Jordan University of Science and Technology

Faculty of Applied Medical Sciences

Physical Therapy Department

P.T781 Research Methods And Biostatistics - JNQF Level: 9
First Semester 2023-2024

Course Catalog
3 Credit Hours. The course is to develop knowledge and understanding of the methods to conduct scientific research in physical therapy. Students will learn to define a problem/question, form a hypothesis, name an appropriate type and design, and identify data collection tools. Observational and experimental research designs will be discussed. The students will also gain knowledge about common statistical models used to analyze continuous and categorical data. Correlation, regression, Chi square, t-test, ANOVA, and ANCOVA will be among the models discussed.
Teaching Method: On Campus

Text Book	
Title	SPSS Survival Manual
Author(s)	Julie Pallant
Edition	7th Edition
Short Name	Reference 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Reference 2	Kielhofner's Research in Occupational Therapy: Methods of Inquiry for Enhancing Practice	Renee R. Taylor	17th Edition	

Instructor	
Name	**Prof. Mahmoud Alomari**
Office Location	M5L-4#24
Office Hours	
Email	alomari@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Wed : 14:30 - 17:30 Room: M1305

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to Research Methods Forming research questions and hypotheses	From **Reference 2**
Week 2	Research types and designs	From **Reference 2**
Week 3	Ethical concerns + Sampling	From **Reference 2**
Week 4	Data collection	From **Reference 2**
Week 5	Introduction to statistics	From **Reference 1**
Week 6	Preliminary Analysis and Graphing	From **Reference 1**
Week 7	Comparison statistics	From **Reference 1**
Week 8	Pearson and partial correlations + Simple and multiple linear regression	From **Reference 1**
Week 9	Simple and multiple linear regression	From **Reference 1**
Week 10	Categorical data and Chi-Square Analysis of Frequency Data	From **Reference 1**
Week 11	Chi-Square Analysis of Frequency Data Spearman correlation	From **Reference 1**
Week 12	Logistic binary regression	From **Reference 1**

Week 13	Logistic multinomial regression	From **Reference 1**
Week 14	Validity and reliability tests	From **Reference 1**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Use the terminology of basic research and statistics [1MS_PLO5] [1L9K1, 1L9K2, 1L9K3]	25%	
Choose the appropriate research design to answer research questions. [1L9K1, 1L9K2, 1L9K3]	25%	
Choose the appropriate statistical model to answer research questions. [1L9K1, 1L9K2, 1L9K3]	25%	
Present the results of statistical analysis and interpret data. [1L9K1, 1L9K2, 1L9K3]	25%	

Relationship to Program Student Outcomes (Out of 100%)																
PLO1-K1	PLO8-C1	PLO9-C2	PLO5-S1	PLO2-K2	PLO3-K3	PLO6-S2	PLO4-K4	PLO10-C3	PLO7-S3	MS_PLO1	MS_PLO2	MS_PLO3	MS_PLO4	MS_PLO5	MS_PLO6	MS_PLO7
														25		

Relationship to NQF Outcomes (Out of 100%)		
L9K1	L9K2	L9K3
33.33	33.33	33.33

Policy	
Statement on Professionalism	Professional behavior is expected of students at all times. Attitude and professional behavior are a minimum criterion for passing this class. Repeated lack of professional behavior will result in failure of the course. Examples of unprofessional behavior include but are not limited to: missing classes (see attendance policy), tardiness, lack of attention for a speaker, talking to others during lectures, passing food during lectures, leaving a lecture prior to its completion without prior authorization of the instructor, working on other class material during class, inappropriate dress for labs, and sleeping during class.
Attendance policy	? Students are expected to attend more than 90% of lectures If the absence is more than 10% students will be banned from the course after electronic notification from the university through student e-mail.. ? Each student is expected to sit in his/her numbered seat ? Empty seats will be counted as absent ? All absences will be entered electronically into the University site
Communication with instructor	Electronic-mail is the best way to reach me as I consistently check it. However, students still can use the above-listed phone numbers.
Cell phones	Please do not use cell phones in class or labs. If you are depended upon for anticipated emergencies please put cell phones on vibration and answer the phone outside the classroom. I WILL KEEP MY CELL PHONE IN MY OFFICE OR ON VIBRATION MODE DURING CLASS TIME. Unfortunately, I have to remove the student from class in case the phone rings.

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