ضمان الجودة

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Baghdad University.....

Faculty/Institute: .....AL Kindy College of Medicine.....

Scientific Department: .....Physiology.....

Academic or Professional Program Name: Physiology.....

Final Certificate Name: .....

Academic System: ...AL Kindy College of Medicine.....

Description Preparation Date: 24/ 3/ 2024

File Completion Date: 24/ 3/ 2024

Signature:

Head of Department Name:

Date:

Signature:

Scientific Associate Name: Prof Dr. Taghreed Alhaidari

Date:

The file is checked by: Aseel Sameer Mohamed

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 23/4/2024

Signature:

Approval of the Dean

The Dean
Prof. Dr.
Mohammed Shihab Al-Edanni

1. Program Vision

To fulfill the goal of graduating excellent, safe, competent, and professional doctors at both the undergraduate and postgraduate levels who are dependable in providing health care services and leadership.

2. Program Mission

To fulfill the goal of graduating excellent, safe, competent, and professional doctors at both the undergraduate and postgraduate levels who are dependable in providing health care services and leadership.

3. Program Objectives

The overall aim is that, the student will be a familiar with :

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.
4) Knowledge of the physiology of some systems in the body which are dealt with in greater detail in the following years of the Medicine degree program.

4. Program Accreditation

The Higher Accreditation Program of Iraqi Medical Colleges, supervised by the Ministry of Higher Education and WHO

5. Other external influences

None

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	12	12	0.1	Basic
College Requirements	Bachelor Degree Requires (6) credits	6	0.5	Basic
Department Requirements	Bachelor Degree Requires (6) credits	6	0.5	Basic
Summer Training	None			
Other	None			

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First Level/ first year	MPH102	Medical Physics	3	6
2ndLevel/ first year	PHYS 113	Medical physiology	3	6
First Level/ second. year	HLS 204	Haemopoitic and lymphatic Module	0.7	0.1
First Level/ second year	MSK 205	Musculoskeletal system	0.6	None

First Level/ second year	CVS 210	Cardiovascular System Module	0.8	0.1
2nd Level/ second year	RSP 211	Respiratory System Module	1.0	2
2nd Level/ second year	GIT 212	Digestive &HB system	1.1	None
First Level/ third year	NCS 301	Neurosciences system	1.1	2
First Level/ third year	ENS 302	Endocrine system	0.7	0.1
First Level/ third year	INS 303	Integumentary System	0.4	None
2nd Level/ third year	REN 307	Urinary system	0.7	None
2nd Level/ third year	REP 308	Reproductive system	0.7	None

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	The ability to conduct research on various health problems related to physical phenomena
Skills	
Learning Outcomes 2	Able to be a community leader
Learning Outcomes 3	Able to be a medical professional
Ethics	
Learning Outcomes 4	Students should have an ethical issues with their colleagues
Learning Outcomes 5	Students should have an ethical issues in the community

9. Teaching and Learning Strategies

Lectures, practical training programs.

10. Evaluation methods

Reports and quizes.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Ass. Prof. Dr. Hayder Sabah	Physiology	Cardiovascular			5	5
Ass. Prof. Dr. Ekhlas Jawad	Physics	–				
Lec. Dr. Mohammed Abdul Ameer	Physics	–				
Ass. Lec. Dr. Rayan Zaidan	Physiology	Cardiovascular				
Ass. Lec. Dr. Bilal Sadiq	Physiology	Neuroscience				

Professional Development

Mentoring new faculty members

The process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level is by training them for a period of time before starting the educational program.

Professional development of faculty members

It is done by training them for a period of time before starting the educational program

12. Acceptance Criterion

Regulations that related to enrollment in the college are central admission according to the rules of the Ministry of Higher Education.

13. The most important sources of information about the program
1-Al-kindy Medical College 2-Ministry of Higher Education and Scientific Research.

11. Infrastructure	
1. Books Required reading:	1. Guyton and hall textbook of medical physiology 13th edition by John E. Hall - ELSEVIER 2.Ganong's review of medical physiology 25th edition- LANGE 3. Medical physics by J.R. Cameron
2. Main references (sources)	all
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.

12. The development of the curriculum plan
1. 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

	2		The specific heat capacity of a liquid by an electrical heating method	Medical Physics lab	Reports , attendance & quiz
4	1		Electrical signals from muscle ,heart and brain	Lectures	Quiz , attendance
	1		Physics of eye and vision	Lectures	Quiz , attendance
	2		Use of Boyles law	Medical Physics lab	Reports , attendance & quiz
5	1		Physics of ear and hearing	Lectures	Quiz , attendance
	2		Infrared ,ultraviolet and microwaves in medicine	Discussion	Quiz , attendance
	2		Determine The focal length of a concave mirror	Medical Physics lab	Reports , attendance & quiz
6	1		Force in &on the body	Lectures	Quiz , attendance
	1		Skeleton design and bone strength	Lectures	Quiz , attendance
	2		Determine The focal length of convex lens using concave mirror	Medical Physics lab	Reports , attendance & quiz
7	1		Heat and Energy Requirements of People	Lectures	Quiz , attendance

	2		Calculate The wave length of sodium light using a diffraction grating	Medical Physics lab	Reports , attendance & quiz
8	1		Mechanical work and energy	Lectures	Quiz , attendance
	2		Light in medicine	discussion	Quiz , attendance
	2		Investigation The velocity of sound by means of a resonance tube closed at one end	Medical Physics lab	Reports , attendance & quiz
9	2		DOSE AND EXPOSURE—MEASUREMENTS.	Discussion	Quiz , attendance
	1		Power and energy effect on human body	Lectures	Quiz , attendance
	2		Determine The internal resistance of a cell using a potentiometer	Medical Physics lab	Reports , attendance & quiz
10	2		SPECT and PET scans	Discussion	Quiz , attendance
	1		Biological Effects of Radiation1	Lectures	Quiz , attendance
	2		Using of cathode ray oscilloscope in the measurements of D.C. voltage	Medical Physics lab	Reports , attendance & quiz
11	1		Structure of the atomic nucleus	Lectures	Quiz , attendance
	2		Radio nuclides 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
12	2		Physics of Nuclear Medicine.	Discussion	Quiz , attendance
	1		Radioactivity of Nuclear Medicine.	Lectures	Quiz , attendance
	2		Hooks law to verify the tension and compression	Medical Physics lab	Reports , attendance & quiz
13	1		Physics of Radiation Therapy.	Lectures	Quiz , attendance
	2		The wavelength of He-Ne laser	Medical Physics lab	Reports , attendance & quiz

	1		Physics of Diagnostic X-Rays	Lectures	Quiz , attendance
14	1		Interaction of x-ray with body	Lectures	Quiz , attendance
	2		The refractive index of a liquid	Medical Physics lab	Reports , attendance & quiz
15	1		Radiation protection	Lectures	Quiz , attendance
	2		Verifying of Ohms law	Medical Physics lab	Reports , attendance & quiz

10. Course Structure/Medical Physiology -First year - second Semester

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	1		Cell as a living unit of the body and physiology of cell membrane	Lectures	Quiz , attendance
	2		Blood pressure	lab	Reports , attendance & quiz
2	1		Body fluid composition	Lectures	Quiz , attendance
	2		WBC and RBC	lab	Reports , attendance & quiz
3	1		Introduction to neuron physiology	Lectures	Quiz , attendance
	2		Vision	lab	Reports , attendance & quiz
4	1		Nerve action potential	Lectures	Quiz , attendance
	2		Body temperature	lab	Reports , attendance & quiz
5	1		Properties of action potential	Lectures	Quiz , attendance
	2		Blood typing	lab	Reports , attendance & quiz
6	1		synapses and neuromuscular junction	Lectures	Quiz , attendance
	2		Skin physiology	lab	Reports , attendance & quiz
	2		Aging of muscles and nerves	discussion	Quiz , attendance
7	1		Introduction to skeletal muscle cell physiology	Lectures	Quiz , attendance
	2		Physiology of taste and smell	lab	Reports , attendance & quiz

	2		The platelets, Hemostasis and blood coagulation	discussion	Quiz , attendance
8	1		Skeletal muscle contraction	Lectures	Quiz , attendance
	2		Thermoregulation	lab	Reports , attendance & quiz
	2		Cell, morphology and classification. The white blood cell	discussion	Quiz , attendance
9	1		Smooth muscle contraction and Nervous and hormonal control of smooth muscle contraction	Lectures	Quiz , attendance
	2		Muscle fatigue	lab	Reports , attendance & quiz
	2		The hemoglobin and red blood cell	discussion	Quiz , attendance
10	1		The immune system	Lectures	Quiz , attendance
	2		Regulation of Blood Flow and Pressure	lab	Reports , attendance & quiz
	2		Cardiac muscle contractions	discussion	Quiz , attendance
11	2		Sport physiology	lab	Reports , attendance & quiz
	2		Plasma exchange	discussion	Quiz , attendance
12	2		Physiological changes in pregnancy	lab	Reports , attendance & quiz
	2		Physiology of the liver	discussion	Quiz , attendance
13	2		Hearing physiology	lab	Reports , attendance & quiz
	2		Composition and function of the blood	discussion	Quiz , attendance
14	2		Introduction to respiratory system	lab	Reports , attendance & quiz
	2		Fluid derangement in the body	discussion	Quiz , attendance
15	2		Physiology of high altitude	lab	Reports , attendance & quiz
	2		Synaptic transmission	discussion	Quiz , attendance

10. Course Structure/Medical Physiology –second year					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
	12		S1- Haemopoitic and lymphatic Module	Lecture and practical	Quiz , attendance ,Reports
	9		S1-Musculoskeletal system	Lecture and discussions	Quiz , attendance
	13		S2- Cardiovascular System Module	Lecture and practical	Quiz , attendance ,Reports
	17		S2- Respiratory System Module	Lecture and practical	Quiz , attendance ,Reports
	16		S2-Digestive &HB system	Lecture and discussions	Quiz , attendance

10. Course Structure/Medical Physiology –third year					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
	18		Neurology system module	Lecture and practical	Quiz , attendance ,Reports
	12		Endocrine system module	Lecture and practical	Quiz , attendance ,Reports
	6		Integumentary module	Lecture and practical	Quiz , attendance ,Reports
	10		Reproductive system module	Lecture and practical	Quiz , attendance ,Reports
	10		Urinary system	Lecture and practical	Quiz , attendance ,Reports

Program Skills Outline

Year/Level	Course Code	Course Name	Basic or optional	Required program Learning outcomes											
				Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First/S1	MPY1 109	Medical physics	Basic	x	x	x	x	x	x	x	x	x	x	x	x
First /S2	PHYS 115	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x
Second/S1	Hematopoietic and lymphatic module	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x
	Musculoskeletal system module	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x
Second/S2	Respiratory system module	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x
	Cardiovascular system module	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x
	Endocrine system module	Medical physiology	Basic	x	x	x	x	x	x	x	x	x	x	x	x

Third /S1	Neurology system module	Medical physiology	**Basic**	x	x	x	x	x	x	x	x	x	x	x	x	
	Integumentary module	Medical physiology	**Basic**	x	x	x	x	x	x	x	x	x	x	x	x	
Third /S2	Digestive and HB System module	Medical physiology	**Basic**	x	x	x	x	x	x	x	x	x	x	x	x	
	Reproductive system module	Medical physiology	**Basic**	x	x	x	x	x	x	x	x	x	x	x	x	
	Urinary system module	Medical physiology	**Basic**	x	x	x	x	x	x	x	x	x	x	x	x	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name: Physiology /Medical Physics

Course Code:

Medical Physics1/ MPH102(first year ,first semester)
Medical physiology/PHYS 113(first year, 2nd semester.
Hemopoietic & Lymphatic System/ HLS 204 (second year)
Musculoskeletal System/MSK 205 (second year)
Cardiovascular System/CVS 210(second year)
Respiratory System/RSP 211(second year)
GIT, Liver, Biliary and Pancreas/GIT 212(second year)
Neurosciences/NCS 301(third year)
Endocrine System/ENS 302(third year)
Integumentary System/INS 303(third year)
Renal System/REN 307(third year)
Reproductive System/REP 308(third year)

Semester / Year:

1st /S1 Medical Physics
1st/S2 Medical physiology
2nd /S1 Haemopoitic and lymphatic Module
2nd /S1 Musculoskeletal system
2nd /S2 Cardiovascular System Module
2nd /S2 Respiratory System Module
2nd /S2 Digestive &HB system
3rd /S1 Neurosciences system
3rd /S1 Endocrine system
3rd /S1 Integumentary System
3rd /S2 Urinary system
3rd /S2 Reproductive system

1. Description Preparation Date: 24/ 3/ 2024

2. Available Attendance Forms:

3. Number of Credit Hours (Total) / Number of Units (Total)

4. Course administrator's name (mention all, if more than one name)

Name: Physiology /Medical Physics

Email: haydernaji@kmc.uobaghdad.edu.iq

5. Course Objectives

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 physiology of some systems in the body which are dealt with in greater detail in the following years of the Medicine degree program

6. Teaching and Learning Strategies

Teaching and Learning Methods
1- Lectures. 2- Small group teaching 3- Slides demonstration 4- Short teaching video 5- Labs
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

10. Course Structure/Medical Physics -First year - First Semester

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Evaluation methods
1	1		Physics of cardiovascular system	Lectures	Reports , attendance & qui
	2		measurement of Young's modulus	Medical Physics lab	Reports , attendance & qui
2	1		Bernoulli's principle	Lectures	Reports , attendance & qui
	1		physics of lungs	Lectures	Reports , attendance & qui
	2		The surface tension	Medical Physics lab	Reports , attendance & qui
3	1		Measurement of lung volumes, physics of alveoli	Lectures	Reports , attendance & qui
	1		Electricity within the body.	Lectures	Reports , attendance & qui
	2		The specific heat capacity of a liquid by an electrical heating method	Medical Physics lab	Reports , attendance & qui
4	1		Electrical signals from muscle ,heart and brain	Lectures	Reports , attendance & qui
	1		Pliysics of eye and vision	Lectures	Reports , attendance & qui
	2		Use of Boyles law	Medical Physics lab	Reports , attendance & qui
5	1		Physics of ear and hearing	Lectures	Reports , attendance & qui
	2		Infrared ,ultraviolet and microwaves in medicine	Discussion	Reports , attendance & qui
	2		Determine The focal length of a concave mirror	Medical Physics lab	Reports , attendance & qui
6	1		Force in &on the body	Lectures	Reports , attendance & qui
	1		Skeleton design and bone strength	Lectures	Reports , attendance & qui
	2		Determine The focal length of convex lens using concave mirror	Medical Physics lab	Reports , attendance & qui

7	1		Heat and Energy Requirements of People	Lectures	Reports , attendance & quiz
	2		Calculate The wave length of sodium light using a diffraction grating	Medical Physics lab	Reports , attendance & quiz
8	1		Mechanical work and energy	Lectures	Reports , attendance & quiz
	2		Light in medicine	discussion	Reports , attendance & quiz
	2		Investigation The velocity of sound by means of a resonance tube closed at one end	Medical Physics lab	Reports , attendance & quiz
9	2		Dose and exposure measuremen	Discussion	Reports , attendance & quiz
	1		Power and energy effect on human body	Lectures	Reports , attendance & quiz
	2		Determine The internal resistance of a cell using a potentiometer	Medical Physics lab	Reports , attendance & quiz
10	2		SPECT and PET scans .	Discussion	Reports , attendance & quiz
	1		Biological Effects of Radiation1	Lectures	Reports , attendance & quiz
	2		Using of cathode ray oscilloscope in the measurements of D.C. voltage	Medical Physics lab	Reports , attendance & quiz
11	1		Structure of the atomic nucleus	Lectures	Reports , attendance & quiz
	2		Radio nuclides in medicine.	Discussion	Reports , attendance & quiz
	2		Flow of water through a capillary tube to deduce the viscosity of water	Medical Physics lab	Reports , attendance & quiz
12	2		Physics of Nuclear Medicine.	Discussion	Reports , attendance & quiz
	1		Radioactivity of Nuclear Medicine.	Lectures	Reports , attendance & quiz
	2		Hooks law to verify the tension and compression	Medical Physics lab	Reports , attendance & quiz
13	1		Physics of Radiation Therapy.	Lectures	Reports , attendance & quiz

	2		The wavelength of He-Ne laser	Medical Physics lab	Reports , attendance & quiz
14	1		Physics of Diagnostic X-Rays	Lectures	Reports , attendance & quiz
	1		Interaction of x-ray with body	Lectures	Reports , attendance & quiz
	2		The refractive index of a liquid	Medical Physics lab	Reports , attendance & quiz
15	1		Radiation protection	Lectures	Reports , attendance & quiz
	2		Verifying of Ohms law	Medical Physics lab	Reports , attendance & quiz

10. Course Structure/Medical Physiology -First year - second Semester

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Evaluation methods
1	1		Cell as a living unit of the body and physiology of cell membrane	Lectures	Reports , attendance & quiz
	1		Introduction to medical physiology	Discussion	Reports , attendance & quiz
	2		Body temperature	lab	Reports , attendance & quiz
2	1		Body fluid composition	Lectures	Reports , attendance & quiz
	1		Derangement in body fluids	Discussion	Reports , attendance & quiz
	2		Blood pressure	lab	Reports , attendance & quiz
3	1		Introduction to neuron physiology	Lectures	Reports , attendance & quiz
	1		Homeostasis	Discussion	Reports , attendance & quiz
	2		Blood typing	lab	Reports , attendance & quiz
4	1		Nerve action potential	Lectures	Reports , attendance & quiz
	1		Aging of muscles and nerves	Discussion	Reports , attendance & quiz
	2		Obesity and BMI	lab	Reports , attendance & quiz
5	1		Properties of action potential	Lectures	Reports , attendance & quiz

	1		Composition and function of the blood	Discussion	Reports , attendance & quiz
	2		WBC and RBC	lab	Reports , attendance & quiz
6	1		synapses and neuromuscular junction	Lectures	Reports , attendance & quiz
	1		Synaptic transmission	Discussion	Reports , attendance & quiz
	2		Thermoregulation	lab	Reports , attendance & quiz
7	1		Introduction to skeletal muscle cell physiology	Lectures	Reports , attendance & quiz
	1		The platelets, Hemostasis and blood coagulation	Discussion	Reports , attendance & quiz
	2		Vision	Lab	Reports , attendance & quiz
8	1		Skeletal muscle contraction	Lectures	Reports , attendance & quiz
	1		Physiology of the liver	Discussion	Reports , attendance & quiz
	2		Physiology of taste and smell	Lab	Reports , attendance & quiz
9	1		Smooth muscle contraction	Lectures	Reports , attendance & quiz
	1		Physiology of high altitude	Discussion	Reports , attendance & quiz
	2		Hearing physiology	lab	Reports , attendance & quiz
10	1		The immune system	Lectures	Reports , attendance & quiz
	2		Regulation of Blood Flow and Pressure	discussion	Reports , attendance & quiz
	2		Physiology of the skin	Lab	Reports , attendance & quiz
11	1		Sport physiology	Lectures	Reports , attendance & quiz
	1		Plasma exchange	discussion	Reports , attendance & quiz
12	1		Introduction to respiratory system	Lectures	Reports , attendance & quiz
	1		Geriatric physiology	discussion	Reports , attendance & quiz

13	1		Physiology of diving	Lectures	Reports , attendance & quiz
	1		Geriatric physiology	discussion	Reports , attendance & quiz
14	1		Cardiac muscle contraction	Lectures	Reports , attendance & quiz
	1		Physiology of flight	discussion	Reports , attendance & quiz
15	1		Introduction to endocrine system	Lectures	Reports , attendance & quiz
	1		Revision and exams	discussion	Reports , attendance & quiz
Reports , attendance & quiz					Reports , attendance & quiz
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Reports , attendance & quiz
	12		S1- Haemopoitic and lymphatic Module	Lecture and practical	Reports , attendance & quiz
	9		S1- Musculoskeletal system	Lecture and discussions	Reports , attendance & quiz
	13		S2- Cardiovascular System Module	Lecture and practical	Reports , attendance & quiz
	17		S2- Respiratory System Module	Lecture and practical	Reports , attendance & quiz
	16		S2- Digestive &HB system	Lecture and discussions	Reports , attendance & quiz
Reports , attendance & quiz					Reports , attendance & quiz
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Reports , attendance & quiz
	18		Neurology system module	Lecture and practical	Reports , attendance & quiz
	12		Endocrine system module	Lecture and practical	Reports , attendance & quiz
	6		Integumentary module	Lecture and practical	Reports , attendance & quiz
	10		Reproductive system module	Lecture and practical	Reports , attendance & quiz
	10		Urinary system	Lecture and practical	Reports , attendance & quiz
					Reports , attendance & quiz

7. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily prepa ra written exams, reports .... etc

8. Learning and Teaching Resources

1. Books Required reading:	1. Guyton and hall textbook of medical physiology 13th edition by John E. Hall - ELSEVIER 2. Ganong's review of medical physiology 25th edition- LANGE 3. Medical physics by J.R. Cameron
2.Recommended books 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.
3. Electronic references, Internet sites…	Any trusted sites