



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	Neuromuscular Physiotherapy I
2	Course number	1801339
3	Credit hours	3 (2, 1)
	Contact hours (theory, practical)	6 (2, 4)
4	Prerequisites/corequisites	Therapeutic Exercise II (1801204)+ (1801213) Neuroscience
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)	2023/ 2024 First Term
12	Other department (s) involved in teaching the course	None
13	Main teaching language	English
14	Delivery method	On-campus
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, 2023

17 Course Coordinator:

Name: Mayis Aldughmi PT, PhD

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18 Other instructors:

Name: Maha Mohamad, PT, PhD

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Lab instructors:

Miss Yara Abdullah

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19 Course Description:

This three-credit course incorporates the foundations of the latest findings from motor control research and best evidence in rehabilitation science to develop a problem-solving approach for the evaluation and management of a broad range of motor control impairments resulting from neurological dysfunctions. The course will provide students with a systematic approach of motor control issues as they relate to normal and abnormal posture and balance, mobility, and upper extremity function.

Additionally, this course will provide basic knowledge and essential clinical reasoning skills for the physiotherapy assessment and treatment of complex problems and multiple handicaps encountered by patients with stroke. By emphasizing the fundamentals of neurological assessment, problem analysis, clinical reasoning, and treatment planning, this course builds a conceptual framework that continues into the following Neurological Physiotherapy II (1801434) course, where more neurological conditions and treatment methods will be presented.



20 Course aims and outcomes:

A- Aims:

The aim of this course is to develop a problem-solving approach for the evaluation and management of motor control impairments resulting from neurological disorders across the lifespan.

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)	SLO (8)	SLO (9)	SLO (10)	SLO (11)
1 Apply the International Classification of Functioning (ICF) model to people with neurological disorders and recognize the individual bio-psycho-social, and environmental and contextual factors affecting health, rehabilitation, and disease management	X										
2 Define and discuss principles of normal motor control and how they relate to normal development and control in pathological conditions		X									
3 Perform components of neurological assessment (including postural and balance control, motor and sensory evaluations, and functional mobility assessments) and interpret assessment results						X					
4 Demonstrate an evidence-based choice and application of appropriate treatment interventions						X					

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:

Theoretical lectures:				
Wk.	Lec.	Topic	SLO	References
1	1.1	Introduction to course	1, 2	Syllabus
	1.2			
2	2.1	Motor control: issues and theories	1, 2	Shumway-Cook & Woollacott, Ch 01
	2.2	-----		
3	3.1	Motor learning and recovery of function	1, 2	Shumway-Cook & Woollacott, Ch 02
	3.2	-----		
4	4.1	Normal postural control	1 – 4	Shumway-Cook & Woollacott, Ch 07
	4.2	-----		
5	5.1	Normal postural control	1 – 4	Shumway-Cook & Woollacott, Ch 07
	5.2	-----		
6	6.1	Abnormal postural control	1, 3, 4	Shumway-Cook & Woollacott, Ch 10
	6.2	-----		
7	7.1	Abnormal postural control	1, 3, 4	Shumway-Cook & Woollacott, Ch 10
	7.2	-----		
8	8.1	Midterm exam	1 – 4	All content

	8.2	Control of normal mobility	1 – 4	Shumway-Cook & Woollacott, Ch 12
9	9.1	Control of normal mobility	1 – 4	Shumway-Cook & Woollacott, Ch 12
	9.2	-----		
10	10.1	Abnormal mobility	1, 3, 4	Shumway-Cook & Woollacott, Ch 15 & 14
	10.2	-----		
11	11.1	Abnormal mobility	1, 3, 4	Shumway-Cook & Woollacott, Ch 15 & 14
	11.2	-----		
12	12.1	Stroke: intro. & problems in body structure and function	1 – 4	Lennon, Ch 7
	12.2	Recovery after stroke	1 – 4	Lennon, Ch 7
13	13.1	Stroke: principles of physical management of stroke related impairment, disability, and functioning	1 – 4	Lennon, Ch 7
	13.2	Stroke: management in the acute and chronic stages	1 – 4	Lennon, Ch 7
14		Final practical exam	1 – 4	
15		Final theoretical exam	1 – 4	All content

Learning methods: all theoretical lectures will be held synchronously face-to-face on-campus

Platform: Microsoft Teams and Moodle.

Evaluation methods: content learned during theoretical lectures will be evaluated during written exams; midterm and final.

Practical labs:

Wk.	Topic	SLO	Reference
1	A conceptual framework clinical practice	1	Shumway-Cook & Woollacott, Ch 6 + Lab handouts
2	Principles of neurological examination	1, 3	Lab Handouts
3	Assessment of balance and posture	1, 3	Shumway-Cook & Woollacott, Ch 11
4	Assessment of gait and mobility functions	1, 3	Shumway-Cook & Woollacott, Ch 16
5	Interventions to improve motor control and motor learning	1, 4	O'Sullivan & Schmitz, Ch 2 & 3
6	Interventions to improve motor control and motor learning	1, 4	O'Sullivan & Schmitz, Ch 2 & 3
7	Interventions to improve bed mobility and early trunk control	4	O'Sullivan & Schmitz, Ch 4
8	Interventions to improve bed mobility and early trunk control	4	O'Sullivan & Schmitz, Ch 4
9	Midterm	1, 2, 3	
10	Interventions to improve sitting and sitting balance skills	4	O'Sullivan & Schmitz, Ch 5
11	Interventions to improve kneeling and half-kneeling control	4	O'Sullivan & Schmitz, Ch 6
12	Interventions to improve standing control and standing balance skills	4	O'Sullivan & Schmitz, Ch 9 Shumway-Cook & Woollacott, Ch 11
13	Interventions to improve locomotor skills	4	O'Sullivan & Schmitz, Ch 8 Shumway-Cook & Woollacott, Ch 15
14	Final practical exam	1, 3, 4	



All labs will be held using on-campus. Students will be asked to prepare by reviewing video content prepared specifically for the labs and then attend labs at the university to learn and apply skills.

Evaluation methods: content learned during practical labs will be evaluated during practical exams; midterm and final.

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 theoretical exam	30	Weeks 1 – 6	1 – 4	Week 8	On-campus
Midterm practical exam	20	Weeks 1 – 6	1, 3, 4	Week 9	On-campus
Final practical exam	20	All material	1 – 4	Week 14	On-campus
Final theoretical exam	30	All material	1, 3, 4	TBA	On-campus

Practical exam grading rubric is provided in the appendix.

23 Course Requirements

Students should have a computer and internet connection with access to e-learning and Microsoft Teams accounts. For practical sessions, students should wear comfortable lab clothes.

24 Course Policies:

A- Attendance policies:

- Attendance will be taken on every class throughout the semester.
- Students are expected to attend and actively participate in all classes and practical sessions.
- 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. 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 6 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.
- 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.

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:

1. Shumway-Cook, A. & Woollacott, M. (2022). Motor Control: translating research into clinical practice (6th edition).
2. O'Sullivan, S. & Schmitz, T. (2021). Improving Functional Outcomes in Physical Rehabilitation (3rd edition). Philadelphia, Pennsylvania: FA Davis.
3. Lennon, S., Ramdharry, G., Verheyden, G. (2018). Physical Management for Neurological Conditions (4th edition). Elsevier.
4. Recorded materials prepared by course instructors

B- Recommended books, materials, and media:

Jones, K. (2011). Neurological Evaluation: A clinician's guide. Elsevier.

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.
- Course content and materials will be posted on e-learning website so make sure you have access to the website and can download the materials and access the online assignment.
- This course builds on the knowledge that you have obtained in the internal medicine, musculoskeletal, neuromuscular and cardiopulmonary courses. Please make sure you revise main pathologies and assessment tools.

Name of Course Coordinator: --Mayis Aldughmi---Signature: --MD---- Date: ---20/10/2023----

Head of Curriculum Committee/Department: Dr. Ibrahim Tobasi Signature: Ibrahim Tobasi

Head of Department: Dr. Ibrahim Tobasi----- Signature: Ibrahim Tobasi

Head of Curriculum Committee/Faculty: ---Prof. Kamal A. Hadidi Signature: -KAH-----

Dean: ---Prof. Kamal A. Hadidi Signature: -KAH-----

Appendix Practical Exam Grading Criteria

You will withdraw 2 questions from 2 different piles and you are given 6 minutes to answer both questions.

Depending on the nature of the question, the grading rubric will be as follows:

Points	Item
2	Decisions about care are appropriate
1	Decisions about care would not be hindered, but improvement is needed
0	Decisions about care would be incorrect or unsafe

Question 1 (Examination technique):

• Appropriate verbal cues and directions	0	1	2
• Proper body mechanics	0	1	2
• Interpretation of examination results	0	1	2
• Effective performance of examination technique	0	1	2
• Student correctly answered questions directed to them	0	1	2
Total out of 10:			

Question 2 (Treatment technique):

• Appropriate manual contacts	0	1	2
• Appropriate verbal cues and directions	0	1	2
• Proper body mechanics	0	1	2
• Effective performance of technique	0	1	2
• Student correctly answered questions directed to them	0	1	2
Total out of 10:			

Total out of 20:

