

CELL CULTURE

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
CELL CULTURE	HSED2137540	Fall Semester	2+4	4	8
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Third Cycle (Doctorate Degree)				
Course Type	Elective				
Course Coordinator	Prof.Dr. İlknur KESKİN				
Name of Lecturer(s)	Prof.Dr. İlknur KESKİN, Prof.Dr. Tangül MÜDOK				
Assistant(s)	İlknur Keskin, Seda Karabulut				
Aim	The aim of this lecture is to acquire the basic and detailed knowledge of cell culture, cell culture techniques, cell lines and stem cell aspects.				
Course Content	This course contains; Introduction to cell culture,Cell lines,Cell culture techniques,Primary culture and passaging,Cryopreservation of cell and cell lines,Applications of cell culture,Midterm exam,Introduction to stem cell ,Cell cycle of stem cells, stress and aging,Pluripotent stem cells,embryonic source of multipotent stem cells,adult stem cells,cancer stem cells,Final exam.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Defines basic concepts about cell culture			14, 17, 9	A	
Explains basic information about cell lineages.			14, 9	A	
Defines basic concepts related to cell culture techniques.			14, 17, 9	A	
Explains the basic concepts of primary cell culture and passaging.			14, 17, 9	A	
Explains the basic information about freezing and thawing of cells and cell lines.			14, 17, 9	A	
Explains the usage areas of cell culture.			14, 9	A	
Defines the basic concepts related to the concept of stem cells.			14, 9	A	
Explains basic concepts about the life cycle of stem cells, stress and aging.			14, 9	A, E	
Identifies pluripotent stem cells.			14, 9	A	
Explains the basic information about embryo and fetus derived multipotent stem cells.			14, 9	A, E	
Identifies adult stem cells.			14, 9	A	
Explains the basic information about cancer stem cells.			14, 9	A, E	
Teaching Methods	14: Self Study Method, 17: Experimental Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Introduction to cell culture	Reading the relevant course presentation			
2	Cell lines	Reading the relevant course presentation			
3	Cell culture techniques	Reading the relevant course presentation			
4	Primary culture and passaging	Reading the relevant course presentation			
5	Cryopreservation of cell and cell lines	Reading the relevant course presentation			
6	Applications of cell culture	Reading the relevant course presentation			
7	Midterm exam	-			
8	Introduction to stem cell	Reading the relevant course presentation			
9	Cell cycle of stem cells, stress and aging	Reading the relevant course presentation			
10	Pluripotent stem cells	Reading the relevant course presentation			
11	embryonic source of multipotent stem cells	Reading the relevant course presentation			
12	adult stem cells	Reading the relevant course presentation			
13	cancer stem cells	-			
14	Final exam				
Evaluation Methods		Weight(%)			
Midterm Exam		50			
General Exam		50			

Resources
Lecture notes