

CELL CULTURE

1	Course Title:	CELL CULTURE
2	Course Code:	TİM5011
3	Type of Course:	Optional
4	Level of Course:	Second Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	1.00
9	Practice (hour/week):	4.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ARZU YILMAZTEPE ORAL
15	Course Lecturers:	Prof. Dr. H. Barbaros Oral
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi, Tıp Fakültesi, Tıbbi Biyokimya Anabilim Dalı, 16059, Nilüfer, BURSA E-mail: arzuy@uludag.edu.tr Tel: 2953921
17	Website:	
18	Objective of the Course:	The aim of this course is to provide the student knowledge and skills required for performing cell culture methods.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	To know the biological features of primary cells and cell lines
	2	To comprehend the equipment, consumables and environment
	3	To gain knowledge about the maintenance and storage of cell culture
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Cell culture laboratory and its equipments	
2	Safety in cell culture laboratories and asepsis techniques	
3	Features of culture environment	
4	Primary cell culture and features	

5	Cell counting and viability tests	
6	Suspension cell cultures and features	
7	Passage in monolayer cultures and its maintenance	
8	Detection of contamination and measures	
9	Cell freezing and storage	
10	Specific cell separation methods	
11	Flow cytometry in cell culture	
12	Immunochemical staining in cell culture	
13	Cell-based ELISA	
14	Fluorescent plate tests used in cell culture	

22	Textbooks, References and/or Other Materials:	<ol style="list-style-type: none"> 1. Thompson L., "Measuring Immunity: Basic and clinical practice", Elsevier Academic Press (2005). 2. Buyru N., Dalay N., Özgüç M., Öztürk M., Sakızlı, M. (Çeviri editörleri) "Hücrenin Moleküler Biyolojisi", TÜBA Yayınları, 1. Basım (2008) 3. Green M., Sambrook J., "Molecular Cloning: A Laboratory Manual", Cold Spring Harbor Laboratory Press (2012)
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	1	14	1.00	14.00
Final Exam		50.00		
Practicals/Labs		14	4.00	56.00
Self study and preparation		14	4.00	56.00
Contribution of Term (Year) Learning Activities to	50.00			
Homeworks		5	10.00	50.00
Contribution of Final Exam to Success Grade	50.00			
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		0	0.00	0.00
Measurement and Evaluation Techniques Used in the				
Others		0	0.00	0.00
24 CREDITS / WORK LOAD TABLE				
Final Exams		1	4.00	4.00
Total Work Load				180.00
Total work load/ 30 hr				6.00
ECTS Credit of the Course				6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High
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