



Module (Course Syllabus) Catalogue 2023-2024

College/ Institute	Erbil Technical Health College	
Department	Prosthetics and Orthotics	
Module Name	Physiology and Pathology I	
Module Code	PAP 301	
Degree	Technical Diploma <input type="checkbox"/> Bachelor <input checked="" type="checkbox"/> High Diploma <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/>	
Semester	3 rd	
Qualification	Master in Rheumatology and Medical Rehabilitation	
Scientific Title	Assistant Lecturer	
ECTS (Credits)	4	
Module type	Prerequisite <input type="checkbox"/> Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>	
Weekly hours	2 hr	
Weekly hours (Theory)	(2)hr Class	(60)Total hrs Workload
Number of Weeks	12	
Lecturer	Dr. Zekra Ali Aziz	
E-Mail & Mobile NO.	zekra.aziz@epu.edu.iq 009647504413211	
Websites		

Course Book

<p>Course Description</p>	<p>At the end of this course, the student should be able to:</p> <ul style="list-style-type: none"> - Identify essential basics of physiology. - Identify different systems of human body - Recognize the function of different systems of the body including the neuromuscular and the autonomic nervous system. <p>The course is designed to introduce prosthetics and orthotics students to pathology via:</p> <p>Discuss tissue injury and diseases processes, using appropriate vocabulary.</p> <p>Recognize morphological and functional differences between normal and injured or diseased tissue.</p> <p>Recognize the different types of pathological lesions and their causes.</p> <p>Integrate pathological findings with clinical manifestations of disease.</p>
<p>Course objectives</p>	<p>At the end of this course, the student should be able to:</p> <ul style="list-style-type: none"> - Recognize fundamental concepts and definitions of human physiology that can be applied to practice. - Identify human physiological principles related to the neuromuscular & system autonomic nervous system, which underpin prosthetics and orthotics management. - Understand physiology emphasizing the dynamic relationships of human structures and function. <p>Upon the completion of the course, the student should be able to:</p> <p>Define pathology and disease.</p> <p>Discuss broadly the causes of disease and the categories under which they can be considered.</p> <p>Describe pathological mechanisms underlying disease processes: cell injury, inflammation.</p> <p>Understand the clinical manifestations of pathological processes.</p> <p>Discuss the diseases affecting particular organ systems/tissues e.g. cardiovascular system, central nervous system and musculoskeletal system.</p> <p>Understand the clinical manifestations of pathological processes affecting particular organ systems/tissues.</p>
<p>Student's obligation</p>	<ul style="list-style-type: none"> • Reading and understanding of study notes • Participation in forum and discussions • Participation in active communication with the lecturer • Regular assignment submission

Required Learning Materials	Lectures notes, videos, audios, platform-based conferences, homework exercises, homework correction and guidance, live consultation and problem-solving, self-study. Hall, projector.				
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review				
	Assignments	Homework	10%	4 th & 10 th	1,2,3,4 & 5
		Class Activity	2%	All	All
		Report	8%	8 th	1,2,3,4 & 5
		Seminar	8%	6 th	1,2,3,4 & 5
		Essay			
		Project			
	Quiz	8%	All	All	
	Midterm Exam	24%			
	Final Exam	40%			
Total	100%				
Specific learning outcome:	<p>1- Understand the levels of organization of cells, tissues, organs and systems, and associated terminology.</p> <p>2- Describe the basic structure of muscle, and nerve cells and tissue, their interactions and how these relate to their functions in the human body.</p> <p>3- Describe the roles of the muscular, and nervous systems, and appreciate the importance of the control of (and co-ordination between) these systems.</p> <p>4- Compare the structure and properties of biological substances.</p> <p>5- Understand the alteration in the physiology for the fabrication of the prosthesis and orthosis.</p> <p>6- Understand the implications of specific diseases, pathologies or injuries on function.</p> <p>7-Demonstrate an understanding of essential basic pathological processes.</p> <p>8-Use the terminology for the field of pathology correctly and contextually.</p> <p>9-Demonstrate an understanding of the predisposing factors, causes, and pathogenesis, morphology and potential complications of such diseases.</p> <p>10- Correlate clinical features with the causes and mechanisms of disease.</p> <p>11- Knowledge of the pathogenesis of diseases, interventions for effective treatment, and mechanisms of health maintenance to prevent disease</p>				
Course References:	<ul style="list-style-type: none"> - Concise Textbook of Physiology, Indu Khurana and Arushi Khurana, 3rd edition, 2018 Published by RELJ India Private Limited - Physiology USMLE Step 1, Robert B. Dunn and Steven R. Daughert, 2013 by De Vry/ Becker Educational Development Corp. AU rights reserved 				

- Guyton and Hall textbook of medical physiology, John E. Hall and Arthur C. Guyton, 12th edition, 2011, Saunders Elsevier.
 - Human physiology an integrated approach. Dee Unglaub Silverthorn, Bruce B. Johnson, William C. Ober, Claire G. Garrison, Andrew C. Silverthorn, 8th edition, 2019. Pearson education
 - Book: Anatomy and Physiology (boundless),2021.<https://med.libretexts.org/@go/page/7665>
- Rapid Review Pathology by Edward F. Goljan
 Robbins Basic Pathology by Kumar, Abbas & Aster
 Crash Course Pathology by Olivia Mckinney & Isabel Woodman

Course topics (Theory)	Week	Learning Outcome
L01: Introduction to physiology and general design of the Nervous system	1 st	1&7
L02: The nerve impulse and nerve conduction	2 nd	2&7
L03: Introduction to the concepts of pathology L04: Cellular injury: degeneration, calcification, and necrosis.	3 rd	3,7,8&9
L05: The Autonomic and Peripheral Nervous System Homework, Post amputation pain and Phantom Limb Pain, aetiology and physiology	4 th	2,7,8&9
L06: Somatic sensation	5 th	3,9,10&11
L07: Cortical and Brainstem Control of Motor Function	6 th	2,7&8
Midterm exam		
L08: Motor Functions of the Spinal Cord; the Cord reflexes	7 th	1,9&10
L09: Peripheral Nerve Injury L10: Spinal Cord Injury Homework, Muscle weakness conditions (Mobility aids and orthotic devices)	8 th	4,7&9
L11: Muscle Contraction	9 th	4,7&9
L12: Energetic of Muscle Contraction Report, Muscle Fatigue	10 th	5,7&9
L13: Muscular Dystrophy L14: Congenital Limb Deficiencies	11 th	3,8
L15: The Physiology of the Cardiac Muscle L16: Vascular Disorders	12 th	9
Final exam		
Questions Example Design		
- Multiple choices, True and false, Full the blank, Cross match, Enumerate, Definition, and short essay.		
Extra Note		
External evaluator		