

Jordan University of Science and Technology

Faculty of Medicine 2018-2019

COURSE TITLE : Research and Community Medicine
COURSE CODE : MED 408.
CREDIT HOURS : 4.5 CREDIT HOURS
SEQUENCE : YEAR 4, 6 WEEKS
COURSE COORDINATOR: Dr. Rami Saadeh
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Course Description:

Community medicine is a branch of medicine that is concerned with the health of populations. Students in this course are taught the effects of organized efforts in protecting societies, maintaining their health and improving the wellness of their members. While the medical theme mostly focuses on individuals; organ based or systems based, community medicine teaches students that the population, rather than individuals, is the target of the medical practitioner in their community health service.

Students will learn the importance of working in community health settings that focuses on population health care. Applying public health principles while treating patients at same the time will advance their roles in the Jordanian health care system and improve the overall quality of the service. They will learn how to initiate, identify, and appreciate their roles as community health practitioners. Main objectives of this course are tailored to improve students' skills in medical – social aspects, patient-doctor communication, environmental health, epidemiology and health statistics, and clinical decision-making, and apply this knowledge in a practical/clinical setting.

Another part of this course is to adopt a research project that entails a core medical aspect while bearing a cultural and social perspective. Students will choose a mentor from the faculty of medicine who will serve as their main research advisor. Research projects are expected to lead students through all steps of research: formulating a research question, design the study, prepare the study instrument, collect data, perform data management and analysis, report the results, write the thesis, and present the final project.

The main components of the course that include basic knowledge on community medicine and the research project are considered excellent tools to enrich students' academic and practical capabilities, broaden their scope in applying their skills, and prosper their career in the future.

Course Learning Outcomes

1. Recognize the role of the community health practitioner in health education.
2. Describe the basic principles of public health and their role in protecting the population.
3. Discuss the role of the medical community doctor in recognizing communicable and non – communicable diseases, compute associated risks, and practical ways of health management and disease prevention.
4. Understand the main health indicators in the community, their relative implication in evidence – based practice and disease prevention, in addition to their statistical and clinical significance.
5. Define the main factors that affect the health of the community, including genetic, social, and environmental factors.
6. Recognize the importance of data collection, analysis and interpretation in community medicine, while recognizing the implication of epidemiological and clinical studies in data generation.
7. Describe the advantages of incorporating maternal and child health services in any community.
8. Describe the main components of primary health care, and how to implement them in rural areas.
9. Comprehend, describe, and apply research steps through performing a high – quality evidence – based community study.

Recommended Textbooks:

1. Textbook of Community Medicine (Preventive & Social Medicine) by Sunderlal
2. Community Medicine With Recent Advances by Suryakantha Ah
3. Essentials of Community Medicine: A Practical Approach by Lalita D Hiremath, MD and Dhananjaya A Hiremath, MD.

Learning Objectives

(A) Lectures objectives

1	Health Education	<ol style="list-style-type: none"> 1. Understand the advantages of educating a community about health aspects of diseases. 2. Be familiar with the modalities and methods of health education. 3. Describe the cost – benefits of health education and its role in disease prevention. 4. Describe the effects of health education in school health, food safety, and primary health care
2	Disease Epidemiology	<ol style="list-style-type: none"> 1. Define the functions of public health in detecting diseases and measuring their magnitude. 2. Describe different ways to measure indicators of diseases and compute associated risks. 3. Describe the importance of epidemiological investigations in supporting evidence – based medicine.
3	Disease investigation and measures of association	<ol style="list-style-type: none"> 1. Compute mortality and morbidity rates 2. Compute measures of association and know their statistical significance. 3. Differentiate between statistical and clinical significance. 4. Understand the importance of clinical trials and survival analysis in evidence – based medicine.
4	Toxicogenomic and Medicine	<ol style="list-style-type: none"> 1. Describe the relationship of genetics and health 2. Explain the interaction of environmental stressors with genes, including the concept of toxicogenomic 3. Comprehend the effects of genetics in community health planning and disease prevention.
5	Primary Health Care Maternal & Child Health	<ol style="list-style-type: none"> 1. Describe the advantages of primary health care in disease prevention and health promotion. 2. Identify the primary functions of primary health care in urban and rural areas. 3. Describe the importance of maternal and child health care in improving family and population health. 4. Identify the basic needs of providing perinatal quality care.
6	School health	<ol style="list-style-type: none"> 1. Describe basic school health programs 2. Identify problems and needs in school – based health programs. 3. Evaluate the quality of medical and health services in schools. 4. Communicate professionally and effectively with children and parents to deliver health messages.

7	Management in health care Rural health care services	<ol style="list-style-type: none">1. Define the concepts of health management and health administration2. Identify the major roles of a community health leader and health facility manager.3. Describe the aspects of planning, organization, and management in any health organization.4. Describe the basic needs of rural health care and differentiate between urban and rural health care5. Identify the major gaps and needs in rural health services
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(B) Research Project objectives

Title	Objectives
Research question	<ul style="list-style-type: none">• Specify the health problem or concern• Formulate research question that's community – based or problem – based.• Ensure that research question is answerable.
Study design	<ul style="list-style-type: none">• Identify major components of research methods.• Formulate research questions.• Identify research tools and instruments required to meet research objectives.• Design a study that meet research needs and answer the research question.
Data collection	<ul style="list-style-type: none">• Comprehend scientific ways of collecting data.• Be able to conduct random sampling during data collection.• Identify gaps and possible flaws in data collection, including missing data and outliers.
Data management, analysis, and interpretation	<ul style="list-style-type: none">• Recognize problems in data that must be managed• Manage data through cleaning and organizing analyzable data• Run basic statistical diagnostic tools that identify problems in available data.• Run descriptive analysis using SPSS and describe the results• Run some inferential statistics that suits the study design• Interpret the results from SPSS tables and reflect them on study objectives
Data presentation	<ul style="list-style-type: none">• Present data in a professional way: written and oral• Reflect on the implication of results

Course Assessment

Assessment		
Assessment Type	Expected Due Date	Weight
Exam (Theory)	End of Lectures	40
Field Work Evaluation	End of the semester	20
Research activity	*Submission of research work is before graduation	40
Total		100

*The research project evaluation will be held at the end of three years of the medical training program. This would include assessment of the thesis and a formal presentation of the results.

Students Learning Outcomes

Student Learning Outcomes(SLOs) (4-8 Maximum) Upon successful completion of this course, students should be able to:			
SLOs	Related ILO(s)* (numbers only)	Evaluation Criteria (MCQ, OSCE, Homework...)	
		Type of Criteria (MCQ, OSCE, Homework...)	Weight (%)
Describe and investigate the epidemiology of diseases, how to compute associated risks, diseases indicators, and measures	1, 3	MCQ	10
Recognize the roles of primary health care in protecting communities, apply health promotion and disease prevention in school health and maternal and child health	1,5,6,7,10	MCQ	20
Describe the effects of the environment and genetics in causing diseases and how to adjust community health plans according to genetic and environmental factors	2,7	MCQ	10
Identify health education methods that are suitable to promote health in a community and the effect of health education in school health, food safety, and disease prevention.	4,8	MCQ	10
Know the basic concepts of leadership and management and comprehend the needs of communities in rural as well as urban areas.	1,5,10	MCQ	10
Conduct research projects based on community health needs/health problems and be able to use skills and knowledge to apply an evidence – based practice	1,4,8,9	MCQ and Final Project Presentation	40
			100

Intended Learning Outcomes (ILOs)

- 1) Demonstrate enough understanding of the basic health needs of any community and the main role of health care professionals in primary health care and disease prevention.
- 2) Conceptualize the effects of the environment and genetics on causing diseases and how to adjust community health plans according to these factors.
- 3) Apply knowledge about disease epidemiology in investigating, measuring, and controlling diseases and outbreaks in affected communities.
- 4) Deliver evidence-based community health promotion through education and disease prevention.
- 5) Demonstrate proficiency in identifying basic needs and performing required tasks toward targeted communities, such as pregnant women, school children, and rural areas.
- 6) Demonstrate ability to work in diverse settings and communities.
- 7) Identify and understand the changing health needs of ever-changing community and organize relevant effective interventions for the amelioration of health problems.
- 8) Develop a global perspective of health and be capable of understanding cultural and societal specific health needs; its implications and its interventions.
- 9) Conduct and guide research in various areas of community medicine and prevention.
- 10) Lead a team of health professionals in planning and managing community health problems effectively and proactively.