

TOROS ÜNİVERSİTESİ

School Of Health Sciences
Nursing And Health Services

Course Information

HISTOLOGY					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
HEM107	Fall	2	0	2	3

Prerequisites and co-requisites	-
Language of instruction	Turkish
Type	Required
Level of Course	Bachelor's
Lecturer	Tiınç AKSAK
Mode of Delivery	Face to Face
Suggested Subject	-
Professional practise (internship)	None
Objectives of the Course	To have knowledge about basic histological features and functions of cells, tissues and organs in human organism.
Contents of the Course	-Histologic Methods -The General Structure of Cell -The General Structure and Function of Epithelial Tissue -General Structure and Function of Connective Tissue -General Structure and Function of Muscle Tissue - General Structure and Function of Nervous Tissue -General Structure of Skin

Learning Outcomes of Course

#	Learning Outcomes
1	Learns Light Microscope features, types. Learns tissue processing for light microscopy. Learns functions of necessary chemicals.
2	Explains the general structure of cell. Defines the characteristics of plasma membrane. Explains the characteristics of nucleus. Explains the general structure of cytoplasm. Defines the membranous organelles. Defines the nonmembranous organelles. Explains the structure of the cytoskeleton.
3	Explains the cell cycle. Defines types of cell division.
4	Learns the general structure and functions of epithelium tissue. Classifies epithelium tissue. Differentiates types of lining epithelium. Learns apical and lateral cell specializations and junctional complexes, basal cell specializations and cell-extracellular matriks specializations. Learns the general structure and functions of glandular epithelium, types of glandular epithelium.
5	Explains the general structure and functions of connective tissue and connective tissue cells. Explains the connective tissue fibers, extracellular matrix and ground substance. Explains the general structure of adipose tissue. Explains the general structure of cartilage tissue. Defines the histological types and functions of cartilage tissue. Explains the general structure of bone tissue. Explains the general structure and functions of blood tissue and blood cells.
6	Learns general structure of muscle tissue. Classifies muscle tissue. Learns structure and characteristics of skeletal (striated) muscle. Learns structure and characteristics of cardiac muscle. Learns structure and characteristics of smooth muscle.
7	Learns general structure and function of nervous tissue. Learns distinguishing different neuron types of gray matter of the central nervous system. Learns distinguishing different cell types and nerve fibers of white matter of the central nervous system. Learns myelinated nerve fibers of the peripheral nervous system and Schwann cells and sheaths wrapping these fibers. Learns distinguishing neurons in ganglia from other cell types.
8	Learns general structure and functions of skin. Differentiates layers of skin. Learns characteristics and functions of cells of the epidermis. Learns structure and functions of the skin appendages.

Course Syllabus

#	Subjects	Teaching
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		Methods and Technics
1	Histologic Methods, Light Microscope Features and Types, Light Microscopic Tissue Processing Methods, Sectioning, General Features of Histochemical Dyes	Face to face Lecture, Discussion
2	The General Structure of Cell, Cytoplasm	Face to face Lecture, Discussion
3	Organelles	Face to face Lecture, Discussion
4	Nucleus	Face to face Lecture, Discussion
5	The Cell Cycle	Face to face Lecture, Discussion
6	The General Structure of the Lining Epithelium, Types of Lining Epithelium, Functions of Lining Epithelium in Different Organs, Cell Polarity, Apical Cell Specializations, Lateral Cell Specializations and Junctional Complexes, Basal Cell Specializations	Face to face Lecture, Discussion
7	The General Structure of the Glandular Epithelium, Types of Glandular Epithelium	Face to face Lecture, Discussion
8	General Structure and Function of Connective Tissue, Classification of Connective Tissue, Extracellular Matrix, Ground Substance, Connective Tissue Fibers, Connective Tissue Cells	Face to face Lecture, Discussion
9	Mid Exam	
10	General Structure and Function of Cartilage Tissue, Cartilage Tissue Cells	Face to face Lecture, Discussion
11	General Structure and Function of Bone Tissue, Types of Bone Tissue, Bone Tissue Cells	Face to face Lecture, Discussion
12	General Structure and Function of Blood Tissue, Blood Cells	Face to face Lecture, Discussion
13	Overview of Muscle Tissue, Classification of Muscle Tissue, Structures and Characteristics of Skeletal Muscle, Structures and Characteristics of Heart Muscle, Structures and Characteristics of Smooth Muscle	Face to face Lecture, Discussion
14	General Structure of Nervous Tissue, Neuron, Glial Cells, Organization of Peripheral Nervous System, Organization of Central Nervous System	Face to face Lecture, Discussion
15	General Structure of Skin, Layers of Skin, Cells of The Epidermis, Skin Appendages	Face to face Lecture, Discussion
16	Final Exam	

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Theory and Practice of Histological Techniques-Bancroft, Stevens		
2	Histological and Histochemical Methods, Theory & Practice-Kiernan		
3	Histology, A Text and Atlas (6th Edition)-Ross, Pawlina		
4	Color Textbook of Histology-Gartner Hiatt		
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Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Learns Light Microscope features, types. Learns tissue processing for light microscopy. Learns functions of necessary chemicals.	2,7,10	1,2
2	Explains the general structure of cell. Defines the characteristics of plasma membrane. Explains the characteristics of nucleus. Explains the general structure of cytoplasm. Defines the membranous organelles. Defines the nonmembranous organelles. Explains the structure of the cytoskeleton.	2,7,10	1,2
3	Explains the cell cycle. Defines types of cell division.	2,7,10	1,2
4	Learns the general structure and functions of epithelium tissue. Classifies epithelium tissue. Differentiates types of lining epithelium. Learns apical and lateral cell specializations and junctional complexes, basal cell specializations and cell-extracellular matrix specializations. Learns the general structure and functions of glandular epithelium, types of glandular epithelium.	2,7,10	1,2
5	Explains the general structure and functions of connective tissue and connective tissue cells. Explains the connective tissue fibers, extracellular matrix and ground substance. Explains the general structure of adipose tissue. Explains the general structure of cartilage tissue. Defines the histological types and functions of cartilage tissue. Explains the general structure of bone tissue. Explains the general structure and functions of blood tissue and blood cells.		
6	Learns general structure of muscle tissue. Classifies muscle tissue. Learns structure and characteristics of skeletal (striated) muscle. Learns structure and characteristics of cardiac muscle. Learns structure and characteristics of smooth muscle.	2,7,10	1,2
7	Learns general structure and function of nervous tissue. Learns distinguishing different neuron types of gray matter of the central nervous system. Learns distinguishing different cell types and nerve fibers of white matter of the central nervous system. Learns myelinated nerve fibers of the peripheral nervous system and Schwann cells and sheaths wrapping these fibers. Learns distinguishing neurons in ganglia from other cell types.	2,7,10	1,2
8	Learns general structure and functions of skin. Differentiates layers of skin. Learns characteristics and functions of cells of the epidermis. Learns structure and functions of the skin appendages.	2,7,10	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	2	28
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	2	2
8	Midterm Exam	1	2	2
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0

13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	12	12
16	Final Exam	1	3	3
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