

# HUMAN ANATOMY

## ANTR

### Department of Radiology College of Human Medicine

#### 350 Human Gross Anatomy and Structural Biology

Fall, Spring. 3(4-0) P: BS 161 or BS 181H or LB 145 R: Not open to freshmen or approval of department. SA: ANTR 316, ANTR 316

Survey of human systemic gross anatomy with clinical illustrations. Introduction to the language of medicine. Structural basis of physiological principles. Designed for pre-professional students entering health-care disciplines.

#### 401 Quantitative Human Biology

Spring. 3(4-0) Interdepartmental with Biomedical Engineering and Materials Science and Engineering and Radiology. Administered by Biomedical Engineering. P: (MTH 235 and PHY 184) and ((PSL 250 or concurrently) or (PSL 431 or concurrently) or (ANTR 350 or concurrently)) and (CEM 141 or CEM 151) RB: (CSE 131 or concurrently) or (CSE 231 or concurrently) or PSL 410

Qualitative description and quantitative engineering analysis of selected, tractable human-biological systems. Multi-disciplinary problem-solving among medical and engineering professionals.

#### 480 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: ANTR 480

Topics from an anatomical field such as gross anatomy, histology, tissue culture, cytology, neurology, or embryology.

#### 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.

#### 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.

#### 541 Gross Anatomy for Nurse Anesthesia

Fall, Summer. 4(3-2) R: Approval of department.

Gross anatomy of the human body using prosections, medical imaging, clinical correlations, case studies, video tapes and computer aided instruction.

#### 551 Medical Gross Anatomy

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

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

#### 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: ANTR 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: ANTR 839

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

#### 885 Vertebrate Neural Systems

Spring of odd years. 3(2-2) Interdepartmental with Neuroscience and Physiology. Administered by Neuroscience. SA: ANTR 885

Comparative analysis of major component systems of vertebrate brains. Evolution, ontogeny, structure, and function in fish, amphibians, reptiles, birds and mammals.

#### 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.