



Jordan University of Science and Technology
Faculty of Dentistry
Dental Surgery Department

DENT709 Research Methodology And Biostatistics

First Semester 2021-2022

Course Catalog

3 Credit Hours. This course outline has been prepared primarily for the postgraduate students, residents, fellows, and specialists in Jordan. However, the course may be of benefit for the entire spectrum of people working in the field of health sciences including medicine, pharmacy, public health, nursing, and allied health sciences. Although textbooks in epidemiology and in biostatistics are widely available, they are often highly specialized and therefore difficult to use by a wide range of health researchers and scientists. This course is intended to be simple and practical avoiding unnecessary scientific jargon and responding to the actual needs of students and researchers in the field of health sciences. Despite the increasing availability of computers and statistical software, most available books, if not all, still ignore these facts and make little use of the available technology. In this course, we will try to bridge this gap and explain how to use the computer to perform the needed statistical analysis. Practical training on two of the commonly used statistical packages, Epi Info and SPSS, should be considered an essential part of the course. At the end of this course we expect that the student will have the basic knowledge and skills to: 1- Formulate research question/questions. 2- Propose an appropriate research design. 3- Draw a representative and appropriate sample from a certain population using the appropriate sampling technique 4- Select appropriate data collection methods. 5- Collect, organize, summarize and present data related to health sciences 6- Present his data in tables, graphs, and charts as appropriate. 7- Plan and perform the necessary statistical analysis. 8- Estimate population parameters (means and proportions) with high reliability based on the information contained in the sample. 9- Test any hypothesis about the population parameters. 10- Interpret his findings and draw valid conclusions. 11- Reach decisions about large body of data by examining only a small part of the data. 12- Draw scientific conclusions from data. In addition, a major goal for the course is to strengthen the ability of students to critically read the literature and identify possible pitfalls.

Text Book

Title	Epidemiology
Author(s)	Leon Gordis.
Edition	11th Edition
Short Name	Epi
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Epi	Epidemiology in medicine, first edition, 1987, Little, Brown and Company, Boston, Toronto.	Charles H. Hennekens, Julie E. Buring.	1st Edition	

Instructor

Name	Prof. Yousef Khader
Office Location	-
Office Hours	
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Class Schedule & Room

Section 1:
 Lecture Time: Thu : 16:30 - 17:30
 Room: U

Mapping of Course Outcomes to Program Student Outcomes

1- Formulate research question/questions. 2- Propose an appropriate research design. 3- Draw a representative and appropriate sample from a certain population using the appropriate sampling technique 4- Select appropriate data collection methods. 5- Collect, organize, summarize and present data related to health sciences 6- Present his data in tables, graphs, and charts as appropriate. 7- Plan and perform the necessary statistical analysis. 8- Estimate population parameters (means and proportions) with high reliability based on the information contained in the sample. 9- Test any hypothesis about the population parameters. 10- Interpret his findings and draw valid conclusions. 11- Reach decisions about large body of data by examining only a small part of the data. 12- Draw scientific conclusions from data.

Course Outcome Weight (Out of 100%)	Assessment method
100%	

Relationship to Program Student Outcomes (Out of 100%)														
Taking History and clinical Examination for complete or partial denture patients Primary impressions	Border molding using tracing compound and secondary impressions using ZOE impression material	Jaw registration	Wax-try-in	Insertion of finished dentures	Professionalism	Infection control	Comprehensive dental care	Dental Caries	Operative dentistry	Endodontics	Restoration of badly broken teeth	Knowledge-pediatric dentistry	Written assignments	Clinical skills: pediatric dentistry

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