

Kurdistan Region Government Ministry of Higher Education and Scientific Research Erbil Polytechnic University



Module (Course Syllabus) Catalogue 2022-2023

College/Institute	Erbil Technical Health		
Department	Physiotherapy		
Module Name	Medical Physics		
Module Code	MEP105		
Degree	Technical Diploma	Bachler 1	
	High Diploma	Master PhD	
Semester	1st		
Qualification			
Scientific Title			
ECTS (Credits)	7ECTS		
Module type	Prerequisite	Core 1 Assist.	
Weekly hours	5		
Weekly hours (Theory)	(2)hr Class	()Total hrs Workload	
Weekly hours (Practical)	(3)hr Class	()Total hrs Workload	
Number of Weeks	8		
Lecturer (Theory)	Karim Mahmood Ababakr & Didar Swara Salih		
E-Mail & Mobile NO.	Karim.ababakr@epu.edu.iq, 07504479612		
Lecturer (Practical)	Didar.salih@epu.edu.iq Karim Mahmood Ababakr & Didar Swara Salih		
E-Mail & Mobile NO.	Karim.ababakr@epu.edu.iq, 07504479612 Didar.salih@epu.edu.iq		
Websites			

Course Book

Course Description	Provide an introduction to key physical principles applied in physiotherapy through education and practical training. The course covers a wide range of topics needed in physiotherapy including: Electromagnetic radiation, heat, ultrasound, electrotherapy, force and motion, measurements and units. The students gain knowledge in variety of Physical concepts and will be prepared for other courses that are closely related to physics such as therapeutic equipment.				
Course objectives	Develop basic understanding of medical physics concepts. Develop scientific communication skills. Provide education and practical training for students and prepare them for careers in physiotherapy. Provide a basic knowledge for the Therapeutic equipment course.				
Student's obligation	Students should attend the lectures Students should take all exams including daily quizzes and practical exam				
Required Learning Materials	Principle of electricity, radiation, ultrasound, thermodynamic, force and motion, etc				
		Task	Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review				
		Homework			
	Ass	Class Activity			
	ign	Report			
E-val-va4ian	Assignments	Seminar			
Evaluation	ıts	Essay			
		_			
		Project			
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	1- Ability to develop general knowledge in physiotherapy and		
	understand the subjects of the module		
	2- Ability to understand and use, of general physics in		
	physiotherapy.		
Specific learning	3- Demonstrate the ability to think critically and solve		
outcome:	problems		
	4-Ability to apply knowledge in practice		
	5- Ability to make reasoned decision.		
	6-Demonstrates research skills to investigate, evaluate or		
	problem solve.		
	6-		
Course References:	Fundamentals of Electrotherapy & Biomedical Physics by Ashish Kakkad		
	Textbook of Electrotherapy by Jagmohan Singh		

Course topics (Theory)	Week	Learning Outcome
Introduction to Medical Physics	1	1&2
Physics and Measurements	2	2&4
Force and Laws of Motion	3	2
Temperature and Heat	4	2&3
Electromagnetic Spectrum	5	4
Electricity	6	2&5
Sound Wave	7	2&5
Energy and Power	8	2&6
Fluid Mechanics	9	2&6
Practical Topics	Week	Learning Outcome
Reflection of light and Snell's law	1&2	2&5&4
Focal length of concave lens by displacement method	3&4	2&3&4
Diffraction grating, measuring the wavelength of light	5&6	2&3&4

Ohm's law	7&8	2&3&4
Spiral spring	9&10	2&6&4
Questions Example Design		•

Questions Example Design

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- 2. Explain:
- 3. Calculate:
- 4. Fill in the blanks:
- 5. Multiple choices:
- 6. Enumerate:
- 7. Match the following:
- 8. True or False

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	HULCS:

External Evaluator

I do approve the content of this course-book. It does cover the general concepts of physics in physiotherapy. The topics are broad and are aimed to equip students with required knowledge to enable them to understand the physics concept of the physiotherapy equipment in latter stages.

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Lecturer Chiman Bakir Ismail