

Heart Physiology – Course Plan(international Medical Program)

:Number of Students	Semester: First	Academic Year: ۱۴۰۵-۱۴۰۶
Student Representative and Mobile :Number	Course Level: Basic Sciences	Program: Medicine
Office Address: School of Medicine - ۳rd Floor - Physiology Department \	- Course Name: Heart Physiology	Department: Physiology
Contact Hours: ۱۲:۰۰-۱۳:۰۰ daily	Course Number: ۱۱۱۱۲۹۴۳۱۲	Course Instructor/Coordinator: Dr. Pourshah Nazari
Telephone: ۰۳۱۳۷۹۲۹۱۸۴	:Classroom	Day and Time: Sunday, ۱۰-۱۲
E-mail: aaporsha@gmail.com	Prerequisite Courses: Cell, Nerve, and Muscle Physiology	Course Type: Theoretical
Overall Course Objective: Students are expected to learn the concepts, principles, and physiological mechanisms related to cardiac function, circulatory system function, and respiratory physiology in the areas listed below, and to be able to identify them in normal and altered physiological processes		
:Specific Objectives of Heart Physiology Heart, its chambers and layers – Cardiac muscle, cardiac action potential, and contraction of cardiac muscle cells – Cardiac cycle and its stages – Control of cardiac activity – Electrocardiogram (ECG) curve – Path of blood through the heart during one cardiac cycle – Physiological characteristics of cardiac muscle and its similarities to and differences from skeletal muscle – Stages and mechanisms of cardiac muscle contraction – Cardiac muscle cell action potential, its stages, and differences from skeletal muscle – Components of the cardiac excitation-conduction system and control of heart rate – Cardiac cycle and its stages – Concepts of cardiac output, end-systolic volume, end-diastolic volume, and stroke volume – Preload, afterload, and their effects on cardiac output – Sympathetic and parasympathetic systems in control of cardiac function – ECG curve and its components – Cardiac leads and electrode – placement – How the P, QRS, and T waves of the ECG are generated		
Main Course References (title of textbook or course handout, author, year and place of publication, publisher, : (and relevant chapters or pages—when studying the entire book or all volumes is not required Guyton and Hall Textbook of Medical Physiology :Supplementary Course References (book, journal, system, etc.) Berne & Levy Physiology		
Maximum ۲۰% Approximately ۸۰%	Student Assessment Methods and Weight of Each Assessment A) Formative Assessment (during-course assessment, including quizzes, assignments, midterm examination, etc.): In-course examinations B) Summative Assessment (end-of-course assessment): Final examination	
:Student Responsibilities .Study Cell Physiology and previous sessions, and attend class with prior preparation .Other Important Notes for Students: To be provided in the first session		

Reference for This Syllabus		Instructor	Title (Based on the National Curriculum Syllabus)	Date	No
Guyton Chapter	Reference Name				
9 و 14	Guyton Physiology	Dr. Pourshah Nazari	General Principles of the Cardiovascular System (Physical Principles (Anatomy, and Histology of the Cardiovascular System	1405/9/1	1
10	Guyton Physiology	Dr. Pourshah Nazari	Electrical and Contractile Activity of Cardiac Muscle	1405/9/8	2
10	Guyton Physiology	Dr. Pourshah Nazari	Rhythmic Excitation of the Heart	1405/9/15	3
9	Guyton Physiology	Dr. Pourshah Nazari	Normal Electrocardiography and Its Waves	1405/9/22	4
11	Guyton Physiology	Dr. Pourshah Nazari	Principles of ECG Analysis and the Cardiac Axis	1405/9/29	5
12	Guyton Physiology	Dr. Pourshah Nazari	The Heart as a Pump	1405/10/6	6
9	Guyton Physiology	Dr. Pourshah Nazari	Control of Cardiac Function	1405/10/13	7
13	Guyton Physiology	Dr. Pourshah Nazari	Arrhythmias and ECG Abnormalities	1405/10/20	8
70	:Total Pages				

Session rules:

- 1-All students are advised to print the class PowerPoint presentations and bring them to class. Having extra space for taking notes beside the figures and charts will be useful
- 2-A proportional number of questions from each teaching session is included in the examination blueprint. The importance of the material is based on the time spent teaching it, rather than its volume in the reference. Therefore, class notes are particularly important
- 3-A limited number of questions will be taken from the course reference and may not have been covered in class. Therefore, studying the main reference is necessary to obtain a full score
- 4-Most examination questions are five-option multiple-choice questions without negative marking. A smaller number are combined questions, including fill-in-the-blank, matching, English, completion, and essay questions
- 5-Students are advised to visit the department website for greater access to the main and supplementary resources
- 6-The Faculty Education Office is responsible for administering examinations, and students are required to comply with the relevant regulations
- 7-Due to the large number of students in the examination session, no questions will be answered except those concerning printing errors. If any problem is found, the student should answer the best option and report the issue in the comments and suggestions section at the end of the questions
- 8-Writing the student's first and last name on the examination paper is mandatory. For grading, the examination paper must be submitted together with the answer sheet
- 9-Bringing course materials and mobile phones into the examination room is prohibited
- 10-After the grades are posted, students have three days to submit a written appeal; in-person appeals will not be accepted
- 11-Before the final grades are announced on the website, students have three days to submit an appeal through the website; in-person appeals will not be accepted
- 12-If students object to an examination, a committee consisting of the female and male student representatives and the two students with the highest grades in the class will review the examination in the relevant instructor's office. If the students remain dissatisfied, the committee must report the matter to the department head
- 13-All academic coordination between the instructor and students will be conducted through the student representative. Information received from other students is not considered official
- 14-The student representative is required to prepare and turn on all audiovisual equipment, such as the computer, video projector, and data projector, before the instructor enters