



Jordan University of Science and Technology
Faculty of Medicine
Public Health Department

PH760 Epidemiology

First Semester 2021-2022

Course Catalog

3 Credit Hours. The course is designed to achieve the following objectives: To introduce the students to the concepts of epidemiology and its integration with clinical medicine. To introduce the students to the methods of research in the health field. To improve the students' abilities to critically read medical and health-related literature. To provide students with some basic skills in quantification of disease and interpretation of data. Teaching methods include lectures, class discussions, and exercises. At the end of this course we expect the student to have the basic knowledge and skills to: 1- Define epidemiology and know its scope. 2- Understand time trends of disease and how to investigate epidemics. 3- Understand the different study types and designs and their strengths and limitations 4- Know the concept of sampling and the different methods of sampling including their strengths and limitations. 5- Understand screening, validity, reliability, predictive value, receiver operating characteristics and related issues. 6- Understand criteria of causality. 7- Calculate and interpret measures of associations such as the relative risk, odds ratio, correlation coefficient, and attributable risk. 8- Calculate and interpret measures of disease occurrence such as incidence and prevalence. 9- Formulate research question/questions. 10- Propose an appropriate research design. 11- Select appropriate data collection methods. 12- Plan and perform the basic statistical analysis. 13- Interpret study findings and draw valid conclusions. 14- Understand the concept of confounding and the different types of bias. 15- Critically read the literature and identify possible pitfalls.

Text Book

Title	Epidemiology
Author(s)	Leon Gordis
Edition	1st Edition
Short Name	Ref #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Epidemiology in Medicine	Charles H. Hennekens, Julie E. Buring	1st Edition	
Ref #3	Principles of Epidemiology	Mausner and Ban	1st Edition	
Ref #4	Foundations of Epidemiology	David E. Lilienfeld	1st Edition	

Instructor	
Name	Prof. Anwar Batieha
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Office Hours	
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Class Schedule & Room
Section 1: Lecture Time: Mon : 11:30 - 14:30 Room: LAB

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Definition and scope of epidemiology	From Ref #1, From Ref #2, From Ref #3, From Ref #4
Week 2	Descriptive epidemiology: Characterization of disease by person, time, and place	From Ref #1, From Ref #2, From Ref #3, From Ref #4
Week 3	Causality: Criteria, measurement, and interpretation of associations	From Ref #1, From Ref #2, From Ref #3, From Ref #4
Week 4	Infectious diseases: Epidemics: definition, types, characteristics, investigation and control. Other concepts of infectious diseases	From Ref #1, From Ref #2, From Ref #3, From Ref #4

Week 5	Mortality statistics: Sources, measures, problems, adjustment of rates	From Ref #1 , From Ref #2 , From Ref #3 , From Ref #4
Week 6	Morbidity statistics: Sources, measures, uses, problems	From Ref #1 , From Ref #2 , From Ref #3 , From Ref #4
Weeks 7, 8, 9	Study design: Types, strengths, problems, uses, analysis, and interpretation	From Ref #1 , From Ref #2 , From Ref #3 , From Ref #4
Weeks 10, 11	Screening: definition, validity, reliability, predictive value, receiver operating characteristics, criteria, and biases	From Ref #1 , From Ref #2 , From Ref #3 , From Ref #4
Week 12	Sources of error: bias, confounding, and interaction	From Ref #1 , From Ref #2 , From Ref #3 , From Ref #4

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