THE VISION OF THE UNIVERSITY OF JORDAN

A university excelling in pedagogy, research, and innovation and advancing in global standing

THE MISSION OF THE UNIVERSITY OF JORDAN

Providing students with fulfilling learning experiences, conducting knowledge-producing research, and building firm societal ties, within an environment conducive to creativity, innovation, and entrepreneurship: making efficient use of resources and forging fruitful partnerships.

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.

مركز الاعتماد وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

Course Syllabus

1	**Course title**	Applied Biostatistics
2	**Course number**	1801712
3	**Credit hours**	3
	Contact hours (theory, practical)	3 (3, 0)
4	**Prerequisites/corequisites**	---
5	**Program title**	M.Sc. in Physiotherapy/ Neuromusculoskeletal
6	**Program code**	018-01-7
7	**Awarding institution**	The University of Jordan
8	**School**	Rehabilitation Sciences
9	**Department**	Physiotherapy
10	**Course level**	Graduate
11	**Year of study and semester (s)**	2024/2025 – Fall semester
12	**Other department (s) involved in teaching the course**	---
13	**Main teaching language**	English
14	**Delivery method**	☐Face to face learning ■Blended ☐Fully online
15	**Online platforms(s)**	■Moodle ■Microsoft Teams ☐Skype ☐Zoom ☐Others……
16	**Issuing/Revision Date**	Oct, 2024

17 Course Coordinator:

Name: Maha Mohammad — Contact hours: S & T, 3:00 – 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:

This course provides students with the essential theoretical and practical skills required to understand and employ common statistical procedures utilized in health research. It will expose students to advanced statistical approaches in the health sciences including univariate and multivariate statistical procedures. Students will have the opportunity to practice the usage of statistical packages and software(s) in advanced analysis and modeling.

20 Course aims and outcomes:

A- Aims:

- To understand the basic foundation behind hypothesis testing procedures.
- To comprehend the rationale behind statistical tests, be able to calculate few of them manually, and comprehend the meaning of their findings.
- To use SPSS statistical software to do statistical tests and use the output to write results.
- To read the Statistical Analysis and Results sections of research papers and understand their interpretation.

B- Students Learning Outcomes (SLOs):

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

SLOs / SLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)
1 Understand Statistical Analysis and Results sections of research papers.	X						
2 Decide on the appropriate statistical test to be used to analyze data from the most common research designs and perform the required analysis using SPSS.						X	
3 Write the results section for a paper using the findings from the data analysis.						X	

Program Students Learning Outcomes:

1. Develop the skills needed to adopt the evidence-based practice in the field of physiotherapy for neurological and musculoskeletal disorders.
2. Utilize clinical reasoning knowledge and skills to guide assessment, measurement, and providing care to clients with neuromusculoskeletal conditions.
3. Criticize and adopt physiotherapy theories, approaches, and frameworks in the practice of physiotherapy.
4. Build the ability to work and communicate effectively with clients, peers, and healthcare providers.
5. Adhere to the ethical and professional standards in research and clinical practice according to the national and international standards of physiotherapy practice.
6. Develop critical thinking and problem-solving skills to implement research projects that improve clinical practices.
7. Engage in continuous professional development activities.

21. Topic Outline and Schedule:

#	Topic	SLO	Evaluation Methods	Resources
1	Course introduction		---	Lecture slides
2	Descriptive statistics Summarizing data in figures	1 – 3	In-class work Mid & final exams	Portney, Ch. 22 Field, Ch. 1
3	Descriptive statistics Summarizing data in figures	1 – 3	In-class work Mid & final exams	Portney, Ch. 22 Field, Ch. 1
4	Foundations of statistical inference Introduction to SPSS	1, 3	Mid & final exams	Portney, Ch. 23 Field, Ch. 2 & 4
5	Foundations of statistical inference Exploring data with graphs	1, 3	In-class work Mid & final exams	Portney, Ch. 23 Field, Ch. 2 & 5
6	Comparing two means	1 – 3	Mid & final exams	Portney, Ch. 24 Field, Ch. 10
7	Comparing more than two means	1 – 3	Mid & final exams	Portney, Ch. 25 Field, Ch. 12
8	Midterm exam	1 – 3	---	
9	Non-parametric tests for group comparisons	1 – 3	Final exam	Portney, Ch. 27 Field, Ch. 7
10	Measuring associations for categorical variables: chi square	1 – 3	Final exam	Portney, Ch. 28 Field, Ch. 19
11	Correlation	1 – 3	Final exam	Portney, Ch. 29 Field, Ch. 8
12	Regression	1 – 3	Final exam	Portney, Ch. 30 Field, Ch. 9

13	Epidemiology: measuring risk	1 – 3	In-class work Final exam	Portney, Ch. 34 Field, Ch. 20
14	Course review	1 – 3	Final exam	

Learning methods: This course will be held using blended learning model. Lectures will alternate between on-campus and online every other week.

Students are expected to bring their laptops with them to class to facilitate application of learnt skills.

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	30	Weeks 1 – 7	1 – 3	Week 8 – Nov 28	On-campus
In-class work	30	Weekly topic	1 – 3	On-going	On-campus
Final exam	40	All material	1 – 3	Week 16	On-campus

In-class work: this will be the students' chance to show what they have learnt in the course. This will take multiple formats, for example: performing statistical calculations manually or using SPSS, writing results section, and providing conclusions from data. Students will be informed of the nature of the work ahead of time to prepare for it.

All evaluation activities will be typed, except the parts that require solving statistical questions, for which students will be allowed to handwrite.

23 Course Requirements

Computer; internet connection; SPSS; calculator; accounts on e-Learning and Teams.

24 Course Policies:

A- Attendance policies:

- Attendance will be taken on every class throughout the semester.
- Absence of more than 20% of all the number of 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:

- Absence from exam should be discussed with the instructor as soon as possible.
- Makeup for the final exam may be arranged according to the regulations of The University of Jordan.

C- Health and safety procedures:

- Students will not be in direct contact with patients during this course.
- Students are not expected to use any heavy tools that might impose health and safety issues during this course.

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 homeworks 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. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited.
- 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 (email is acceptable) 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.

- The University of Jordan provides internet access for students who request such services. Please contact the Assistant Dean for Student Affairs for such requests.

25 References:

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

Foundations of Clinical Research, 4th edition, Portney, L., 2020

Discovering Statistics using IBM SPSS, 5th edition, Andy Field, 2017

SPSS Survival Manual, 7th edition, Julie Pallant, 2020

B- Recommended books, materials and media:

Basic and Clinical Biostatistics, 5th edition, Susan White, 2020

Epidemiology and Biostatistics, 2nd edition, Bryan Kestenbaum, 2019

Any biostatistics book or website

26 Additional information:

Course announcements will be posted on Teams.

All course materials including assigned readings, homeworks, etc. will be posted on elearning. It is the student's responsibility to regularly check the elearning page for course updates.

Teaching material for the course will also include readings from articles assigned by the course instructor.

Name of Course Coordinator: --maha mohammad--Signature: ---mm--- Date: ---10/10/2024-
Head of Curriculum Committee/Department: Dr. -Mayis Aldughmi Signature: Mayis Aldughmi -----
Head of Department: Dr. -Mayis Aldughmi---------- Signature: Mayis Aldughmi
Head of Curriculum Committee/Faculty: Prof. Kamal Hadidi Signature: -KAH---
Dean: Prof. Kamal Hadidi Signature: -KAH---