



Al-Ayen University / Technical Engineering College / Department
of Medical Instrumentation Technical Engineering

Template of Course Specification

Name and Scientific title of the subject instructor: M.Sc. Marwa A. Shams

Name of Course: Medical Physics Lab

Course Specification

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the program specification.



2021

جامعة العين
الكلية التقنية الهندسية
AL-AYEN UNIVERSITY
TECHNICAL ENGINEERING COLLEGE

1.	Teaching Institution	Al-Ayen University / Technical Engineering College
2.	University Department / Center	Department of Medical Instrumentation Technical Engineering
3.	Course Title / Code	Medical Physics Lab
4.	Program(s) to which it contributes	
5.	Modes of Attendance offered	Weekly (practical + theoretical)
6.	Semester/Year	1st / 2022
7.	Number of hours tuition (total)	Theory (60 h) and practical (60 h)
8.	Date of production/revision of this Specification	31-3-2022
9.	Aims of the Course	
	1-	
	2-	
	3-	
	4-	
	5-	
10.	Learning Outcomes, Teaching, Learning and Assessment Methods	
	A. Knowledge and understanding	
		<p>A1 - Students recognize the influence of forces on the human body Identify how the skeleton works</p> <p>A3- shows how pressure affects the body's organs Recognize physical activity of the lungs and breathing</p> <p>A5 - Students demonstrate the physics of the cardiovascular system and the urinary system</p> <p>A6 - The student distinguishes the basic principles using the applications of electricity and magnetism in medicine</p> <p>A-7 Students shall be acquainted with respiratory, cardiovascular and cardiovascular equipment</p> <p>A8 - The student distinguishes the basic principles, using the sound waves in medicine and the use of x-rays in the diagnosis and identification of diseases</p>

B.	Subject-specific skills B1. The student tries to identify the most important physical experiments related with the human body B2. Explain some important physical phenomena B3. Identify the most important medical devices that work on the physical principles B4. diagnose some diseases using some medical devices
C.	Assessment methods <ul style="list-style-type: none"> • Written quarterly examinations • Practical Quarterly Examinations • Weekly Tests (Oral / Written) • Quizzes • pre- test and post-test
D.	Thinking Skills D1. The student listens to the explanation D2. The students learn about the impact of science and scientists in life D3. The student should describe the importance of learning the subject of MEDICAL PHYSICS D4. The student is concerned with quietly and the class syst
E.	Teaching and learning methods Discussion and dialogue with students
F.	Assessment Methods Questionnaire, Seminars, Discussion Hubs
G.	General and Transferable Skills (other skills relevant to employability and personal development)

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Methods	Assessment Methods
1.	Practical (2)	The student understands the lesson	focal length of concave mirror	practical	Quiz
2.	Practical (2)	The student understands the lesson	simple pendulum	practical	Direct questions
3.	Practical (2)	The student understands the lesson	Velocity of sound by means of Resonance	practical	Quiz
4.	Practical (2)	The student understands the lesson	focal length of convex mirror	practical	Quiz
5.	Practical (2)	The student understands the lesson	Hooks law	practical	Direct questions
6.	Practical (2)	The student understands the lesson	Ohms law	practical	Direct questions
7.	Practical (2)	The student understands the lesson	Velocity of liquid	practical	Quiz
8.	Practical (2)	The student understands the lesson	The cathode ray oscilloscope	practical	Quiz
9.	Practical (2)	The student understands the lesson	blood pressure measurement	practical	Direct questions
10.	Practical (2)	The student understands the lesson	Laser application for measurement of single slit	practical	Direct questions
11.					
12.					
13.					
14.					
15.					

12. Infrastructure	
Required reading: ·CORE TEXTS ·COURSE MATERIALS · OTHER	- Medical Physics
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities)include for example, guest Lectures, internship, field studies)	Journal of Applied Clinical Medical Physics - University of Tikrit / college of Dentistry

13. Admissions	
Pre-requisites	
Minimum number of students	15
Maximum number of students	150

