Course Name	Code	Semester	Theory (hrs/week)	Application (hrs/week)	Laboratory (hrs/week)	ECTS
Microscopic Anatomy Techniques	ANA608	1st Semester	2	0	2	4
Prerequisites	No					
Course language	Turkish					
Course Type	Imperative					
Learning and teaching techniques of the course	Theoretical Lectures, Discussion and Laboratory Studies					
Course instructor(s)	Prof. Dr. Şahin Abdullah Sırmalı, Lecturer Res. Asst. Gökçe Deniz Külekçi					
Course objectives	To gain general information about the normal structure, development and functions of cells and tissues, to recognize the techniques used in the field of microscopic anatomy, to learn the basic principles of light and electron microscopes about their types and uses.					
Learning outcomes of the course	1- Have knowledge about microscopic anatomical techniques and laboratory features. 2- Have knowledge about light (IM) and electron (TEM, SEM) microscopes and know and prepare the basic principles of sample preparation for examination with these microscopes. 3- Uses these microscopes to examine specimens, appropriately obtains and records micrographs.					
Resources	1- Mescher AL. Junqueira's Basic Histology Text & Atlas. 15th ed. United States: McGraw-Hill Education; 2018. 573 p. 2- Moore KL, Persaud TVN, Torchia MG. The Developing Human Clinically Oriented Embriyology. 10th ed. United States, Philadelphia: Elsevier; 2016. 679 p. 3- Eroschenko VP. diFiore's Atlas of Histology with Functional Correlations. 12th ed. United States, Philadelphia: Lippincott Williams and Wilkins; 2013. 625 p.					

Weekly Course Topics:

WEEKS	TOPICS TO BE DISCUSSED
1. Week	Microscopic anatomy and its uses
2. Week	Types of microscopes and basic principles
3. Week	Light microscopes
4. Week	SEM-TEM-General principles
5. Week	SEM-TEM-Sample review
6. Week	Digilab sample preparation
7. Week	Zeiss axioscan-2 sample review
8. Week	**Midterm Exam**
9. Week	Cell
10. Week	Epithelial of docus
11. Week	Connective tissue
12. Week	Cartilage-bone tissue
13. Week	Muscle tissue
14. Week	Nerve tissue
15. Week	**Final Exam**

Student Workload Table

Events	Number	Time	Total Workload
Lesson	14	2	28
Laboratory	14	2	28
Application			
Fieldwork			
Out-of-Class Study Time (Freelancing/Group Work/Pre-Study)	14	3	42
Presentation (Shooting videos/Preparing posters/Making Oral Presentations/Focus Group Interviews/Conducting Surveys/Observation and Report Writing)			
Seminar Preparation			
Project			
Case Study			
Role Playing, Dramatizing			
Writing an article-Criticizing			
Mid-term exams	1	1	1
Final exams	1	1	1
Total workload (hours) / 25(s)	100/25		
Ders ACT	**4**		

Evaluation System

Semester Studies	**Number**	**Contribution**
Midterm Exam	1	%40
Quiz		
Laboratory		
Application		
Fieldwork		
Course-Specific Internship (If Available)		
Assignments		
Presentation and Seminar		
Projects		
Other		
Total of Semester Studies		%40
Final Work		
Finale	1	%60
Homework		
Application		
Laboratory		
Total of Final Studies		%60
The Contribution of Semester Studies to the Success Grade		%40
The Contribution of the Final Exam to the Success Grade		%60
Sum of Success Grade		**100**

THE RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM COMPETENCIES

No	Program Qualifications	Learning Outcomes		
		ÖÇ1	ÖÇ2	ÖÇ3
1	Knows the basic structure, functions and working mechanisms of organs and systems and can explain each system in detail.			
2	Describe the basic microanatomical structures and developmental processes of tissues, organs and systems in the human body.	5	1	4
3	Knows the topographic layouts, surface projections and courses of organs and formations.			
4	It alone can dissect different parts of cadavers, identify organs and other structures.			
5	Radiography can describe normal anatomical structures in MRI and CT images and provide anatomical explanation for pathological conditions.			
6	Can establish, solve and develop hypotheses about anatomy by using anatomy knowledge at a high level.			
7	Can design, implement, conclude and manage an original research process related to anatomy by using appropriate technologies.			
8	Present and publish the results of academic studies in the field of anatomy in reputable domestic and international academic environments.			
9	Observes and teaches social, scientific and ethical values in the stages of collecting, recording, interpreting and announcing data related to the field of anatomy.			
Qualification level: 1: Low, 2: Low/Medium, 3: Medium, 4: High, 5: Excellent				