



THE VISION OF THE UNIVERSITY OF JORDAN

A leading university in scientific, technological, economic, social, and cultural transformation, outstanding in performing its role in the development and modernization of the Jordanian state, and a pioneer in serving the local and global community.

جامعةً قائدةً للتحوُّل العلمي والتكنولوجي والاقتصادي والاجتماعي والثقافي، متميزةٌ في أداء دورها في تطوير وتحديث الدولة الأردنية ورائدة في خدمة المجتمع المحلي والعالمي.

THE MISSION OF THE UNIVERSITY OF JORDAN

To create an outstanding educational, learning, and research environment that stimulates creativity, innovation, and entrepreneurship to prepare competent individuals capable of contributing to sustainable development locally and globally.

تهيئة بيئة تعليمية وتعلمية وبحثية متميزة تحفِّز الإبداع والابتكار والريادة لإعداد كفاءات قادرة على الإسهام في التنمية المستدامة محلياً وعالمياً.

THE VALUES OF THE UNIVERSITY OF JORDAN

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| - Excellence | - التميُّز |
| - Creativity, innovation, and entrepreneurship | - الإبداع والابتكار والريادة |
| - Diversity | - التنوُّع |
| - Civic engagement and social responsibility | - التشاركيَّة والمسؤوليَّة المجتمعيَّة |
| - Good governance | - الحاكميَّة الرشيدة |

THE VISION OF THE SCHOOL OF REHABILITATION SCIENCES

Leadership in the creation and development of knowledge, and in the preparation of human resources aspiring for excellence regionally and internationally

THE MISSION OF THE SCHOOL OF REHABILITATION SCIENCES

To excel in the preparation and training of model rehabilitation personnel, who participate in the health and community sector, and provide the local and regional community with appropriate rehabilitation services based on needs. Through educational curricula that facilitates the implementation of up to date rehabilitation services based on the best available evidence.

THE VISION OF THE DEPARTMENT OF PHYSIOTHERAPY

To be recognized as an outstanding educational program with high quality faculty members, staff and students

THE MISSION OF THE DEPARTMENT OF PHYSIOTHERAPY

To graduate professionals in the field of physical therapy who are to contribute to the health needs of society through education, scholarly activities, research, service and professional practice.

Course Syllabus

1	Course title	Biostatistics
2	Course number	1801381
3	Credit hours	2 (2, 0)
	Contact hours (theory, practical)	2 (2, 0)
4	Prerequisites/corequisites	None
5	Program title	B.Sc. in Physiotherapy, B.Sc. in Occupational Therapy, B.Sc. in Hearing and Speech Sciences, and B.Sc. in Orthotics and Prosthetics
6	Program code	1801
7	Awarding institution	The University of Jordan
8	School	School of Rehabilitation Sciences
9	Department	Department of Physiotherapy
10	Course level	Undergraduate/ Third year
11	Year of study and semester (s)	2025/ 2026 – Fall semester
12	Other department (s) involved in teaching the course	None
13	Main teaching language	English
14	Delivery method	Face-to-face
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
16	Issuing/Revision Date	Oct, 2025

17 Course Coordinator:

Name: Maha T. Mohammad	Contact hours: Sun and Tue 2:30 – 4:00
Office number: 320	Phone number: 23218
Email: maha.tayseer@gmail.com	Teams account: m_mohammad

The preferred method of communication is the Teams account.



While the instructor will try the utmost effort to reply to students' inquiries and messages in a timely manner, students should allow a 48-hour window for the instructor to reply back to inquiries. The course instructor does not reply to messages sent during the weekends or official holidays.

18 Other instructors:

None

19 Course Description:

The course provides students with basic principles of statistical analysis. This course introduces the concepts of several statistical methods encountered in health-related research such as scales of measurement of variables, descriptive statistics, hypothesis testing, z-tests, t-tests, ANOVA, non-parametric tests, correlation, regression, and measures of disease risk. Students will be taught to perform several of the tests discussed and will be shown several examples of the use of these methods in recent research articles.

20 Course aims and outcomes:

A – Aims

This course aims to:

1. Provide students with the basic concepts of descriptive and inferential statistics and statistical tests used for data analysis in health-related research.
2. Enable the students to use the skills acquired during the course to read and understand the research papers.
3. Allow students practice the application/ calculation of simple statistical procedures.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

SLOs SLOs of the course	SL O (1)	SL O (2)	SL O (3)	SL O (4)	SL O (5)	SL O (6)	SL O (7)	SL O (8)	SL O (9)	SL O (10)	SL O (11)
1. Understand and interpret results of statistical tests such as t-test, ANOVA, regression, and measures of disease risk.	X										
2. Utilize the knowledge from this course in evidence-based practice.					X						
3. Utilize knowledge gained in this course in objectively examining and making decisions related to results of patient management.						X					

Physiotherapy program SLOs:

1. Recognize, critically analyze and apply the conceptual frameworks and theoretical models underpinning physiotherapy practice
2. Demonstrate comprehension of background knowledge that informs sound physiotherapy practice
3. Demonstrate the ability to use online resources and technologies in professional development
4. Display a professional commitment to ethical practice by adhering to codes of conduct and moral frameworks that govern the practice of physiotherapy
5. Evaluate the importance of and critically appraise research findings to inform evidence-based practice such that these skills could be utilized in continuing self-development
6. Implement clinical reasoning, reflection, decision-making, and skillful application of physiotherapy techniques to deliver optimum physiotherapy management
7. Adhere to the professional standards of physiotherapy practice in terms of assessment, management, outcome measurement, and documentation
8. Display a willingness to promote healthy lifestyle and convey health messages to clients
9. Value the willingness to exercise autonomy while appreciating the challenges associated with delivering physiotherapy services
10. Display the ability to practice in a safe, effective, non-discriminatory, inter- and multi-disciplinary manner
11. Demonstrate effective oral and written communication with clients, carers, and health professionals

21. Topic Outline and Schedule:

Week	Lecture	Topic	SLO	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Course introduction	1	Sync	Midterm Final	Lecture slides
	1.2	Overview of research process	1	Sync	Midterm Final	Lecture slides
2	2.1	Research process and types of variables	1	Sync	Midterm Final	Lecture slides Portney, Ch. 1
	2.2	Descriptive statistics	1	Sync	Homework Midterm Final	Lecture slides Portney, Ch. 22
3	3.1	Descriptive statistics	1	Sync	Homework Midterm Final	Lecture slides Portney, Ch. 22
	3.2	Data representation by figures	1, 2	Sync	Midterm Final	Lecture slides Portney, Ch. 22
4	4.1	Normal distribution	1	Sync	Midterm Final	Lecture slides Portney, Ch. 23
	4.2	Normal distribution	1, 2	Sync	Midterm Final	Lecture slides Portney, Ch. 23
5	5.1	Sampling distribution	1, 2	Sync	Midterm Final	Lecture slides Portney, Ch. 23
	5.2	Sampling distribution	1, 2	Sync	Midterm Final	Lecture slides Portney, Ch. 23
6	6.1	Hypothesis testing	1, 3	Sync	Midterm Final	Lecture slides Portney, Ch. 23
	6.2	Hypothesis testing	1, 3	Sync	Midterm Final	Lecture slides Portney, Ch. 23

7	7.1	Hypothesis testing – Errors	1, 3	Sync	Midterm Final	Lecture slides Portney, Ch. 23
	7.2	Hypothesis testing – Estimation and Effect size	1, 3	Sync	Midterm Final	Lecture slides Portney, Ch. 23
8	8.1	Statistical tests – t-test	1, 3	Sync	Final	Lecture slides Portney, Ch. 24
	8.2	Statistical tests – t-test	1, 3	Sync	Final	Lecture slides Portney, Ch. 24
9	9.1	Midterm – TBC	1 – 3	Sync	---	---
	9.2	Statistical tests – t-test	1, 3	Sync	Final	Lecture slides Portney, Ch. 24
10	10.1	Statistical tests – ANOVA	1, 3	Sync	Final	Lecture slides Portney, Ch. 25
	10.2	Statistical tests – ANOVA	1, 3	Sync	Final	Lecture slides Portney, Ch. 25
11	11.1	Statistical tests – non- parametric tests	1, 2	Sync	Final	Lecture slides Portney, Ch. 27
	11.2	Statistical tests – non- parametric tests	1, 2	Sync	Final	Lecture slides Portney, Ch. 27
12	12.1	Statistical tests – correlation and regression	1, 2	Sync	Final	Lecture slides Portney, Ch. 29
	12.2	Statistical tests – correlation and regression	1, 2	Sync	Final	Lecture slides Portney, Ch. 30
13	13.1	Statistical tests – chi square	1, 2	Sync	Homework Final	Lecture slides Portney, Ch. 28
	13.2	Statistical tests – chi square	1, 2	Sync	Homework Final	Lecture slides Portney, Ch. 28



14	14.1	Measures of disease risk	1, 2	Sync	Final	Lecture slides Portney, Ch. 34
	14.2	Measures of disease risk	1, 2	Sync	Final	Lecture slides Portney, Ch. 34

Course material will be available on e-learning. In addition, Microsoft Teams will be used for announcements.

22 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Midterm exam	30	1 – 7	1 – 3	Week 9	On-campus
Homeworks	20	2 and 13	1 – 3	TBA	On-campus
Final exam	50	1 – 14	1 – 3	TBA	On-campus

Two homeworks will be given to students during the term. The two homeworks will be worth 20 points (10 points each). Homework instructions will be announced to the students in due time. Failure to follow the instructions will result in deduction of grades. Access to the homework and submission of answers will be done via juexams.com website.

Students' placements and seat numbers for the exams will be announced before the exams (midterm and final). Students must bring their university IDs with them to the exam and place it on the desk for the exam proctor to check during the exam. Each student must bring their calculator with them. Sharing of calculators or using cellphones are not permitted.

23 Course Requirements

Students should have a computer/ smart phone, internet access, headset, account on e-learning and Microsoft Teams (provided by JU).



24 Course Policies:

A- Attendance policies:

- Students are expected to be on time.
- Repeated tardiness or leaving early will be recorded as absence.
- Students who miss class (or any portion of class) are responsible for the content. All classes will be recorded and uploaded on Microsoft Stream. It is the student's responsibility to review the material of classes they missed.
- Attendance will be taken on every class throughout the semester.
- Absence of more than 15% of all the number of classes (which is equivalent to 4 classes) requires that the student provides an official excuse to the instructor and the dean.
- If the excuse was accepted the student is required to withdraw from the module.
- If the excuse was rejected the student will fail the module and mark of zero will be assigned according to the regulations of The University of Jordan.

B- Absences from exams and submitting assignments on time:

- Makeup for the midterm or quizzes may be arranged if convincing excuse is presented according to the regulations of The University of Jordan.
- Makeup for the final exam may be arranged according to the regulations of The University of Jordan.
- If a student misses an exam, it is their responsibility to contact the instructor within 24 hours of the original exam time to discuss their excuse.

C- Health and safety procedures:

- This course is offered using online learning. Please bear in mind that continuous exposure to light from electronic devices could cause dryness of your eyes. Please make sure you maintain proper eye hygiene and give your eyes frequent breaks during your studies.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

- Students are expected to observe all University guidelines pertaining to academic misconduct.
- Any work submitted by a student for academic credit must be the student's own work. Submission of work taken directly from another source (e.g., book, journal, internet, or another student work) will be considered plagiarism and the student/group will get a zero grade on that homework. In addition, if copying occurred, both the student who copied the work and the student who gave material to be copied (if applicable) will receive a zero for the assignment.
- Students are expected to do work required for homework on their own. Asking other instructors at JU, staff, or other students to assist in or do any part of the assignment for them will negatively affect their grade on that assignment. The course instructor is the person the student needs to talk to if s/he has any difficulties pertaining to an assignment or project and is strongly encouraged to schedule an appointment with the instructor if such difficulties arise during the semester.
- Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. It is only intended for the personal use of students for their individual learning.
- Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited. The permission of the course coordinator must be sought before sharing of content.



- Any forms of academic misconduct will be handled according to the University of Jordan guidelines.

E- Grading policy:

- Grading for this course will be determined based upon the accumulation of points for variety of assignments and exams.
- All work will be evaluated on completeness, organization, clarity of information, and the integration and application of the material.

F- Available university services that support achievement in the course:

- The University of Jordan provides many services to support social, health, and mental well-being of students in general and students with disabilities in specific. Students are advised to visit the Deanship of Students Affairs to learn more about those services.
- If you are a student with a disability for which you may request accommodations, please notify the instructor as soon as possible (via Teams or email) so the appropriate accommodations for this course can be made. Also, notify the staff of Services for Student with Disabilities (Deanship of Students Affairs) as soon as possible.
- According to University regulations, some students with disabilities can be allowed additional time during exams. This extra time is granted by an official letter from the University administration. Please discuss with the course coordinator your need for such extra time at the start of the term.
- All information provided to the course coordinator will be dealt with confidentially.

25 References:

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

Foundations of Clinical Research: Applications to Evidence-Based Practice, Portney, 2020.

Any biostatistics book will cover the topics of the current course.

Assigned-readings, lecture slides, and videos will be provided via the course page on elearning.

B- Recommended books, materials and media:

Statistics for the Behavioural Sciences, Gravetter & Wallnau.

Statistics without Maths for Psychology, Dancy & Reidy.

Discovering Statistics using SPSS, Field.



26 Additional information:

This course builds upon information taught in Digital Skills course, and lays the foundation – along with Research Methods in Rehabilitation Sciences course- for evidence-based practice and continued professional development.

All course materials including announcements, links to recorded synchronous lectures, assigned readings, homework, etc. will be posted on elearning. It is the student's responsibility to regularly check the elearning page for course updates.

Name of Course Coordinator: ---maha t mohammad---	Signature: ---mm--	Date: --Oct 2025--
Head of Curriculum Committee/Department: Dr. Dr. Mayis Aldughmi	Signature: MD	
Head of Department: Dr. Mayis Aldughmi-----	Signature: -----MD-----	
Head of Curriculum Committee/Faculty: ---Lara Khlaifat---	Signature: -----LK	
Dean: ---Lara Khlaifat---	Signature: -----LK	