

GAZİ UNIVERSITY GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCE ECTS FORM								
Course Code and Title	ILT 549 CELL CULTURE TECHNOLOGY AND BIOMEDICAL APPLICATIONS							
Credits	3							
ECTS	7.5							
Name of Lecturer And e-mail address	Assoc. Prof. Dr. Gülçin Sağdıçoğlu Celep, gulcin.celep@gmail.com							
Department/Program	Advanced Technologies							
Course Type	Elective							
Course Language	Turkish							
Course Semester	Fall/Spring							
Prerequisites	None							
Course Objectives	Teaching the basic information, techniques applied and the principles of cell and tissue culture technology. Teaching the applications of cell and tissue culture technology in biomedical field. Teaching the interdisciplinary studies and developments in this field in our country and in the world.							
Course Contents	Cell and its structure. Equipments used in cell culture. Basic principles of cell culture. Cell passage and growth curve. Cell freezing and saving techniques. Cell viability and toxicity tests. Cell culture and drug discovery against diseases (anticancer etc.). Biotechnology applications. Cell therapy. Stem cell technology. Tissue engineering and regenerative medicine. Cell banks. Recents advances in cell and tissue culture technology. Applications of cell and tissue culture technology in Turkey.							
Course Learning Outcomes	Ability to use technical /modern materials which will be required in her/his studies, ability to present oral and written forms in her/his field, ability to work on interdisciplinary studies, ability to rapidly distinguish the true and required knowledge and ability to analyze the results.							
References (References must be up to date)	Books	1-Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications, 6th Edition, R. Ian Freshney. ISBN: 978-0-470-52812-9, 2010, Wiley-Blackwell 2-Molecular Cell Biology, Edit: Harvey Lodish, W.H. Freeman and Company, 2008 3-Recent publications about cell culture technology and biomedical applications 4. ATCC Animal Cell Culture Guide (2015)						
	Journals, Articles, Papers, Symposiums							
Planned learning activities and teaching methods	Theoric	Practice	Lab.	Projects	Assign.	Other	Total	ECTS
	42			76	30		188	7.5
Assessment Methods and Criteria	Quantity (mark with "X")					Percentage (%)		
Midterm Exam	X					30		
Quiz								
Assignment	X					10		
Projects	X					20		
Laboratory								
Practice								
Other								
Final Exam	X					40		
WEEKLY COURSE PLAN								
Week	Contents and topics							
1. Week	Cell and its structure							

2. Week	Equipments used in cell culture
3. Week	Basic principles of cell culture
4. Week	Cell passage and growth curve
5. Week	Cell freezing and saving techniques
6. Week	Cell viability and toxicity tests
7. Week	Midterm
8. Week	Cell culture and drug discovery against diseases (anticancer etc.)
9. Week	Biotechnology applications
10. Week	Cell therapy
11. Week	Stem cell technology
12. Week	Tissue engineering and regenerative medicine
13. Week	Cell banks
14. Week	Recent advances in cell and tissue culture technology.
15. Week	Applications of cell and tissue culture technology in Turkey
16. Week	Applications of cell and tissue culture technology in Turkey