



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Microscopes and Digital Imaging							
Course Code		THE526		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		to learn and apply all steps in preparation of tissues which will be evaluated in different types of microscopes							
Course Content		Microscope types and working principles, preparation of tissues							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Histoloji Konu Anlatımı ve Atlas
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Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to microscopes
2	Theoretical	Classification of microscope species
3	Theoretical	light microscope
4	Theoretical	preparation of tissue samples for light microscopy
5	Theoretical	Light microscopic staining methods
6	Theoretical	article discussion
7	Intermediate Exam	midterm exam
8	Theoretical	Properties and applications of confocal microscope
9	Theoretical	Dark field microscope features and usage areas
10	Theoretical	Phase contrast microscope features and usage areas
11	Theoretical	Fluorescence microscope properties and usage areas
12	Theoretical	Inverted microscope properties and usage areas
13	Theoretical	History of Scanning Electron Microscopy / development, working principles and application areas
14	Theoretical	article discussion
15	Theoretical	article discussion
16	Final Exam	final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Lecture - Practice	14	3	2	70
Reading	10	0	1	10
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Explain and use light microscope types
2	To be able to explain and use fluorescence microscope
3	To be able to define the principles of Electron Microscopy
4	To follow new imaging technologies and investigate the microscopes that are being developed



5	Defining a confocal microscope
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Programme Outcomes (*Histology and Embryology (Medical) Master*)

1	To have detailed information about cell structure and function at microscopic level
2	To have theoretical and practical knowledge about experimental methods used in histology
3	To know the ethical rules for publishing and presenting a scientific study
4	To have sufficient knowledge about the laboratory methods used in fertilization and assisted reproduction
5	to have enough knowledge about the general characteristics of human embryology

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	4	4	3	4	4
P2	3	3	4	4	3
P3	4	4	3	3	4
P4	3	5	4	4	3
P5	4	3	4	3	3

