

HUMAN ANAT. AND CELL SCIENCE (ANAT)

ANAT 7012 Advanced Brain Imaging Methods 1.5 cr

Basic concepts and theories behind advanced brain imaging methods will be introduced, which includes multivariate pattern analysis and machine learning. Then, students will run the learned analyses using sample data in class and in homework.

PR/CR: A minimum grade of C is required unless otherwise indicated.

Prerequisite: IMED 7004.

ANAT 7014 Functional Human Anatomy 2 cr

This course is an overview of human anatomy from a functional perspective. The students will be introduced to the structure and function of neuromuscular system. The course is specifically designed for students enrolled in programs in which a background in biology and /or anatomy is not a prerequisite (e.g. biomedical engineering). May not be held with the former BME 7014.

Equiv To: BME 7014

ANAT 7060 Advanced Human Macroscopic (Gross) Anatomy 6 cr

Dissection, with special emphasis on regions relative to the research projects and interests of students concerned. Both terms.

ANAT 7250 Experimental Teratology 3 cr

Basic principles of experimental teratology in lectures, seminars, and practical work. The causes, embryological basis, and mechanisms of developmental defects will be covered.

ANAT 7320 Introduction to Scanning and Transmission Electron Microscopy 3 cr

Designed to provide general theoretical aspects of electron microscopy and practical knowledge of electron microscopic laboratory procedures. 3 hours lecture/lab per week, one term. Minimum enrollment: 5 students.

PR/CR: A minimum grade of C is required unless otherwise indicated.

Prerequisite: written consent of instructors.

ANAT 7330 Readings in Anatomy 3 cr

Regular tutorials on selected topics in Anatomy and research related to student's research work. The tutorials will be incorporated into the Department's seminar program.

ANAT 7380 Human Developmental Anatomy (Embryology) 3 cr

Human development as it is of practical application to medical subjects.

ANAT 7392 Human Neuroanatomy 3 cr

(Laboratory required). The objective of this course is to provide an introduction to the structure and function of the nervous system from an anatomical perspective. It is intended primarily for graduate students registered in the Department of Human Anatomy and Cell Science. The course consists of a combination of lectures and laboratory sessions. The lectures will provide an introduction to the basic structure and function of the nervous system. Disorders of the nervous system will be discussed to highlight the function of different components of the nervous system. Laboratory sessions will be scheduled at regular intervals to provide students the opportunity to examine the three-dimensional structure of the nervous system.

ANAT 7400 Morphological Techniques 3 cr

Designed to develop advanced morphological techniques such as immunohistochemistry and cell culture.

ANAT 7460 Human Histology: Basic Tissues 1.5 cr

A lecture and lab course that examines the histological features of the 4 basic tissue types found within the human body. The microscopic structure will be correlated to function in each of the basic tissues of the human body. The clinical significance of structural and functional changes at the histological level will also be presented. May not be held with ANAT 7360.

Mutually Exclusive: ANAT 7360

ANAT 7462 Human Histology: Blood, Immune, and Cardiopulmonary Systems 1.5 cr

A lecture, lab, and student presentation course that examines the histological features of the blood, immune system, cardiovascular, and respiratory systems within the human body. The microscopic structure will be correlated to function in each of these systems. The clinical significance of structural and functional changes at the histological level will also be presented. May not be held with ANAT 7360.

Mutually Exclusive: ANAT 7360

ANAT 7464 Human Histology: Gastrointestinal System and Endocrine Glands 1.5 cr

A lecture, lab, and student presentation course that examines the histological features of the gastrointestinal system (including associated glands) and endocrine glands within the human body. The microscopic structure will be correlated to function in each of these systems.

The clinical significance of structural and functional changes at the histological level will also be presented. May not be held with ANAT 7360.

Mutually Exclusive: ANAT 7360

ANAT 7466 Human Histology: Reproductive and Urinary Systems, Skin , and Special Senses 1.5 cr

A lecture, lab, and student presentation course that examines the histological features of the reproductive system, urinary system, skin and special senses within the human body. The microscopic structure will be correlated to function in each of these systems. The clinical significance of structural and functional changes at the histological level will also be presented. May not be held with ANAT 7360.

Mutually Exclusive: ANAT 7360

ANAT 7470 Graduate Gross Anatomy 6 cr

A comprehensive Human Gross Anatomy study of the structures of the whole human body. The structure and function of the body systems will be covered through lectures (such as anatomical, clinical, radiological, cross sectional) and complemented by laboratory sessions with cadaver dissection of whole cadavers, including review and reading sessions.