



Module (Course Syllabus) Catalogue 2023-2024

College/ Institute	Erbil Technical Health and Medical College	
Department	Physiotherapy	
Module Name	Spinal Orthotics	
Module Code	CPO203	
Degree	Technical Diploma <input type="checkbox"/>	Bachl <input type="checkbox"/>
	High Diploma <input type="checkbox"/>	Maste <input checked="" type="checkbox"/> Pl <input type="checkbox"/>
Semester	1 st	
Qualification	Doctorate in Rheumatology	
Scientific Title	Lecturer	
ECTS (Credits)	4	
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/> Assis <input type="checkbox"/>
Weekly hours		
Weekly hours (Theory)	(2)hr Class	(110)Total hrs Workload
Weekly hours (Practical)	()hr Class	()Total hrs Workload
Number of Weeks	12	
Lecturer (Theory)	2	
E-Mail & Mobile NO.	Zekra.aziz@epu.edu.iq/07504413211	
Lecturer (Practical)		
E-Mail & Mobile NO.		
Websites		

Course Book

Course Description	<p>This course covers the basic anatomy, physiology and biomechanics of the spine. In addition, this course covers, extensively, the different conditions (fractures, herniation, osteoporosis, loose of normal sagittal plane curvatures, etc) that may impose deformational changes on the normal alignment of the spine and thus destroy its integrity. Students will learn the biomechanical principles of applying spinal orthoses. In addition, the different strategies used to restrict the vertebral column mobility will be covered. Further, ways of correcting or/and preventing the deterioration on the vertebral column structure using a spinal orthosis will be enlightened. Students will learn how to work in a team to provide the best treatment for the patient. The interdisciplinary teamwork will also be the focus of this course.</p>
Course objectives	<p>At the end of the course the students should:</p> <ol style="list-style-type: none"> 1. Develop an understanding about spinal orthoses biomechanics 2. Develop an understanding about vertebral column anatomy and biomechanics 3. Develop an understanding about the different types of spinal orthoses 4. Be equipped with a thorough understanding of a wide range of spinal orthoses, which are used during rehabilitation program and specifically for the treatment of spinal trauma and deformations
Student's obligation	<ul style="list-style-type: none"> -Reading and understanding of given references. - Participation in forum and discussions -Participation in active communication with the lecturer - Regular assignment submission
Required Learning Materials	<p>Lectures notes, videos, audios, platform-based conferences, homework exercises, homework correction and guidance, live</p>

	consultation and problem-solving, self-study. Hall, projector.				
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review				
	Assignments	Homework			
		Class Activity	5%	All	
		Report	10%	8 th	Scoliosis
		Seminar	10%	12 th	Spinal orthotics
		Essay			
		Project			
	Quiz	5%	10 th		
	Lab.				
	Midterm Exam	20%			
	Final Exam	50%			
Total	100%				
Specific learning outcome:	<ol style="list-style-type: none"> 1. Recognizing the normal anatomy and function of the spine. 2. Identify the biomechanics of spinal stability and mobility. 3. Recognize the different diseases and deformations that might affect the spine. 4. Recognizing how diseases and deformations might affect spinal integrity from a biomechanical point of view. 5. Defining the best orthotic design, components, material, and type for a patient. 6. Employ analytical skills in proper patient examination. 7. Defining the biomechanical principles in treating different spinal deformities and introducing modifications to the core principles if needed. 8. Developing skills in casting, molding, and lamination. 9. Learn how to recognize the size of the problem of a spinal condition. 10. learn how to deal with patient in a professional way. 11. Dealing congenitally with patient data and personal information. 12. Recognizing the importance of patient satisfaction. 13. Delivering high quality health care. 				

	<p>14. Recognizing and work within the limits of their competence and ask for help when necessary.</p> <p>15. Respecting the decisions and rights of patients.</p> <p>16. Communicate with others within the medical team to improve treatment outcome.</p> <p>17. Acquire self-critical appraisals skills.</p> <p>18. Acquire the skills of decision making.</p> <p>19. Acquire the skills of identifying what constitute sufficient. image quality for orthotic evaluation.</p> <p>20. Refer to the literature to identify the best orthotic intervention for each specific case.</p>	
Course References:	<p>1. Atlas of spinal orthotics.</p> <p>2. Spinal Orthoses: Principles, Designs, Indications, and Limitations.</p> <p>3. 2021_Jones_spinal_orthotics_lecture.</p> <p>4. Orthotics Prosthetics Rehabilitation.</p>	
Course topics (Theory)	Week	Learning Outcome
Section 1: basic science principles	1 st	1
1. Review of spinal anatomy, and Team care		
2. Biomechanics of the spine and spinal orthoses	2 nd	2-5
Section 2: Classification and management of spinal deformity	3 rd	5-8
1. Scoliosis terminologies and classification		
2. Physical examination of patients with scoliosis		
3. Radiologic evaluation of spinal deformity	4 th	5,7,8
4. Patient evaluation: what the orthotist needs to know		
5. Importance of physician and orthotist interaction	5 th	6,9-13
6. The role of physical therapy in adolescent idiopathic scoliosis		
Section 3: orthotic management of spinal deformities	6 th	6,14-20
1. Basics of spinal deformity orthoses		
2. Measurement, fabrication and fitting principles		
Midterm exam		
3. Orthotic management of adolescent idiopathic	7 th	6, 9,11,14,

scoliosis 4. Effectiveness of orthotic management in adolescent idiopathic scoliosis		16,17,19,20
5. Orthotic management of the paralytic spine 6. Orthotic management of Scheuermann's Kyphosis	8 th	6, 9,11,14, 16,17,19,20
Section 4: orthotic management of spinal pathologies 1. Orthotic management of spondylolysis and spondylolisthesis 2. Orthotic management of spine trauma	9 th	6, 9,11,14, 16,17,19,20
3. Orthotic management of osteoporosis of the spine 4. Orthoses for low back pain	10 th	6, 9,11,14, 16,17,19,20
5. Orthotic management of the cervical spine	11 th	6, 9,11,14, 16,17,19,20
Presentation	12 th	17-20
Final exam		
Questions Example Design		
Extra notes:		
External Evaluator		