

TECHNIQUES OF HISTOCHEMISTRY AND IMMUNOHISTOCHEMISTRY

1	Course Title:	TECHNIQUES OF HISTOCHEMISTRY AND IMMUNOHISTOCHEMISTRY	
2	Course Code:	THE 6004	
3	Type of Course:	Compulsory	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	1.00	
9	Practice (hour/week):	4.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	THE 6005 Techniques of Light Microscopy	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ZEHRA MİNİBAY	
15	Course Lecturers:	Prof.Dr. Zehra Minbay	
16	Contact information of the Course Coordinator:	oeyigor@uludag.edu.tr 295 4065 U.Ü. Tıp Fak. Histoloji ve Embriyoloji AD.	
17	Website:		
18	Objective of the Course:	To educate researchers; who comprehend the detailed knowledge of histochemical and immunohistochemical techniques, who acknowledge the area of usage and the differences of these techniques and who can employ these techniques.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To comprehend the principles of histochemical techniques
		2	To employ histochemical techniques in the laboratory and interpret the results.
		3	To understand the principle of enzyme histochemistry and to employ these techniques in the laboratory.
		4	To comprehend the principles and protocols of immunohistochemical techniques
		5	To be able to employ light and fluorescence immunohistochemical techniques.
		6	To be able to perform light and fluorescence microscopic analyses in immunohistochemistry.
		7	To quantitatively analyse the preparations resulted after immunohistochemical staining.
		8	To comprehend the electroimmunohistochemistry techniques.
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21	Course Content:				
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Week	Theoretical		Practice		
1	The aim and teaching plan of the course		Overview of the histochemistry laboratory		
2	Introduction to histochemical techniques		Preparation of solutions		
3	Histochemical procedures		Principles of the techniques		
4	Enzyme histochemistry		Enzymatic reactions		
5	Enzymatic staining		Staining technique of enzyme histochemistry		
6	Principles of immunohistochemistry		Overview of the immunohistochemistry laboratory		
7	Immunohistochemical tissue preparation, fixation and sectioning		Laboratory: Fixation and sectioning		
8	Antigen Retrieval Methods		Laboratory: Antigen Retrieval		
9	Immunohistochemical methods for light microscopy		Laboratory: Immunohistochemistry for light microscopy		
10	Immunohistochemical methods for		Laboratory: Immunohistochemistry for fluorescence		
Activities			Number	Duration (hour)	Total Work Load (hour)
Theoretical	microscopy	electron microscopy and analysis	14	1.00	14.00
Practicals/Labs			14	4.00	56.00
Self study and preparation	immunohistochemistry	preparations	14	3.00	42.00
Homeworks			2	10.00	20.00
Projects	immunohistochemistry	preparations	0	0.00	0.00
Field Studies			0	0.00	0.00
Midterm Exams	Principles of quantitative analysis of immunohistochemical stainings	Laboratory: Quantitative analysis of immunohistochemical stainings	0	0.00	0.00
Others			0	0.00	0.00
Final Exams	Textbooks, References and/or Other Materials:	Immunocytochemistry: A Practical Approach (Editor).	1	15.00	15.00
Total Work Load					147.00
Assessment					4.90
Total work load/ 30 hr					4.90
ECTS Credit of the Course					5.00
Midterm Exam		0	0.00		
Quiz		0	0.00		
Home work-project		2	0.00		
Final Exam		1	100.00		
Total		3	100.00		
Contribution of Term (Year) Learning Activities to Success Grade			0.00		
Contribution of Final Exam to Success Grade			100.00		
Total			100.00		
Measurement and Evaluation Techniques Used in the Course					
24	ECTS / WORK LOAD TABLE				

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	3	5	0	0	0	0	5	0	0	0	0	2	0	0	0	0
ÖK2	3	5	4	0	3	0	5	0	0	0	0	0	0	0	0	0
ÖK3	3	5	4	0	0	0	5	0	0	0	0	2	0	0	0	0
ÖK4	3	5	4	0	0	0	5	0	0	0	0	2	0	0	0	0
ÖK5	3	5	4	0	3	0	5	0	0	0	2	0	0	0	0	0
ÖK6	3	5	4	0	0	0	5	0	0	0	2	0	0	0	0	0
ÖK7	3	5	4	0	3	0	5	0	0	4	2	0	0	0	0	0
ÖK8	3	5	4	0	0	2	5	0	0	0	0	2	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			