TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

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 programme specification.

1. Teaching Institution	Ministry of Higher Education and Scientific Research
2. University Department/Centre	Basic Sciences Branch
3. Course title/code	Medical Physics
4. Modes of Attendance offered	Presence, electronic and laboratories
5. Semester/Year	Two semesters / first stage
6. Number of hours tuition (total)	60 hours theoretical + 60 hours practical
7. Date of production/revision of this specification	2020-2021
8. Aims of the Course	
Enabling the student to know the physical ideas related to the human body from two aspects: the physical functions of the organs of the human body and medical applications in diagnosis and treatment, description and application Theoretical and practical mastery of the prescribed curriculum vocabulary	

9· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Cognitive goals.
A1. Physics' relationship with humans
A2. Physics' relationship with humans
A3. Physical applications on the human body in diagnosis and treatment
A4. improving the performance of the human body by physical means
A5. Relationship of all this information to human health
A6 .

B. The skills goals special to the course.
B1. Lectures and discussion to consolidate ideas
B2. Experiments, laboratories and preparing reports

Teaching and Learning Methods

Theoretical lectures in the form of power point guiding students to some websites and scientific resources for leadership, including practical laboratories and conducting experiments by students

Assessment methods

Quarterly exams, student attendance scores, student activity and interaction with the lecture and at

science festivals

C. Affective and value goals
C1.
C2.
C3.
C4.

Teaching and Learning Methods

Assessment methods

D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)

D1.

D2.

D3.

D4.

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2		Lardiov ascular system	Electron theory lecture a program power point	Exams Short, Quarterly, and midyear and the final
2	2		Force on &in body: Static forces Dynamic forces	Electron theory lecture a program power point	
3	2		Physics of the skeleton:	Electron theory lecture a program power point	
4	2		Heat and cold in Medicine	Electron theory lecture a program power point	
5	2		Energy, work and power of the body	Electron theory lecture a program power point	
6	2		Pressure	Electron theory lecture a program power point	
7	2		Electricity within the body	Electron theory lecture a program power point	
8	2		Sound in medicine	Electron theory lecture a program power point	
9	2		Physics of the ear and hearing	Electron theory lecture a program power point	
10	2		Light in medicine	Electron theory lecture a program power point	
11	2		Physics of diagnostic X- ray	Electron theory lecture a program power point	
12	2		Physics of the eye and vision	Electron theory lecture a program power point	
13	2		Laser in medicine What is laser	Electron theory lecture a program power point	
14	2		Physics of radiation therapy	Electron theory lecture a program	

				power point	
15	2		Radiation effects of ionizing radiation	Electron theory lecture a program power point	
16	2		Physics of nuclear medicine	Electron theory lecture a program power point	
17	2		The dose units (Rad and Gray	Electron theory lecture a program power point	
18	2		Principles of radiation therapy	Electron theory lecture a program power point	
19	2		Radioactive isotopes and their medical uses	Electron theory lecture a program power point	
20	2		Atomic nature of matter	Electron theory lecture a program power point	
21	2		Function of bones	Electron theory lecture a program power point	
22	2		Structure & fractures of bones	Electron theory lecture a program power point	
23	2		Personal dosimetry	Electron theory lecture a program power point	
Laboratory sessions					
24	2		Introduction		
25	2		The focal length of a concave mirror		
26	2		The focal length of convex lenses		
27	2		The Acceleration of free fall by means of the simple pendulum		
28	2		The surface tension		
29	2		The principles of thermometry: (1) The room temperature		
30	2		(2The boiling point of liquid		
31	2		The fall of a body through a viscous medium		

32	2		Coefficient of viscosity		
33	2		Ohm's law to calculate unknown resistance		
34	2		The specific heat capacity of a liquid		
35	2		The specific heat capacity of a poor conductor		
36	2		The specific heat capacity of a liquid by the cooling		
37	2		Hook's law to find (1) accelerations		
38	2		(2)The hooks constant		
39	2		Boyle's law		
40	2		The saturation vapor pressure		
41	2		Terminal velocity		
42	2		Velocity of the sound by using a resonance tube		
43	2		Velocity of the sound by a monometer		
44	2		Velocity of the sound by comparison with a fork of known frequency		
45	2		Static and dynamic friction		
46	2		The refractive index of (a) glass prism		
47	2		The refractive index of (b) glass block		
48	2		To compare the densities of two liquids by using U tube		

49	2		The index coefficient by concave mirror		
50	2		The focal length of concave lens in contact method		
51	2		The focal length of convex lenses using a graphical method		
52	2		Wheat stones bridge		
53	2		The post office		

11. Infrastructure	
1. Books Required reading:	Medical Physics John Cameron
2. Main references (sources)	Medical Physics John Cameron
A- Recommended books and references (scientific journals, reports…).	1- physics including human application 2- Physics of the Human Body 3- Physics in Biology and Medicine
B-Electronic references, Internet sites…	

12. The development of the curriculum plan