



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.

Course Syllabus

1	Course title	Exercise physiology	
2	Course number	1801200	
3	Credit hours	2	0
	Contact hours (theory, practical)	(2,0)	
4	Prerequisites/corequisites	Physiology 1 0501107	
5	Program title	B.Sc. in Physiotherapy	
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	
11	Year of study and semester (s)	2024/ 2025 First semester	
12	Other department (s) involved in teaching the course	None	
13	Main teaching language	English	
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
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	10/10/2023	

17 Course Coordinator:

Name: Dr Mohammad Zaid Darabseh

Contact hours: Sunday and Tuesday: 14:30-15:30

Office number: 426

Phone number: 065355000- 23279/23223

Email: m_darabseh@ju.edu.jo



18 Other instructors:

Name:

Office number:

Phone number:

Email:

Contact hours:

Name:

Office number:

Phone number:

Email:

Contact hours:

19 Course Description:

This course examines the physiological responses to exercise with a focus on skeletal muscles physiology, energy metabolism, the oxygen transport system, cardiovascular responses, respiratory system responses, temperature and fluid balance. This course prepares you with the evidence-based knowledge to design and deliver client centred exercise programs to athletes, healthy people and people with chronic health conditions.

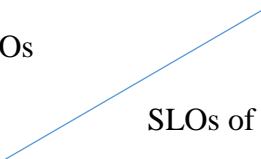
20 Course aims and outcomes:

A- Aims:

1. Understand the Basic physiological mechanisms that occur in different body systems in response to different types of exercises.
2. Understand the Basic physiological mechanisms that allow training adaptation to occur in different structures and their specific functions
3. Understand the physiological principles of training to improve performance

B- Students Learning Outcomes (SLOs):

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

SLOs	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)	SLO (8)	SLO (9)	SLO (10)	SLO (11)
 SLOs of the course											
1 Critically analyze and apply the conceptual frameworks (International classification of functioning disability and health) to understand the physiological functions of different body systems and the relation to metabolism and theoretical models underpinning physiotherapy practice	√										
2 Demonstrate comprehension of background knowledge that informs sound physiotherapy practice as demonstrated by: <ul style="list-style-type: none"> • Understanding the essentials of metabolic pathways. • Understanding the production of energy in human body • Explain adaptations of energy systems to exercise • Explain the basic anatomy and physiology of different body systems in relation to function 		√									

3 Evaluate the importance of and critically appraise research findings to inform understanding of physiological system adaptation to exercise					√						
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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	Student Learning Outcome	Learning Methods (Face to Face/Blended / Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1 6/10	Module introduction		Face to face		Synchronous		
	1.2 8/10	Essentials of bioenergetics and anaerobic metabolic pathways: Energy sources	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam	Chapter 2

							Final theory exam	
2	2.1 13/10	Skeletal muscle physiology 1		Face to face		Synchronous		
	2.2 15/10	Skeletal muscle physiology 2	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 2
3	3.1 20/10	Skeletal muscle physiology 3	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 2
	3.2 22/10	Skeletal muscle physiology 4	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 2
4	4.1 27/10	Response to submaximal and maximal exercise	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 3
	4.2 29/10	Response to submaximal and maximal exercise	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 3
5	5.1 3/11	Response to submaximal and maximal exercise	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 3
	5.2 5/11	Response to submaximal and maximal exercise	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 3

6	6.1 10/11	Response to submaximal and maximal exercise	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 4
	6.2 12/11	Exercise physiology, functional capacity, and basic exercise prescription	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 4
7	7.1 17/11	Exercise physiology, functional capacity, and basic exercise prescription	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 4
	7.2 21/11	Exercise and mental health	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 4
8	8.1 24/11	Cardiovascular physiology	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 4
	8.2 26/11	Midterm exam (TBC)	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	
9	9.1 1/12	Midterm exam (TBC) Cardiovascular system	1,2, and 5	Face to face		Synchronous		
	9.2 3/12	Midterm exam (TBC) Cardiovascular system	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 6

10	10.1 8/12	Cardiovascular system	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 6
	10.2 10/12	Cardiovascular system	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 6
11	11.1 15/12	Respiratory system	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 7
	11.2 17/12	Respiratory system	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 7
12	12.1 22/12	Exercise response in children 1	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 7
	12.2 24/12	Exercise response in children 2	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 7
13	13.1 29/12	Exercise response in children 3	1,2, and 5	Face to face		Synchronous	Class work Midterm theory exam Final theory exam	Chapter 7
	13.2 31/12	Quiz and case discussion		Face to face		Synchronous		
14	14.1	Quiz and case discussion		Face to face		Synchronous		

	5/1							
	14.2 7/1	Quiz and case discussion		Face to face		Synchronous		
15	15.1 12/1	Module feedback and revision		Face to face		Synchronous		

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	all	1,2, and 5	Week 8- TBC	In class
Course work (Quizzes, assignments or projects etc) Topics TBD	20		1,2, and 5	Throughout the semester	In class
Final exam	50	all	1,2, and 5	Week 14/15- TBC	In class

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Access to computer/ laptop

Internet connection

University student account

24 Course Policies:

A- Attendance policies:

- Students are expected to be on time.
- Repeated tardiness or leaving early will not be accepted.

- 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:

- The instructor will not do any make-up exams.
- Exceptions for make-up exams and late submission of class assignments will be made on a case-by-case basis for true personal emergencies that are described as accepted by the regulations of UJ (e.g., documented medical, personal, or family emergency).
- It is the student's responsibility to contact the instructor within 24 hours of the original exam time to schedule a make-up exam>
- Late submission of homework will result in deduction of 2 points for each day of delay
- Makeup for the final exam may be arranged according to the regulations of The University of Jordan.

C- Health and safety procedures:

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. 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:

Exercise physiology: integrating theory and application, second edition. Kraemer et al.2016.Wolters Kluwer

B- Recommended books, materials, and media:

26 Additional information:

Students with disabilities:

- If you are a student with disability, please contact the course coordinator at the beginning of the term to inform them of any needs or adjustments you might have.
- 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 you provide to the course coordinator will be dealt with confidentially.

Course material and copy rights:

- All material prepared by the course coordinator for the purposes of this course are the intellectual property of the course coordinator. It is only intended for the personal use of students for their individual learning.



- Sharing of course content with other people or via different platforms other than those used by the course coordinator is prohibited. The permission of the course coordinator must be sought before sharing of content.

This course builds upon knowledge students obtained in the following courses:

Anatomy 1 and 2

Physiology 1 and 2

Name of Course Coordinator: --Mohammad Darabseh---Signature: -----MD--- Date: ---6/10/2024
Head of Curriculum Committee/Department: Dr. Mais AlGoghmi Signature: Mais AlGoghmi
Head of Department: Dr. Mais AlGoghmi Signature: - Mais AlGoghmi
Head of Curriculum Committee/Faculty: : Prof. Kamal Hadidi--- Signature: -KAH
Dean: : Prof. Kamal Hadidi--- Signature: -KAH

Reviewed by: