



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Advanced Cell and Tissue Culture Techniques							
Course Code		TIB602		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	151 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course									
Course Content									
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)		Prof. Mehtap KILIÇ EREN							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	The Cell: A molecular Approach , Geoffrey M. Copper
2	2. Molecular Cell Biology, Lodish, WH Freeman and Company
3	3. Molecular Biology of the Cell, Alberts, Garland Science

Week	Weekly Detailed Course Contents	
1	Theoretical	Primary cultures, short-and long-term cultures
2	Theoretical	Cultures care, primary cultures, cell line,
3	Theoretical	Defining the concepts of continuous cell lines
4	Theoretical	Changing of the media and cell passages, different purposes culture conditions
5	Theoretical	Characterization of cells in culture, markers of tissue and concepts of transformation
6	Theoretical	Staining, microscopy and photography for the morphological evaluation purposes
7	Theoretical	Cross contaminations and preventing methods
8	Intermediate Exam	Midterm Exam
9	Theoretical	Contamination detection methods, methods for the determination of mycoplasma contamination
10	Theoretical	Cell cloning and selection of specific cell type, purpose and definition of cell cloning, dilution by cloning
11	Theoretical	Cloning in suspension cultures and soft agar method
12	Theoretical	Determination of the chromosomal composition of cells
13	Theoretical	Transformed cell cultures, cell characteristics and transformation studies in culture
14	Theoretical	Transformation genetic and chromosomal abnormalities, studies to determine tumorigenic properties
15	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	4	1	65
Lecture - Practice	13	4	2	78
Midterm Examination	1	2	2	4
Final Examination	1	2	2	4
Total Workload (Hours)				151
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	1. Explains primary cultures, short-and long-term cultures
2	2. Explains and performs cultures care, primary cultures, cell line, defining the concepts of continuous cell lines, changing of the media and cell passages, different purposes culture conditions
3	3. Explains characterization of cells in culture, markers of tissue and concepts of transformation
4	Explains cell cloning and selection of specific cell type, purpose and definition of cell cloning, dilution by cloning, cloning in suspension cultures and soft agar method
5	Determines the chromosomal composition of cells. Transformed cell cultures, cell characteristics and transformation studies in culture, transformation genetic and chromosomal abnormalities, studies to determine tumorigenic properties.

Programme Outcomes (Medical Biology Doctorate)

1	To acquire fundamental knowledge on medical biology field
2	To gain expertise on molecular biology techniques
3	To utilize molecular biology techniques
4	To be able to construct and conduct a research project
5	To be able to follow and interpret scientific advancements

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	5	1	1	1	1
P2	4	4	4	4	4
P3	3	4	3	4	4
P4	4	4	4	2	2
P5	1	2	2	1	1

