

SYLLABUS
Human Microscopic Anatomy (ANAT 150)

Description:

An undergraduate course designed to provide a basic background in the normal histological structure of cells, tissues and organs of the human body. Because there is an inseparable relationship between structure and function, emphasis is placed on structural-functional correlates at both the light and electron microscopic levels. Descriptions of alterations in normal histology through disease or injury provide an understanding of the etiology of various disease states. Histological terms and concepts are taught for the purpose of identification and precise communication.

Learning objectives:

- 1) Describe the basic structure of a cell, including the function of membranes and organelles.
- 2) Describe how the type and histological arrangement of the cells present within tissues and organs of each major body system relate to the function of those tissues and organs.
- 3) Recognize how histological structure and function relate to the etiology of various disease states.

Credit Hours: 3

First offering: Spring 2010

Prerequisite: Introductory Biology for Science or non-Science Majors (BiSc 003/004 or BiSc 011/012)

Lecture contact time/hours: two 1-hour 15-minute lectures per week, scheduled Tuesdays and Thursdays

Laboratory Sessions: No formal lab sessions, but students will have access to the virtual slide collection

Method of Assessment: three multiple choice and short answer written exams, each worth 1/3 of the final grade

Faculty: Janette M. Krum, Ph.D., Assoc. Professor of Anatomy & Regenerative Biology (Course Director)
Kurt E. Johnson, Ph.D., Professor of Anatomy & Regenerative Biology
Anastas Popratiloff, M.D., Ph.D., Assoc. Professor of Anatomy & Regenerative Biology

Textbook: Human Histology by A. Stevens and J. Lowe, 3rd ed. Elsevier. ISBN: 978-0-323-03663-4

Reading List: None

Lecture Topics:

1. Principles of Microscopy and Tissue Processing
2. Biology of Cell Membranes
3. Cell Organelles I
4. Cell Organelles II
5. Epithelium
6. Connective Tissue
7. Bone and Cartilage
8. Muscle
9. Nervous Tissue

EXAM I

10. Blood and Bone Marrow
11. Vascular System
12. Skin
13. Lymphatic System
14. Lower Respiratory System
15. Upper Respiratory System/Upper G. I. System
16. Esophagus and Stomach
17. Small and Large Intestines
18. Liver, Gall Bladder and Pancreas

EXAM II

19. Renal System
20. Pituitary and Pineal Glands
21. Adrenal, Thyroid and Parathyroid Glands
22. Female Reproductive System
23. Breast and Placenta
24. Male Reproductive System
25. Eye
26. Ear
27. Review

FINAL EXAM