



## Course Syllabus

1	Course title	Community Medicine	
2	Course number	0505205	
3	Credit hours	4 credit hours (all theory)	
	Contact hours (theory, practical)	64 hours	
4	Prerequisites/corequisites	None	
5	Program title	Doctor of Medicine	
6	Program code	---	
7	Awarding institution	The University of Jordan	
8	School	School of Medicine	
9	Department	Family and Community Medicine	
10	Course level	2 <sup>nd</sup> medical year	
11	Year of study and semester (s)	Second year / First semester	
12	Other departments (s) involved in teaching the course	None	
13	Main teaching language	English	
14	Delivery method	<input type="checkbox"/> Face to face learning <b>** Blended</b> <input type="checkbox"/> Fully online	
15	Online platforms(s)	<b>** Moodle</b> <b>** Microsoft Teams</b> <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	October 2024	

### 17 Course Coordinator:

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## 18 Other instructors:

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## 19 Course Description:

A. This course is designed to deliver knowledge of principles and practice of prevention in primary health care for medical students. It also provides students with core skills in epidemiology and biostatistics essential for medical research. This course highlights important community health



domains such as mother and child health, environmental and occupational health, in addition to health services management.

B. The aim of this course is to introduce public health fundamentals such as epidemiology and biostatistics. Also, it aims to apply public health principles to health problems and develop strategies to address public health problems. It introduces students to primary healthcare, mother and child health, environmental health, and health administration.

**20. Program Intended Learning Outcomes (PLOs) (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):**

- 1. Demonstrate basic knowledge of normal human structure and function at molecular, genetic, cellular, tissue, organ, system and whole-body levels in terms of growth, development, and health maintenance. Analyze the basic molecular and cellular mechanisms involved in the causation and treatment of human disease and their influence on clinical presentation and therapy.**
- 2. Collect, interpret, document, and communicate accurately a comprehensive medical history, including the psychological and behavioral factors, and a thorough organ-system-specific physical examination inclusive of the mental status of the patient.**
- 3. Integrate and communicate collected clinical information in the construction of appropriate diagnostic and therapeutic management strategies to identify lifethreatening conditions ensuring prompt therapy, referral, and consultation with relevant disciplines and skillfully perform basic medical procedures for general practice on patients with common illness, acute and chronic, taking into account environmental, social, cultural and psychological factors.**
- 4. Demonstrate in-depth knowledge of the epidemiology and biostatistics of common diseases, and analyze the impact of ethnicity, culture, socioeconomic factors and other social factors on health, disease and individual patient's health care.**
- 5. Communicate effectively and professionally, both orally and in writing, with patients, their families, and with other healthcare providers utilizing information technology resources in his/her scholarly activities and professional development with the ability to teach others, and to understand and respect other healthcare professionals' roles, and apply**



- the principles of multidisciplinary teamwork dynamics and collaboration.
6. Apply scientific methods including evidence –based approach to the medical practice including problem identification, data collection, hypothesis formulation, etc., and apply inductive reasoning to problem solving and ensure that clinical reasoning and decision making are guided by sound ethical principles.
  7. Demonstrate knowledge of scientific research methods and ethical principles of clinical research and be able to write research proposals or research papers.
  8. Demonstrate professionally the skills needed for Quality improvement, lifelong learning, and continuous medical education including the ability to identify and address personal strength and weakness, self-assess knowledge and performance, and develop a self-improvement plan.
21. **Intended Learning outcomes of the course (CLOs):** Upon completion of the course, the student will be able to achieve the following intended learning outcomes:
1. Define epidemiological terms and history of epidemiology. In addition, to identify association and causation, and types of associations with underlying statistical principles. (*Knowledge*)
  2. Distinguish types of epidemiological studies, their application, examples, strengths and weaknesses. (*Knowledge*)
  3. Describe communicable and non-communicable disease epidemiology in addition to medical screening and screening criteria (*Knowledge*)
  4. Recognize the importance of environmental health, air pollution, and occupational health and safety and health hazards in the work place. (*Knowledge*)
  5. Describe background, basic elements, and requirements of primary health care and maternal and child health. Recognize the significance of health education as a basic element in the context of primary health care. (*Knowledge*)
  6. Identify the functions of health care managers and assess the unique challenges involved in managing complex health care organizations (*Knowledge*)



7. Calculate incidence and prevalence and to calculate and interpret measures of association (OR and RR) and sensitivity, specificity, +ve and -ve predictive value (*Skill*).
8. Employ basic statistical concepts and their application to healthcare research. Furthermore, Differentiate between parametric and nonparametric tests and comprehend their underlying assumptions and the conceptual basis of statistical inferences. (*Skill*)
9. Demonstrate statistical technique that provide the best answer to a given research question. Develop the necessary computer skills using the SPSS in order to conduct basic statistical analyses. Evaluate computer output containing statistical procedures and graphics and interpret it in a public health context. (*Skill*)
10. Exhibit attitudes and values that demonstrate responsibility toward health of the population and the environment (*Competency*)

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):

Program ILOs / ILOs of the course	CLO (1)	CLO (2)	CLO (3)	CLO (4)	CLO (5)	CLO (6)	CLO (7)	CLO (8)	CLO (9)	CLO (10)
PLO (1)										
PLO (2)										
PLO (3)										
PLO (4)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PLO (5)										
PLO (6)										
PLO (7)										
PLO (8)										

23. Topic Outline and Schedule:



Week	Lecture	Topic	SLO	Descriptors**	Learning Methods(Face to Face /Blended/ Fully Online)	Platform used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Introduction to and History of Epidemiology	Define epidemiology and its components  Describe evolution of epidemiology as a field of science.	K	Face to face	-	Synchronous	Written exams	1
	1.2	Disease causation	Outline the process of disease transmission and	K	Face to face	-	Synchronous	Written exams	1
	1.3	Natural History of disease	Describe natural history of disease.	K	Face to face	-	Synchronous	Written exams	1
	1.4	Incidence and prevalence	Define and Calculate incidence and prevalence	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	paper
2	2.1	Measures of association (risk approach)	Identify and calculate Relative risk (RR) and Odds ratio (OR)	K S	Face to face	-	Synchronous	Written exams	1
	2.2	Bias and confounding	Define Bias and confounding, their causes, effect, types and prevention	K	Face to face	-	Synchronous	Written exams	1
	2.3	Association and causation	Identify and explain Hill's criteria as	K	Face to face	-	Synchronous	Written exams	1
	2.4	Epidemiologic investigation	Describe the process of	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video



			epidemiologic investigation						
3	3.1	Epidemiological Study Designs (1)	Identify types of epidemiologic studies, their application, examples, strengths and weaknesses.	K	Face to face	-	Synchronous	Written exams	1
	3.2	Epidemiological Study Designs (2)	Distinguish different types of epidemiologic studies, their application, examples, strengths and weaknesses.	K	Face to face	-	Synchronous	Written exams	1
	3.3	Medical Screening	Indicate principles of medical screening and disease surveillance	K	Face to face	-	Synchronous	Written exams	1
	3.4	Activity 1: Watch video Evidence Based Medicine and critical appraisal of study designs	Distinguish different types of epidemiological studies, their application, examples, strengths and weaknesses.	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	3.5	Activity 2: Watch video public health surveillance	Indicate disease surveillance: types, advantages and limitations	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
4	4.1	Population pyramid, standardization, Chronic Disease Epidemiology	Recognize key aspects of non-communicable diseases epidemiology and prevention	K	Face to face	-	Synchronous	Written exams	1



		(Diabetes, Cancer, Hypothyroidism)							
	4.2	Infectious Disease Epidemiology, influenza and pneumococcal diseases epidemiology.	Illustrate key aspects of communicable diseases epidemiology and prevention	K	Face to face	-	Synchronous	Written exams	1
	4.3	Smoking cessation preventive services (nicotine addition and smoking cessation behavioural & pharmaceutical interventions)	Identify the concept of nicotine addiction and the role of smoking cessation medical services  Explain key types of population pyramids and their public health importance	K	Face to face	-	Synchronous	Written exams	1
	4.4	Activity 1: CDC influenza vaccines	Interpret the CDC influenza vaccine	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	4.5	Activity 2: Watch video on vaccines	Illustrate concepts about vaccines	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
5	5.1	Unit 1. Introduction to Biostatistics (Data, population & sample)	Conduct the basic statistical tests	S	Face to face	-	Synchronous	Written exams	2
	5.2	Unit 1. Introduction to Biostatistics (variables, hypothesis testing)	Employ statistical technique will provide the best answer to a given research question.	K S	Face to face	-	Synchronous	Written exams	2
	5.3	Unit 1. Introduction to Biostatistics (errors)	Illustrate the practical importance of key concepts of type I and type II errors, and confidence bounds.	K S	Face to face	-	Synchronous	Written exams	2





	5.4	Watch video 1: Basics of descriptive statistics	Practice the basic statistical concepts	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	5.5	Watch video 1: descriptive statistics	Practice the basic statistical concepts	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
6	6.1	Biostatistics: Unit 2. Descriptive Statistics	Interpret concepts of probability, inference	K S	Face to face	-	Synchronous	Written exams	2
	6.2	Biostatistics: Unit 2. Descriptive Statistics	Practice the basic statistical concepts	K S	Face to face	-	Synchronous	Written exams	2
	6.3	Unit 3. Probabilities (Z-score)	Demonstrate proper use z tables	K S	Face to face	-	Synchronous	Written exams	2
	6.4	Watch video 2: using z table	Demonstrate proper use z tables	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	4.5	Watch video 3	Demonstrate proper use z tables	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
7	7.1	Biostatistics: Unit 4. Non-Parametric Tests (Chi-square)	Employ necessary computer skills using the SPSS in order to conduct basic statistical analyses.	K S	Face to face	-	Synchronous	Written exams	2
	7.2	Unit 5. Parametric Tests (t-test)	Employ necessary computer skills using the SPSS in order to conduct basic statistical analyses.	K S	Face to face	-	Synchronous	Written exams	2
	7.3	Unit 5. Parametric Tests (One-Way ANOVA)	Employ necessary computer skills using the SPSS in order to conduct basic statistical analyses.	K S	Face to face	-	Synchronous	Written exams	2



	7.4	Watch video 4:Chi square	Utilize SPSS to assess data sources and data quality for the purpose of selecting appropriate data for specific research questions	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	7.5	Watch video 5: t test and ANOVA	Utilize SPSS to evaluate computer output containing statistical procedures and graphics and interpret it in a public health context.	K S	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
8		Midterm Exam							
	9.1	Environmental Health: Introduction	Describe major causes of health effects of environmental pollution	K	Face to face	-	Synchronous	Written exams	4
9	9.2	Environmental Health: Air pollution	Classify types of air pollutants and their impact on health	K	Face to face	-	Synchronous	Written exams	4
	9.3	Occupational Health	Identify various occupational health and safety issues	K	Face to face	-	Synchronous	Written exams	4
	9.4	Watch video: Food safety and food contamination	Recognize types of food contamination and their causes	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	9.5	Watch video: Occupational hazards	Explain occupational hazards, causes and health effects	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
10	10.1	Introduction to PHC and history of its development	Identify components of PHC and PHC status in Jordan	K	Face to face	-	Synchronous	Written exams	3
	10.2	Basic concepts of PHC	Recognize PHC activities, elements	K	Face to face	-	Synchronous	Written exams	3



			requirements, and principles						
	10.3	Health Education	Indicate the roles of PHC professionals in Jordan	K	Face to face	-	Synchronous	Written exams	3
	10.4	Activity 1: Read paper: Astana declaration	State new pathways for primary health care	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	paper
	10.5	Activity 2: Intersectoral collaboration for PHC	Describe PHC in developing countries	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	paper
11	11.1	Introduction to Maternal and Child Health Services	Identify the Impact and objectives of MCH  Name major health problems and factors that affect MCH	K	Face to face	-	Synchronous	Written exams	3
	11.2	Components of Maternal and Child Health Services	Memorize components of MCH services Functions of MCH services Specify importance of antenatal care (ANC)	K	Face to face	-	Synchronous	Written exams	3
	11.3	Antenatal Care	List components of ANC and Risk factors of pregnancy ANC status in Jordan	K	Face to face	-	Synchronous	Written exams	3
	11.4	Activity 1: Violence against women	Indicate nature and dimensions intimate partner violence	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	11.5	Activity 2: Folic acid and birth defects	Distinguish the role of folic acid in preventing neural tube defects	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
12	12.1	Maternal and Child Health	Define and calculate Maternal Morbidity and Mortality	K S	Face to face	-	Synchronous	Written exams	3
	12.2	Maternal and Child Health	Discuss the impact of Infant and Child	K	Face to face	-	Synchronous	Written exams	3



			Health on the community						
	12.3	Maternal and Child Health	Explain importance of Adolescence Health	K	Face to face	-	Synchronous	Written exams	3
	12.4	Activity 1 Maternal and Child Health	Identify the causes of perinatal mortality	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	12.5	Activity 2 Maternal and Child Health	Define child abuse	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
13	13.1	Introduction to Health Services Management	List functions , roles and skills of managers.	K	Face to face	-	Synchronous	Written exams	5
	13.2	Management Functions and Styles	Classify functions of management and outline styles of management	K	Face to face	-	Synchronous	Written exams	5
	13.3	Management and Motivation	Recognize theories of motivation and their application	K	Face to face	-	Synchronous	Written exams	5
	13.4	Activity 1	Explain the Swiss cheese model	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
	13.5	Activity 2	Describe Tuckman stages of team development	K	Blended	Moodle	Asynchronous	Written exam/ Online activities	video
14	14.1	Revision	Understand PHC	K	Face to face	-	Synchronous	Written exams	1,2,3,4, 5
	14.2	Revision	Understand MCH	K	Face to face	-	Synchronous	Written exams	1,2,3,4, 5
	14.3	Revision	Understand Air pollution issues	K	Face to face	-	Synchronous	Written exams	1,2,3,4, 5
	14.4	Revision	Utilize SPSS	K		-	-	Written exam	1,2,3,4, 5
	14.5	Revision	Understand Health services management	K	Face to face	-	-	Written exam	1,2,3,4, 5
	15.1								
15	15.2	Final Exam	All material	K S C				Written exam	



\*\* K: Knowledge, S: Skills, C: Competency

## 24. Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Descriptor	Period (Week)	Platform
Midterm Exam	30	Epidemiology week 1, 2 &3 Biostatistics week 1 and 2	1.1-1.5 2.1-2.5 3.1-3.5 4.1-4.5 5.1-5.5	K, S, C	8 <sup>th</sup> week	In-campus Paper-based exam
Online Activities	30	Included in Midterm & Final exams	All SLO's	K, S, C	1-14 <sup>th</sup> week	In-campus Paper-based exam
Final Exam	40	Week 3 biostatistics, Week 2 epidemiology, Environmental health, PHC, MCH and Health management	All SLO's	K, S, C	15 <sup>th</sup> -16 <sup>th</sup> week	In-campus Paper-based exam

\*\* K: Knowledge, S: Skills, C: Competency

## 25. Course Requirements

- ✓ Class room Lectures
- ✓ Internet connection
- ✓ Online educational material using Moodle platform (Electronic Videos and Activities)

## 26. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- ✓ Class room Lectures
- ✓ Interactive Videos and Animations



- ✓ Online activities and assignments
- ✓ Discussion sessions and forums
- ✓

## 27. Course Policies:

### **Attendance policies:**

Attendance and arrival on time is expected. Students who miss more than three class sessions with or without excuse will be accounted from the 10% attendance grade. (See the university policies regarding absence).

### **Absences from exams and submitting assignments on time:**

Students unable to take a scheduled exam are expected to inform the instructor within 3 days and arrange for a make-up one. Make ups will be given only to students who have notified the instructor and set up an alternate time. Any missed exam will result in a grade of zero for that particular examination type.

### **Honesty policy regarding cheating, plagiarism, misbehavior:**

Cheating and plagiarism is not tolerated and will be dealt with according to the policies of the of Jordan.

### **Grading policy:**

The student's course grade will be primarily determined by a combination of midterm examination, class participation and attendance, in school, closed book, multiple choice style final examination. The final examination will incorporate principles and materials from the required readings and from classroom discussions and lectures

Available university services that support achievement in the course: all services are available.

## 28 References:

A- Required book(s), assigned reading and audio-visuals:

- PowerPoint presentations will be posted on the E-learning.
- Selected supplemental websites and articles (blended) will be posted on the E-learning. You are responsible for all supplemental readings. Supplemental material will be discussed in class and included in tests.

B- Recommended books, materials, and media:

### **1. Epidemiology**

Merrill, Ray (2012). *Introduction to Epidemiology (6<sup>th</sup> Edition)*. Burlington, [Massachusetts](#); United States: Jones & Bartlett.

**2. Biostatistics:** A Foundation for Analysis in the Health Sciences 10th Edition



by Wayne W. Daniel (Author), Chad L. Cross (Author) William Mendenhall, Introduction to Probability and Statistics, 15<sup>th</sup> edition, 2019

**3. Community medicine:** Population and Family Health Survey Jordan. 2017

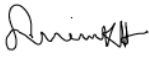
Birkhead, G.S., Morrow, C.B., & Pirani, S. (2021). Essentials of public health (4th edition). Jones & Bartlett Learning

**4. Environment:** Frumken, H., Environmental Health (from global to local) 3rd edition, 2016

**5. Leadership and Management**

Neil Gopee and Jo Galloway (2013). *Leadership and Management in Healthcare (2<sup>nd</sup> Edition)*. Washington DC; United States: SAGE Publications Ltd.

**29. Additional information:**

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Dean: ----- Signature: -----