

Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.

Academic Program Specification Form For The Academic

University: Baghdad University
College: Al-Kindy Medical College
Number Of Departments In The College: 11
Date Of Form Completion: 2023-2024
Department Name: physiology
Name of head of Department: Dr. Hayder Sabah Hasan
Signature:

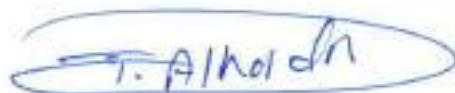


Dean's Name:

Mohammed Shihab Aledanni

Date: / /

Signature



Dean's Assistant For Scientific
Affairs:

Taghreed Kalil Al Haidari

Date: 20/11/2023



The College Quality
Assurance And University

Performance Manager:

Aseel Sameer Mohamed

Date: 20/11/2023

Quality Assurance And University Performance Manager

Date: / /

Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme 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 is supported by a specification for each course that contributes to the programme.

1. Teaching Institution	University of Baghdad
2. University Department/Centre	Al Kindy College of Medicine
3. Programme Title	Medical Physics1/ MPH102(first year, first semester)
4. Title of Final Award	Bachelor in Medicine and General Surgery
5. Modes of Attendance offered	Lectures, discussions and practical
6. Accreditation	The Higher Accreditation Program of Iraqi Medical Colleges, supervised by the Ministry of Higher Education and WHO
7. Other external influences	None
8. Date of production/revision of this specification	2023-2024
9. Aims of the Programme	<p>The overall aim is that, the student will be a familiar with:</p> <ol style="list-style-type: none">1) Knowledge of the normal structure and function of the body and its major organ systems with emphasis on content applicable to clinical diagnostic imaging and/or radiation oncology.2) Knowledge of the radiation safety practices and procedures including the determination of radiation shielding requirements.3) Knowledge of the biological effects of radiation and its application for

radiation safety and for radiation treatment.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Cognitive goals

At the end of each subject, the student shall be able to:

A1. Familiar with the physical principles needed to understand how the body works.

A2. Knowledge of the normal structure and function of the body and its major organ systems with emphasis on content applicable to clinical diagnostic imaging and/or radiation oncology.

A3. Knowledge of radiation and radioactivity, its properties, units of measure, dosimetry measurement concepts and methods.

A4. Knowledge of the radiation safety practices and procedures including the determination of radiation shielding requirements.

B. The skills goals special to the programme.

B1. The ability to perform the clinical support procedures required for the graduated physician.

B2. The ability to retrieve, manage, and utilize information for solving problems relevant to completion of research projects, or for the implementation of clinical operations or procedures.

Teaching and Learning Methods

1. Lectures
2. -Practical
3. Tutorial and discussions
4. Self-directory learning
5. General and Transferable Skills (other skills relevant to employability and personal development).
6. To equip themselves for teamwork .
7. Develop communication skills and etiquette with sense of responsibility

Assessment methods

- 1- Written examination
- 2- practical assessment
- 3- daily activities
- 4- final year examination

<p>C. Affective and value goals C1. To equip themselves for teamwork. C2. Develop communication skills and etiquette with sense of responsibility. C3. Interpretation of laboratory data</p>
<p>Teaching and Learning Methods</p>
<ul style="list-style-type: none"> - Lectures - Small group discussion - Practical -Tutorial and discussions -Short teaching videos interpretation -Skill labs
<p>Assessment methods</p>
<ul style="list-style-type: none"> - Data interpretation -practical assessment
<p>D. General and Transferable Skills (other skills relevant to employability and personal development) D1.Ethics and values D2.Communication skills D3.Health promotion packages.</p>
<p>Teaching and Learning Methods</p>
<p>Teaching communication skills</p> <ol style="list-style-type: none"> 1- Being a member of research team 2- Knowledge component assessment in form of Theory examination 3- Skill component assessment and practical Examination Attitude component assessment by special assessment format 4- The examinations scheduled at the end of each semester as Progress test and the whole year assessed by the End of Year Examination
<p>Assessment Methods</p>
<ol style="list-style-type: none"> 1- Written examinations and quizzes with daily activities 2- Through observation of behaviors of the student during discussions and tutorial.

11. Programme Structure				12. Awards and Credits
Level/Year	Course or Module Code	Course or Module Title	Credit rating	
First Level/ first year	MPH102	Medical Physics	3	Bachelor Degree Requires (6) credits

13. Personal Development Planning

- 1- The ability to conduct research on various health problems related to physical phenomena.
- 2- Able to be a community leader

14. Admission criteria.

Candidate from central admission to the Ministry of Higher Education

15. Key sources of information about the programme

- 1-Al-kindy Medical College
- 2-Ministry of Higher Education and Scientific Research.

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	Al Kindy College of Medicine
2. University Department/Centre	Physiology /medical physics
3. Course title/code	Medical Physics1/ MPH102(first year ,first semester)
4. Modes of Attendance offered	Lectures, practical, & tutorials and discussions
5. Semester/Year	1 st /S1 Medical Physics
6. Number of hours tuition (total)	60 hr.
7. Date of production/revision of this specification	2023-2024
8. Aims of the Course	<p>The overall aim is that, the student will be a familiar with :</p> <ol style="list-style-type: none">1) Knowledge of the normal structure and function of the body and its major organ systems with emphasis on content applicable to clinical diagnostic imaging and/or radiation oncology.2) Knowledge of the radiation safety practices and procedures including the determination of radiation shielding requirements.3) Knowledge of the biological effects of radiation and its application for radiation safety and for radiation treatment.

9- Learning Outcomes, Teaching ,Learning and Assessment Methods

A- Cognitive goals.

Knowledge and Understanding

At the end of each subject, the student shall be able to:

A1. Familiar with the physical principles needed to understand how the body works.

A2. Knowledge of the normal structure and function of the body and its major organ systems with emphasis on content applicable to clinical diagnostic imaging and/or radiation oncology.

A3. Knowledge of radiation and radioactivity, its properties, units of measure, dosimetry measurement concepts and methods.

A4. Knowledge of the radiation safety practices and procedures including the determination of radiation shielding requirements

B. The skills goals special to the course.

B1. The ability to perform the clinical support procedures required for the graduated physician

B2. The ability to retrieve, manage, and utilize information for solving problems relevant to completion of research projects, or for the implementation of clinical operations or procedures.

Teaching and Learning Methods

1- Lectures.

2- Small group teaching

3- Slides demonstration

4- Short teaching videos

5- Lab

Assessment methods

1- Written examinations

2- practical assessment

3- homework's

4- reports

C. Affective and value goals

C1. To equip themselves for teamwork.

C2. Develop communication skills and etiquette with sense of responsibility.

C3. Interpretation of laboratory data

Teaching and Learning Methods

- Lectures

- Small group discussion

- Practical

-discussions

-Short teaching videos interpretation
-Skill labs.

Assessment methods

- 1- Data interpretation
- 2- practical assessment

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

- D1. Ethics and values
- D2. Communication skills
- D3. Health promotion packages

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2		Force on and in the body	Lectures	Quiz , attendance
			Heat and cold in medicine		
	2		Introduction to medical physics lab and laboratory safety	Medical Physics lab	Reports , attendance & quiz
2	2		Energy, work and power of the body	Lectures	Quiz , attendance
			pressure		
	2		Determine The focal length of a concave mirror	Medical Physics lab	Reports , attendance & quiz
3	1		Physics of lungs and breathing	Lectures	Quiz , attendance
	2		The wavelength of He-Ne laser	Medical Physics lab	Reports , attendance & quiz
	2		Magnetic resonance imaging (MRI)	Discussion	Quiz , attendance
4	2		Structure of the atomic nucleus	Lectures	Quiz , attendance
			Physics of Nuclear Medicine		
	2		Hooks law to verify the tension and compression	Medical Physics lab	Reports , attendance & quiz
5	2		Nuclear Medicine Physics and Mathematical Applications	Lectures	Quiz , attendance
			Dose Units Used in Radiotherapy		
	2		Determine The focal length of convex lens using concave mirror	Medical Physics lab	Reports , attendance & quiz
6	1		Principles of Radiation Therapy	Lectures	Quiz , attendance
	2		uses radioisotopes in medicine for Diagnostic and therapeutic	Discussion	Quiz , attendance
	2		Review & Lab Exam I	Medical Physics lab	Reports , attendance & quiz
7	2		Physics of cardiovascular system	Lectures	Quiz , attendance
			Electricity within the body.		
	2		Investigation The velocity of sound by means of a resonance tube closed at one end	Medical Physics lab	Reports , attendance & quiz
8	2		Physics of eye and vision	Lectures	Quiz , attendance
			Use of boyles law apparatus to verify boyles law and to measure the	Medical Physics lab	Reports , attendance & quiz

			atmospheric pressure		
9	1		Physics of ear and hearing	Lectures	Quiz , attendance
	2		The physics of positron emission tomography	Discussion	Quiz , attendance
	2		Verifying of Ohms law	Medical Physics lab	Reports , attendance & quiz
10	1		Physics of ear and hearing	Lectures	Quiz , attendance
	2		Nanotechnology in medicine	Discussion	Quiz , attendance
	2		Flow of water through a capillary tube to deduce the viscosity of water	Medical Physics lab	Reports , attendance & quiz
11	2		Physics of Diagnostic X-Rays	Lectures	Quiz , attendance
			Absorption and reactions of X-ray		
	2		Using of cathode ray oscilloscope in the measurements of D.C. voltage	Medical Physics lab	Reports , attendance & quiz
12	2		Attenuation of X-Ray	Lectures	Quiz , attendance z
			Mathematical Applications of X-Rays		
	2		Review & Lab Exam2	Medical Physics lab	Reports , attendance & quiz
13	2		Radiation protection	Discussion	Quiz , attendance
	2		Calculate The wave length of sodium light using a diffraction grating	Medical Physics lab	Reports , attendance & quiz
14	2		The specific heat capacity of a liquid by an electrical heating method	Medical Physics lab	Reports , attendance & quiz
15	2		The measurement of Young's modulus for a wire	Medical Physics lab	Reports , attendance & quiz

11. Infrastructure

1. Books Required reading:	Medical physics by J.R. Cameron
2. Main references (sources)	Medical physics by J.R. Cameron
A- Recommended books and references (scientific journals, reports...).	(introduction to medical imaging: physics, engineering and clinical applications) by: Nadine Barrie Smith, Andrew Webb Radiation Physics for Medical Physicists Authors: Podgorsak, Ervin B

B-Electronic references, Internet sites...

Any trusted sites

12. The development of the curriculum plan

Preparing the necessary survey tools from scientific questionnaires, meetings, focus groups, and others.

2. Comparison between the objectives of the proposed program and the goals of similar programs in other universities

3- Determine the bodies in the public and private sectors who are recommended to contact to obtain their views on the program and the proposed plan model

4-Development of academic content by deleting, adding and replacing.

5- Using modern teaching methods according to the nature of the subject and the level of the learners from time to time.

6- Using modern orthodontic methods such as alternative and electronic orthodontics