

School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

MEDICAL BIOLOGY and GENETICS

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
MEDICAL BIOLOGY and GENETICS	PHA1112085	Fall Semester	3+0	3	6
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Assist.Prof. Yasemin YOZGAT BYRNE				
Name of Lecturer(s)	Assist.Prof. Yasemin YOZGAT BYRNE				
Assistant(s)					
Aim	To inform about the general structure and functions of the cell and hereditary material.				
Course Content	This course contains; Introduction to Medical Biology,Cellular structure and organelles,DNA, chromosomes and genome,DNA replication and repair mechanisms,RNA and protein synthesis,Control of gene expression and Epigenetics,Midterm exam,Cell junctions and signal transduction,Cell cycle and cell division,Cellular aging and cell death,Cancer and molecular mechanisms,Stem cell biology and treatments,Genetics and genetic disorders,Final exam.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
To define the organic monomers and their macromolecules that form the structure of the cell.			10, 16, 37, 6, 9	A, E	
Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 37: Computer-Internet Supported Instruction, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Introduction to Medical Biology	1,2,3,4			
2	Cellular structure and organelles	1,2,3,4			
3	DNA, chromosomes and genome	1,2,3,4			
4	DNA replication and repair mechanisms	1,2,3,4			
5	RNA and protein synthesis	1,2,3,4			
6	Control of gene expression and Epigenetics	1,2,3,4			
7	Midterm exam	1,2,3,4			
8	Cell junctions and signal transduction	1,2,3,4			
9	Cell cycle and cell division	1,2,3,4			
10	Cellular aging and cell death	1,2,3,4			
11	Cancer and molecular mechanisms	1,2,3,4			
12	Stem cell biology and treatments	1,2,3,4			
13	Genetics and genetic disorders	1,2,3,4			
14	Final exam	1,2,3,4			
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources
Essential Cell Biology, 5th Edition, Alberts, Hopkin, Johnson, Morgan, Raff, Roberts, Walter. 2019, Garland-Norton.Lecture slides