

Kingdom of Saudi Arabia

Alfarabi Private College



المملكة العربية السعودية
كلية الفارابي الأهلية

كلية الفارابي الأهلية - الرياض
ALFARABI PRIVATE COLLEGE-ALRIYADH



Title

Human Body II

Course specifications



Code: HBII242

Title: Human Body II

Year: Two

Level: Four

No of weeks: 15

Type of educational unit: Longitudinal course Integrated block

No of credit hours: 5 (3+1+1)

Pre-requisites for the course:

Course principle coordinator:

Course support coordinator:

Members of the Coordinating Committee:

- 1-
- 2-
- 3-

Description

In this module, students will learn the biochemistry and physiology of the typical cell. The biochemical focus will be on the fundamentals of the forces affecting molecular interactions; the structure-function relationships of proteins and carbohydrates; kinetics and catalysis; the physiological focus will be on the structure and function of subcellular organelles; and the foundations of some specialized cells – blood and lymphoid cells, muscle cells, and nerve cells - which will be needed as students' progress through future modules.

This block serves as an integrated block encompassing the structural macroscopic and microscopic organization of the human body and an appreciation for how the structural organization relates to physiology and biochemistry. It is designed to ease clinical applications with basic science concepts in the future. This course takes a systemic rather than regional approach to the anatomy, physiology and biochemistry.

Objectives

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Describe bone tissue	Lectures & seminars	Written and spotter examinations
1.2	Describe the types of bones	Lectures &	Written and spotter



		seminars	examinations
1.3	Describe axial and appendicular skeletons	Lectures & seminars	Written and spotter examinations
1.4	Give an overview of different types of joints	Lectures & seminars	Written and spotter examinations
1.5	Briefly describe the skull, thoracic cage, the vertebral column and the bones of the limbs	Lectures & seminars	Written and spotter examinations
1.6	Describe the microscopic features of Arteries, Arterioles and Capillaries venules and veins.	Lectures & seminars	Written and spotter examinations
1.7	Describe the pulmonary, systemic, and special circulations.	Lectures & seminars	Written and spotter examinations
1.8	Describe the cardiac cycle.	Lectures & seminars	Written and spotter examinations
1.9	Describe fundamental concepts relating to the relationship between blood pressure, cardiac output, and total peripheral resistance	Lectures & seminars	Written and spotter examinations
1.10	Describe factors that influence arterial blood pressure	Lectures & seminars	Written and spotter examinations
1.11	Describe the regulation of pulmonary, systemic, and special circulations.	Lectures & seminars	Written and spotter examinations
1.12	Describe briefly the major blood vessels in the different parts of the body	Lectures & seminars	Written and spotter examinations
1.13	Describe structural components of the nervous system	Lectures & seminars	Written and spotter examinations
1.14	Describe the functional components of the nervous system	Lectures & seminars	Written and spotter examinations
1.15	Give a brief description of the central nervous system	Lectures & seminars	Written and spotter examinations
1.16	Give a brief description of the peripheral nervous system	Lectures & seminars	Written and spotter examinations
1.17	Give a brief description cranial and spinal nerves	Lectures & seminars	Written and spotter examinations
1.18	Give a brief account of somatic and autonomic plexuses	Lectures & seminars	Written and spotter examinations
1.19	Describe the major peripheral nerves	Lectures & seminars	Written and spotter examinations
1.20	Describe the autonomic nervous system	Lectures & seminars	Written and spotter examinations
4.0	Communication, Information Technology, Numerical		
4.1	Communicate effectively	Seminars	
5.0	Psychomotor		
5.1	Identify the gross anatomical features of the skeleton	Practical session	Spotter
5.2	Identify the gross anatomical features of the circulatory systems	Practical session	Spotter



5.3	Identify the gross anatomical features of the nervous system	Practical session	Spotter
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Content

Topics to be covered in this block:

- **The skeleton:** Anatomical and physiological study of the bone & the skeleton
- **The circulation:** Anatomical and physiological study of the blood vessels, their classification; physiology of circulation and circulatory pathways
- **The nervous system:** Anatomical and physiological study of the nervous system, covering the general classification and description of its various components

Learning strategy

The block will utilize the student-centeredness, integration and the PBL approaches to maximize correlation, learning and retention of the learned knowledge, skills and attitudes. Lectures will be of the interactive type and as few as possible. Certain materials will be studied through practical sessions and some of the important issue related to growth and development will be learned through clinical scenarios.

Hours	Lecture	Tutorial (PBL)	Tutorial (non-PBL)	Seminar	Practical session	Other	Total
Contact	45x1			15x2	15x2		
Credit	3			1	1		

Week One

Type of activity	Code	Title of activity
Lecture 1	L1	Introduction to the course
Lecture 2	L2	Bones
Seminar	S 1	Introduction to seminars
Practical session	PS1	Types of bones

Week Two

Type of activity	Code	Title of activity
Lecture 1	L3	The classification of joints
Lecture 2	L4	The skull
Seminar	S 2	Ligaments and tendons
Practical session	PS2	Joints and ligaments

Week Three

Type of activity	Code	Title of activity
Lecture 1	L5	The vertebral column
Lecture 2	L6	Joints of the axial skeleton
Seminar	S 3	Synovial joints
Practical session	PS3	The axial skeleton

Week Four

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Type of activity	Code	Title of activity
Lecture 1	L7	The shoulder girdle
Lecture 2	L8	Bones of the ram & forearm
Seminar	S 4	Movements of the axial skeleton
Practical session	PS4	Bones of the upper limb

Week Five

Type of activity	Code	Title of activity
Lecture 1	L9	Bones of the hand and wrist
Lecture 2	L10	The pelvic girdle
Seminar	S 5	Movements of the upper limb
Practical session	PS 5	The bony pelvis

Week Six

Type of activity	Code	Title of activity
Lecture 1	L11	Bones of the thigh & leg
Lecture 2	L12	Bones of the foot
Seminar	S 6	Walking
Practical session	PS6	Bones of the lower limb

Week Seven

Type of activity	Code	Title of activity
Lecture 1	L13	Revision for Midterm Examination
Lecture 2	L14	Revision for Midterm Examination
Seminar	S 7	Revision for Midterm Examination
Practical session	PS7	Midterm Examination

Week Eight

Type of activity	Code	Title of activity
Lecture 1	L15	Introduction to the circulatory system
Lecture 2	L16	Overview of the heart
Seminar	S 8	Heart valves
Practical session	PS8	The heart

Week Nine

Type of activity	Code	Title of activity
Lecture 1	L17	The cardiac cycle
Lecture 2	L18	Blood vessels
Seminar	S9	Angiography
Practical session	PS9	Gross anatomy & histology of blood vessels

Week Ten

Type of activity	Code	Title of activity
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Lecture 1	L19	The systemic circulation
Lecture 2	L20	Control of the blood pressure
Seminar	S 10	Hypertension
Practical session	PS10	Measurement of the blood pressure

Week Eleven		
Type of activity	Code	Title of activity
Lecture 1	L21	Venous drainage
Lecture 2	L22	Pulmonary circulation
Seminar	S 11	Oxygenation and deoxygenation
Practical session	PS11	Veins

Week Twelve		
Type of activity	Code	Title of activity
Lecture 1	L23	Special circulations
Lecture 2	L24	The main arteries
Seminar	S 12	The coronary circulation
Practical session	PS3	The main arteries

Week Thirteen		
Type of activity	Code	Title of activity
Lecture 1	L25	Introduction to the nervous system
Lecture 2	L26	Overview of the central nervous system
Seminar	S 13	Functions of the nervous system
Practical session	PS5	Overview of the CNS

Week Fourteen		
Type of activity	Code	Title of activity
Lecture 1	L27	The peripheral nervous system
Lecture 2	L28	The autonomic nervous system
Seminar	S 14	Catecholamines
Practical session	PS7	Somatic plexuses

Week Fifteen		
Type of activity	Code	Title of activity
Lecture 1	L29	The physiology of the sympathetic nervous system
Lecture 2	L30	The physiology of the sympathetic nervous system
Seminar	-	
Practical session	-	

Assessment strategy



Assessment of students will employ a battery of assessment tools that are fit-for-purpose and reliable. Knowledge will be assessed through MCQ-type written exam and computer-based spotter exam. These will be conducted at the middle of the block & at its end. In addition to the mid-block written exam, continuous assessment will be done through the evaluation of performance in PBL sessions and through assignments.

Schedule of assessment tasks for students during the course			
Assessment task		Week Due	% of Total Assessment
1	Seminar evaluation	All weeks	10%
2	Midterm Exam	8 th Week	30%
3	Spotter exam/ OSPE	End of semester	20%
٤	Final Written Exam	End of semester	40%

Recommended reading

- Moore, Persaud & Torchia, The Developing Human, International Edition, Clinically Oriented Embryology With STUDENT CONSULT Online Access, 9th Edition. 2012.
- Boron & Boulpaep, Medical Physiology, Updated Edition, International Edition, with STUDENT CONSULT Online Access, 2nd Edition (INTERNATIONAL EDITION), 2012
- Guyton & Hall Textbook of Medical Physiology, 12th Edition, 2011
- Boron & Boulpaep, Medical Physiology, Updated Edition, International Edition, with STUDENT CONSULT Online Access, 2nd Edition (INTERNATIONAL EDITION), 2012
- Meisenberg & Simmons. Principles of Medical Biochemistry with STUDENT CONSULT Online Access, 3rd Edition 2012
- Ganong's Review of Medical Physiology, 24e - Kim E. Barrett, Scott Boitano, Susan M. Barman, Heddwen L. Brooks

Recommended electronic resources