



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Streptoavidin-Biotin Peroxidase Method							
Course Code		VHE535		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	1	Practice	2	Laboratory	0
Objectives of the Course		The aim of course is to teach application of streptoavidin-biotin peroxidase method in paraffin and frozen sections: fixation, protection of antigen, dehydration and cleaning, problems of staining methods and its solving.							
Course Content		Application of streptoavidin-biotin peroxidase method in paraffin and frozen sections: Fixation, protection of antigen, dehydration and cleaning, problems of staining methods and its solving.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, 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	Polak, J.M., Van Noorden, S. (2003) Introduction to Immunocytochemistry, Garland Science London
2	Burky, R.W. (2010) Immunocytochemistry, Springer USA.

Week	Weekly Detailed Course Contents	
1	Theoretical	Streptoavidin-biotin peroxidase method
	Practice	Identification of laboratory material for this method
2	Theoretical	Streptoavidin-biotin peroxidase method
	Practice	Identification of laboratory material for this method
3	Theoretical	Purpose of the streptoavidin-biotin peroxidase method
	Practice	Prepare of other solutions for this method
4	Theoretical	Fixatives for this method
	Practice	Fixatives for this method
5	Theoretical	Fixatives for this method
	Practice	Fixatives for this method
6	Theoretical	Prepare of fixatives for this method
	Practice	Prepare of fixatives for this method
7	Theoretical	Prepare of fixatives for this method
	Practice	Prepare of fixatives for this method
8	Intermediate Exam	Midterm
9	Theoretical	Protection of the antigen in this method.
	Practice	Protection of the antigen in this method.
10	Theoretical	Tissue dehydration and clearing in this method.
	Practice	Tissue dehydration and clearing in this method.
11	Theoretical	Staining procedure in this method.
	Practice	Staining procedure in this method.
12	Theoretical	The problems possible in this method and its solving.
	Practice	Staining procedure in this method.
13	Theoretical	The problems possible in this method and its solving.
	Practice	The problems possible in this method and its solving.
14	Theoretical	The problems possible in this method and its solving.
	Practice	The problems possible in this method and its solving.
15	Theoretical	Article discussion



15	Practice	Article presentation
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Lecture - Practice	14	0	2	28
Midterm Examination	1	15	1	16
Final Examination	1	16	1	17
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	The student learns tissue fixation for streptavidin-biotin peroxidase method.
2	The student learns protection of the antigen in this method.
3	The student learns tissue dehydration and clearing in this method.
4	The student learns staining procedure in this method.
5	Understands the staining procedure in this method.

Programme Outcomes (*Histology and Embryology (Veterinary Medicine) Master's Without Thesis*)

1	Gains expert knowledge on the function and basic histological features of cells, tissues and systems in animals
2	Gains expert knowledge on the stages of embryonal and fetal development in both mammals and birds
3	Comprehends and defines interactions among disciplines related to histology-embryology.
4	Knows national and international laws and regulations concerning histology and embryology.
5	Determines and uses laboratory equipment and consumables in a histology laboratory.
6	Forms ideas to solve complex problems using theoretical and practical information gained throughout the histology/embryology education.
7	Integrates and interprets information in the area of histology/embryology with information in different fields and, if the need arises, provides scientific information and solutions to solve problems.
8	Performs his/her expertise with the recognition of the rights and responsibilities obtained with the completion of the master of Science in histology/embryology.
9	Develop alternative strategies to solve national and international problems in the field of histology/embryology using expert knowledge and expertise in histology/embryology obtained during his/her training, solves them and evaluates the data. If the need arises, takes a part as a team member to solve problems outside his/her field.
10	Takes responsibility in individual and collective work and completes his/her duties. Takes professional and ethical responsibilities.
11	Comprehends methods associated with attainment and presentation of scientific information.
12	Evaluates his/her expert information gained during the master of Science critically and determines new information and sources of information and attends to activities to complement his/her educational deficiencies
13	For his/her professional development, evaluates and uses any available information and activity in his/her studies.
14	If the need arises, gives information and organizes activities to define a problem in his/her field of expertise.
15	Takes responsibilities in professional organizations and committees related to his/her field of expertise.
16	Relying on his/her professional skills and rights, he/she plans and realizes projects with the conciseness of social responsibility. He/she follows the developments in the world and is sensitive to events.
17	In order to maintain his/her professional development and to have social interactions, he/she uses at least one foreign language.
18	Uses advanced technological means that might be necessary for both professional applications and social interactions.
19	Reviews, evaluates and interprets any data (field observations, available scientific information etc.) towards a specific purpose. Develops and uses strategies in his/her field of expertise.
20	Applies and defines his/her expert knowledge with realizing the needs of the region and the country.

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	5	5	5	5	5
P2	2	2	2	2	2
P3	4	4	4	4	4



P5	4	4	4	4	4
P6	3	3	3	3	3
P7	4	4	4	4	4
P8	4	4	4	4	4
P10	4	4	4	4	4
P11	4	4	4	4	4
P12	4	4	4	4	4
P13	4	4	4	4	4
P19	4	4	4	4	4

