stress on productivity, quality of life, social relationships in different situations (family, occupation, education, etc.), and health. Students will gain a perspective on the consequences of stress on cognitive, emotional and behavioral aspects of life. The course also presents different strategies of stress management and relief and how these interventions improve overall human’s efficiency and quality of life.

Qualitative Research
Course Number: 1930-530
Credit Hours: 2
Prerequisite: 1930-501: Epidemiology I

Course Description: This course will examine the basic and advanced concepts and methods of qualitative research methods and their relationship with quantitative research methods. On completion of the course, the student will be able to conduct qualitative research using the methods and forms of analysis which are relevant to public health research. They will be able to plan and undertake collection and analyses of qualitative data. Examples and application of course content to the Kuwaiti context will be emphasized. Practical exercises in qualitative research will be included.

Data Management and Informatics
Course Number: 1930-531
Credit Hours: 3
Prerequisite: 0565-550: Biostatistics I

Course Description: This course covers basic and advanced concepts of data and information management. Students will be introduced to the dynamic field of public health informatics, the expected competencies of a public health informatics specialist, and the practical application of data management and informatics concepts in the field of public health. Students will also be introduced to the field of data mining and its application to a variety of types of healthcare data. Examples and application of course content to the Kuwaiti context will be emphasized. Practical exercises in data management and informatics will be included. Students will be required to use an anonymized dataset extracted from a health institution to identify problems, consistency issues, and data merging issues.

Issues in Global Health
Course Number: 1910-530
Credit Hours: 3
Prerequisite: 1920-501: Introduction to Public Health Practice and Ethics

Course Description: Global Health has emerged over the last 40 years as a complex configuration of governmental, nongovernmental, national, international, industrial, commercial, and philanthropic institutions involved in projects with an estimated value of $16 billion. This course will introduce the student to the organisational and ethical issues involved in this movement. These include the current structures involved, how they are funded and the ethical issues raised by this development.
Case Studies in Public Health Communication

Course Number: 1910-531
Credit Hours: 3
Prerequisite: 1910-501: Introduction to Public Health Practice and Ethics

Course Description:
This course will extend the skills required to develop important public health communication materials, campaigns, and strategies related to a variety of topics and for diverse target populations. It will use a case-study approach for the students to critically evaluate previous interventions and create alternative visions of how they could be conducted. They will use the principles that they have learned from previous modules.