

### **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 facilitate 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.

1	<b>Course title</b>	Orthotics and Prosthetics
2	<b>Course number</b>	1813449
3	<b>Credit hours (theory, practical)</b>	2
	<b>Contact hours (theory, practical)</b>	2 per week
4	<b>Prerequisites/corequisites</b>	Kinesiology (1801262)
5	<b>Program title</b>	BSc in Physiotherapy
6	<b>Program code</b>	1801
7	<b>Awarding institution</b>	The University of Jordan
8	<b>School</b>	Rehabilitation Sciences
9	<b>Department</b>	Department of Physiotherapy
10	<b>Level of course</b>	Undergraduate, 4 <sup>th</sup> year
11	<b>Year of study and semester (s)</b>	2018/2019, Second semester
12	<b>Final Qualification</b>	BSc
13	<b>Other department (s) involved in teaching the course</b>	None
14	<b>Language of Instruction</b>	English
15	<b>Date of production/revision</b>	27/1/2019

## 16. Course Coordinator:

Name	Alia Alghwiri, PhD
Rank	Associate professor
Office number	316
Office hours	Mon & Wed 1-2 or upon request
Phone number	5355000-ext. 23226
Email addresses	a.ghwiri@ju.edu.jo

## 17. Other instructors:

None
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## 18. Course Description:

This course covers the basic knowledge about the materials used in making braces, splints and artificial limbs for upper limbs, lower limbs and spinal cord. It covers also which type of orthosis is needed, how to evaluate the patient and his needs, methods to train the patient how to make use of it functionally. It includes all types of walking aids, wheel chairs, application and removal of casts.
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## 19. Course aims and outcomes:

A- Aims: Provide students with the basic knowledge about prosthetic components for the management of patients with amputation and orthotic appliances for functional impairments.	
B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to	
Program ILO: 1. Critically analyse and apply the conceptual frameworks and theoretical models underpinning physiotherapy practice.	
Specific course ILOs	1.1 Apply the international classification of functioning, disability and health (ICF) for body structure losses in amputees and functional impairments.
Program ILO: 2. Demonstrate comprehension of background knowledge that informs sound physiotherapy practice.	
Specific course ILOs	2.1 Understand the pathology and causes behind amputation 2.2 Recognize different levels of amputation in upper and lower limbs and their effect on energy expenditure 2.3 Realize expected issues after amputation and rehabilitation options 2.4 Identify appropriate post-operative and pre-prosthetics management strategies 2.5 Identify different prosthetic components and orthotic appliances in upper and lower limbs 2.6 Recognize different spinal impairments and the appropriate orthosis 2.7 Describe basic knowledge about wheel chairs
Program ILO: 3. Demonstrate the ability to use online resources and technologies in professional development and physiotherapy practice.	
Specific course ILOs	NA
Program ILO: 4. Display a professional commitment to ethical practice by adhering to codes of conduct and moral frameworks that govern the practice of physiotherapy.	
Specific course ILOs	NA
Program ILO: 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.	
Specific course ILOs	5.1 Appraise the evidence based selections related to orthotics and prosthetics
Program ILO: 6. Implement clinical reasoning, reflection, decision-making, and skilful application of physiotherapy techniques to deliver optimum physiotherapy management.	
Specific course ILOs	6.1 Apply decision-making skills related to the examination of impairments, selection of appropriate orthotics and prosthetics, and management amputees
Program ILO: 7. Adhere to the professional standards of physiotherapy practice in terms of assessment, management, outcome measurement, and documentation.	
Specific course ILOs	7.1 Differentiate between prosthetic components and orthotic appliances
Program ILO: 8. Display a willingness to promote healthy lifestyle and convey health messages to clients.	
Specific course ILOs	8.1 Advice the patient with the appropriate orthotics or prosthetics based on

	thorough assessment of patient age, needs, and environment
Program ILO: 9. Value the willingness to exercise autonomy while appreciating the challenges associated with delivering physiotherapy services.	
Specific course ILOs	NA
Program ILO: 10. Display the ability to practice in a safe, effective, non-discriminatory, inter- and multi-disciplinary manner.	
Specific course ILOs	NA
Program ILO: 11. Demonstrate effective oral and written communication with clients, careers and health professionals.	
Specific course ILOs	NA

20. Topic Outline and Schedule: (use numbers for ILOs and references).

1.					
Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Orthotics & prosthetics in rehab: ICF framework	1	AA	1.1	Exams	Syllabus and L,J&N. Ch:1
Energy expenditure of walking	2	AA	2.2	Exams	L,J&N. Ch:2
Amputation: definition, epidemiology & aetiology	3	AA	2.1	Exams	L,J&N. Ch:17
Levels of LL amputation	4	AA	2.2	Exams	L,J&N. Ch: 19
Levels of UL amputation	5	AA	2.2	Exams	L,J&N. Ch:30
Issues post amputation	6	AA	2.3, 6.1, 8.1	Exams	L,J&N. Ch:18
Amputees rehabilitation	7	AA	2.3, 6.1, 8.1	Exams	L,J&N. Ch: 26+31
Post-operative and pre-prosthetic management	8	AA	2.4, 6.1, 8.1	Exams	L,J&N. Ch:20
2. LL prosthesis	9-10	AA	2.5, 5.1, 7.1	Exams	L,J&N. Ch: 23+24
3. UL prosthesis	11	AA	2.5, 5.1, 7.1	Exams	L,J&N. Ch:30
4. UL system control	12	AA	2.5	Exams	L,J&N. Ch:30+31
5. UL orthotics	13	AA	2.5, 5.1, 7.1	Exams	L,J&N. Ch:14
6. LL orthotics	14-15	AA	2.5, 5.1, 7.1	Exams	L,J&N. Ch:11
Spinal orthotics	16	AA	2.6, 5.1, 7.1	Exams	L,J&N. Ch:13
7.					

## 21. Teaching Methods and Assignments:

Please pick the approaches that will be used to achieve course and clinical objectives related to the

Select if applied	Instructional Methods	Learning Activities (Examples)
✓	Direct Instruction	Structured orientation lectures Skills and procedures demonstrations
	Interactive Instruction	Clinical conferences and case presentations Seminars and discussions
	Experiential Learning	Experiential learning in clinical setting Simulation Hands-on learning
	Independent Study	Self-directed literature review and synthesis to address problems in a specific case study Reflective Journaling
	Blended Learning	Combined face-to-face classroom practices with computer-mediated activities regarding content and delivery of course topics
	Evidence Based Practice	<ul style="list-style-type: none"> <li>Integrate research methods &amp; results in the learning process</li> <li>Reflective assignments &amp; projects</li> </ul>
	Other (please specify)	

ILOs:

## 22. Evaluation Methods and Course Requirements:

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

Exams		
Exam	Date	Grade
Midterm (First)	25/2/2019	30
Quizzes (Second)	8/4/2019	30
Final	Registration	40

## 23. Course Policies:

## A- Attendance policies:

- Attendance will be taken periodically throughout the semester.
- Students are expected to attend and actively participate in all classes.
- Students are expected to be on time.
- When the student is unable to attend class, it is a courtesy to notify the instructor in advance using either e-mail or phone.
- Repeated tardiness or leaving early will not be accepted.
- Students who miss class (or any portion of class) are responsible for the content. Any student who misses a class has the responsibility for obtaining copies of notes, handouts, assignments, etc. from class members who were present. If additional assistance is still necessary, an appointment should be scheduled with the instructor. Class time is not to be used to go over

material with students who missed class(es).

- An absence of more than 15% of all the number of classes, which is equivalent of (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 as suggested by the laws and regulations of the University of Jordan. Please refer to pages 133, 134 of the student handbook.

B- Absences from exams and handing in 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).
- Make-up exams will be arranged if justifications for missing the exam satisfy the above. It is the student's responsibility to contact the instructor within 24 hours of the original exam to schedule a make-up session. A make-up exam should be taken within a week from the original exam date, unless the student can provide documentation that makes meeting that deadline impossible; otherwise, the recorded score for that exam for the student will be a zero.
- Late assignments will not be accepted and submission of assignments (due to unjustified absence from class) by other students will not be accepted regardless of how much work the student put into its preparation.

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 or equipment that might impose health and safety issues during this course.
- Students should work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation.
- Students should understand the importance of and be able to maintain confidentiality.
- Students should understand the importance of and be able to obtain informed consent.
- Students should know the limits of their practice and when to seek advice or refer to another professional

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, clinic forms, or another student work) will be considered plagiarism and the student/group will get a zero grade for that work if part of an assignment. 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 assignments on their own. Asking other instructors at the JU clinic or the 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 Faculty 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 staff of Services for Student with Disabilities (Faculty of Students Affairs) as soon as possible. Please also contact the instructor as soon as possible (email is acceptable) so the appropriate accommodations for this course can be made.

**24. Required equipment:**

Lecture room with data show requirements.

**25. References:****A. Required book (s), assigned reading and audio-visuals:**

1. Lusardi, M.; Jorge, M.; Nielsen, C. Orthotics and Prosthetics in Rehabilitation, 2013.

**B. Recommended books, materials, and media:****26. Additional information:**

This course will build up on biomechanical principles and kinesiology basics.

Name of Course Coordinator: **Alia Alghwiri** Signature: -----AG----- Date: 27/1/2019

Reviewed by Lara Al-Khlaifat L.K. 5/2/2019

Head of curriculum committee/Department: : Dr. Jennifer Muhaidat----- Signature: -J.M

Head of Department: **Lara Al-Khlaifat** Signature: --LK

curriculum committee/Faculty: Professor Ziad Hawamdeh Signature: - Z.H

Dean: Professor Ziad Hawamdeh Signature: - Z.H