



Course Syllabus

<u>Course title:</u>	Orthotics and Prosthetics	<u>Course No:</u>	1201210
<u>Course level:</u>	3rd	<u>Course prerequisite (s) and/or co-requisite (s):</u>	
<u>Lecture time:</u>	16:00-17:00	<u>Credit hours:</u>	1 hour

Academic Staff Specifics

<u>Name</u>	<u>Rank</u>	<u>Office Number and location</u>	<u>Office hours</u>	<u>E.mail address</u>
Dr. Shadi alkhob	Assistant Professor	0799964616	12:00-13:00	s.alkhob@jpu.edu.jo

Course Description

This course aims to introduce students to the various types of orthotics and the various programs and exercises that they can perform to improve their quality of life.



Course Objectives

The course aimed to inform students with Management of patients with amputations and conditions requiring orthotics will be emphasized. The basic components of the course include types of orthotics and prosthetics, fitting, exercise programs, gait analysis and gait training. A brief overview of upper extremity orthotics and prosthetics will be provided.

Learning Outcome

Knowledge and understanding, by the end of this course, students should be able to:

- 1) Define orthotics and prostheses .
- 2) Discuss the major components of an orthosis and how it can affect alignment or gait.
- 3) Determine the correct orthosis for a given gait deviation.
- 4) Discuss the use of orthotics for prevention of injury in sports and for protection after surgery .
- 5) Differentiate between dynamic and static splinting.
- 6) Construct a simple splint of thermoplastic materials.
- 7) Discuss the development and history of amputation and prosthetics.
- 8) Determine appropriate pre-operative care and education for the lower extremity amputee
- 9) Briefly describe the different levels of amputation and the types of prostheses available.
- 10) Identify, describe, and compare the basic components of an upper extremity prosthesis and discuss the mechanical operation and control of the prosthesis.

Cognitive skills (thinking and analysis):

Interactive learning by participating the student into the lectures content.

Communication skills (personal and academic):

Review concept at office hours

Practical and subject specific skills (Transferable Skills):.

Doing homework and simple reports.



Course Outline and Time schedule

Week	Course Outline
First week	Introduction to Orthotics and Prostheses
2 nd week	Biomechanical principles
3 rd week	Common injuries and deformities that need orthotic intervention
4 th week	Lower Limb Orthoses
5 th week	Upper Limb orthoses
6 th week	Spinal orthoses: Cervical orthoses
7 th week	Thoracolumbar, Lumbosacral orthoses
8 th week	Lower limb prostheses: Below knee Prostheses
9 th week	Above knee Prostheses
10 th week	Upper limb prostheses: Below elbow prostheses
11 th week	Above elbow prostheses

Presentation methods and techniques

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

- ❖ Lectures
- ❖ Cooperative learning.
- ❖ Discussion.
- ❖ Learning by activities.
- ❖ Connecting students with different sources of information



Sources of information and Instructional Aids

- ❖ Computer ... power point ...etc.
- ❖ Transparencies
- ❖ Distance learning
- ❖ Library sources

Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated through: feedback and the skills that are acquired by the students

The tools:

- 1- Diagnostic tests to identify the students level and areas of weakness
- 2- Formal (stage) evaluation
 - a) Mid-term exam
 - b) Class Participation
 - c) Activity file
 - d) Final exam

Tool & Evaluation

The following table clarifies the organization of the assessment schedule:

Test	Grade
Mid-term Exam	25
Activities & Participation	25
Final Exam	50
Total	100



Activities and Instructional Assignment

Practical assignments to achieve the syllabus objectives.

Regulations to maintain the teaching-Learning Process in the Lecture:

- 1- Regular attendance online live lectures.
- 2- Respect of commencement and ending of the lecture time.
- 3- Positive relationship between student and teacher.
- 4- Commitment to present assignments on time.
- 5- High commitment during the lecture to avoid any kind of disturbance and distortion.
- 6- High sense of trust and sincerity when referring to any piece of information and to mention the source.
- 7- The student who absents himself should submit an accepted excuse.
- 8- University relevant regulations should be applied in case the student's behavior is not accepted.
- 9- Allowed Absence percentages is (not exceed 15 %).

References

- Erickson W, Lee C, von Schreder S. Disability Statistics from the American Community Service (ACS). Ithaca, NY: Cornell University Yang- Tan Institute (YTI). Retrieved from Cornell University Disability Statistics Website: www.disabilitystatistics.org Accessed Sep 20, 2021.
- Wilson BA. History of amputation surgery and prosthetics. In: Bowker JH, Michael JW, eds. Atlas of Limb Prosthetics: Surgical, Prosthetic and Rehabilitation Principles. St. Louis: Mosby-Year Book; 1992:3–15.
- Lusardi M, Jorge M, Neilson C. Orthotics and Prosthetics in Rehabilitation. Third Edition. 2013.
- Meadows B, Bowers R. Atlas of Orthoses and Assistive Devices (Fifth Edition), 2019.
- Fatone S (2009). "Chapter 31: Orthotic Management in Stroke". In Stein J, Harvey RL, Macko RF, Winstein CJ, Zarowitz RD (eds.). Stroke Recovery & Rehabilitation. New York. Demos Medical. pp. 522–523.