

## HUMAN ANATOMY ANTR

### Department of Radiology College of Human Medicine

#### 211 Human Tissues and Cells for Medical Illustrators

Summer. 3(2-2) R: Not open to students in the College of Natural Science. Approval of department. Not open to students with credit in ZOL 408.

Elementary structure and function of human tissues, cells, and representative biomolecular classes. Virtual histology laboratory.

#### 350 Human Gross Anatomy for Pre-Health Professionals

Fall, Spring, Summer. 3(4-0) P: BS 161 or BS 181H or LB 145 R: Not open to freshmen or approval of department.

Survey of human systemic gross anatomy with clinical illustrations. Structural basis of organ system physiology. Introduction to medical terminology and clinical language.

#### 355 Human Gross Anatomy Laboratory

Summer. 1(0-3) R: Approval of department. SA: ANTR 381 Not open to students with credit in KIN 217.

Introductory, structured laboratory survey of human regional gross anatomy using prosections, medical imaging, and multimedia for students in allied medical fields. Correct usage and pronunciation of medical terminology.

#### 440 Human Anatomic Variation

Spring of even years. 2(2-0) P: ANTR 350 or KIN 216 or ZOL 328

Human anatomical variation including developmental, pathological and accidental.

#### 485 Directed Study in Human Prosection

Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: ANTR 350 or ZOL 328 or KIN 217 R: Open only to juniors or seniors.

Prosection of selected regions and isolated structures of preserved human cadavers.

#### 490 Special Problems in Anatomy

Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 15 credits in all enrollments for this course. R: Approval of department. SA: ANT 480

Topics from an anatomical field such as gross anatomy, histology, cytology, neuroanatomy, or embryology.

#### 510 Clinical Human Gross Anatomy and Palpatory Skills

Summer. 8(6-6) RB: ANTR 350 R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of department.

Introduction to macroscopic human structure, landmarks, and spatial relationships using laboratory prosections, multimedia, live human palpation models, and diagnostic imaging. Clinical correlations. Correct usage of clinical-anatomical language. Development of osteopathic motor skills for performing basic patient palpation.

#### 534 Cell Biology and Physiology I

Fall. 3 credits. Interdepartmental with Biochemistry and Molecular Biology and Physiology. Administered by Physiology. R: Open only to graduate-professional students in the College of Human Medicine or College of Osteopathic Medicine.

Modern concepts of cell biology as a basis for understanding the physiology of human tissues and organ systems in health and disease.

#### 535 Cell Biology and Physiology II

Spring. 4 credits. Interdepartmental with Biochemistry and Molecular Biology and Physiology. Administered by Physiology. R: Open only to graduate-professional students in the College of Human Medicine or the College of Osteopathic Medicine.

Modern concepts of cell biology as a basis for understanding the physiology of human tissues and organ systems in health and disease. Continuation of PSL 534.

#### 536 Basic Principles of Cell Biology and Physiology

Fall. 3(2-2) Interdepartmental with Biochemistry and Molecular Biology and Physiology. Administered by Physiology. R: Open to graduate-professional students in the College of Osteopathic Medicine.

Modern concepts of cell biology as a basis for understanding the structure (histology) and function (physiology) of human tissues in health and disease.

#### 541 Gross Anatomy for Nurse Anesthetists

Fall. 4(3-2) R: Approval of department. Not open to students with credit in ANTR 551.

Clinically oriented human regional gross anatomy for nurse anesthetists using prosections, case studies, and medical imaging.

#### 551 Medical Gross Anatomy

Fall. 6(4-6) R: Open to students in the College of Human Medicine or approval of department. SA: ANT 551

Human regional gross anatomy with clinical correlations using prosections, cross-sections, and medical imaging.

#### 552 Medical Neuroscience

Spring. 4(3-2) Interdepartmental with Neurology and Ophthalmology and Physiology and Radiology. Administered by Neurology and Ophthalmology. R: Open only to graduate-professional students in the Colleges of Human Medicine and Osteopathic Medicine. SA: ANT 552

Correlation of normal structure and function of the human nervous system with clinical testing, classical lesions, and common diseases.

#### 585 Directed Study in Human Prosection

Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: ANTR 551 R: Open only to graduate-professional students in the College of Human Medicine or College of Osteopathic Medicine and approval of department.

Prosection of selected regions and isolated structures of preserved human cadavers. Oral presentation.

#### 590 Independent Study in Clinical Human Morphology

Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 10 credits in all enrollments for this course. RB: Admission to the College of Human Medicine or the College of Osteopathic Medicine or graduate program in the College of Nursing R: Open to human medicine students and open to osteopathic medicine students and open to graduate students in the College of Nursing. Approval of department.

Independent study of a specific topic from gross anatomy, histology, radiological anatomy, cytology, neuroscience, or embryology.

#### 685 Directed Study in Clinical Prosection

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P: ANTR 551 R: Open to human medicine students in the College of Human Medicine and open to osteopathic medicine students in the College of Osteopathic Medicine. Approval of department; application required.

Study of anatomical prosection and body-region specific pathologies.

#### 820 Advanced Neuroanatomy

Summer of odd years. 1 to 5 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Neuroscience. Administered by Neuroscience. R: Approval of department.

Current topics in anatomy and physiology processes of central nervous system cells.

#### 839 Systems Neuroscience

Spring. 4(4-0) Interdepartmental with Neuroscience and Pharmacology and Toxicology and Physiology and Psychology and Zoology. Administered by Neuroscience. R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Agriculture and Natural Resources, Natural Science, Social Science, and Veterinary Medicine. SA: ANT 839

Anatomy, pharmacology, and physiology of multicellular neural systems. Sensory, motor, autonomic, and chemo-regulatory systems in vertebrate brains.

#### 890 Topics in Anatomy and Structural Biology

Fall, Spring, Summer. 1 to 2 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open to graduate students. Approval of department.

Independent study in gross anatomy, histology, virtual microscopy, neuroanatomy, physical anthropology or forensic radiology.