ANATOMY (ANAT)

ANAT 505 Structural Adaptations to Function
Veterinary gross anatomy course. The basic principles of mammalian and avian anatomy are studied in a veterinary context. The laboratory periods are given to the dissection of the dog, cat, horse, various ruminants, various laboratory animals, chicken and fish.
Taught by: Dr. Orsini and Staff
Course usually offered in fall term
Prerequisite: Permission of instructor in Veterinary School
Activity: Lecture
2 Course Units

ANAT 512 Human Anatomy: Cardiovascular, Respiratory, Digestive, and Musculoskeletal Systems
This human anatomy course will cover anatomy, embryology, histology, and imaging of the cardiovascular, respiratory, digestive, and musculoskeletal systems, including the limbs, vertebral column, and back. Cardiovascular and Respiratory Systems. The objectives are to: 1) define and discuss the structures that participate in the process of respiration; 2) compare and contrast structures situated in the chest (thorax and mediastinum); 3) describe anatomic differences of the right versus the left lung, structures in each lung, and how each lung functions; 4) summarize the anatomic differences in the atria and ventricles of the heart and how these chambers contract, resulting in the opening and closing of the atrioventricular and semilunar valves; 5) compare and contrast the histology of the heart, bronchi, bronchioles, and lung alveoli; 6) analyze and identify anatomic structures in plain films and/or other imaging modalities; and 7) discuss the embryology of the heart and lungs, including fetal and postnatal circulation and common congenital heart malformations.
Taught by: White, James S.
Activity: Online Course
0.5 Course Units
Notes: This course is offered through the School of Medicine Office of Master’s Programs. For permits, please email Kim Halscheid (battillo@upenn.edu) and Kathryn Brossa (brossak@pennmedicine.upenn.edu).

ANAT 513 Human Anatomy: Cardiovascular and Respiratory Systems
This 0.5 CU human anatomy course will cover anatomy, embryology, histology, and imaging of the cardiovascular and respiratory systems. The objectives are to: 1) define and discuss the structures that participate in the process of respiration; 2) compare and contrast structures situated in the chest (thorax and mediastinum); 3) describe anatomic differences of the right versus the left lung, structures in each lung, and how each lung functions; 4) summarize the anatomic differences in the atria and ventricles of the heart and how these chambers contract, resulting in the opening and closing of the atrioventricular and semilunar valves; 5) compare and contrast the histology of the heart, bronchi, bronchioles, and lung alveoli; 6) analyze and identify anatomic structures in plain films and/or other imaging modalities; and 7) discuss the embryology of the heart and lungs, including fetal and postnatal circulation and common congenital heart malformations.
Taught by: James S. White, PhD
Activity: Online Course
0.5 Course Units

ANAT 514 Human Anatomy: Digestive System
This 0.5 CU human anatomy course will cover anatomy, embryology, histology, and imaging of the digestive system. The objectives are to: 1) define the embryological basis for the formation of the gastrointestinal tract; 2) define and discuss the anatomic structures that make up the digestive system, including the mouth, larynx, esophagus, stomach, small intestine, large intestine, liver, and biliary tract; 3) compare and contrast the arterial blood supply and the functional and histologic differences in various parts of the gastrointestinal tract; and 4) analyze and identify anatomic structures in plain films and/or other imaging modalities.
Taught by: James S. White, PhD
Prerequisites: Students who have completed ANAT 512 are NOT eligible for this course.
Activity: Online Course
0.5 Course Units

ANAT 515 Human Anatomy: Musculoskeletal System
This 1.0 CU human anatomy course will cover anatomy, embryology, histology, and imaging of the musculoskeletal system, including the limbs, vertebral column, and back. The objectives are to: 1) discuss the anatomic structures that make up the major parts of the musculoskeletal system, which are the vertebral column and back, upper limbs, and lower limbs; 2) identify the blood supply, innervation, and musculature of the upper limbs, including the shoulder, elbow, wrist, and hand; 3) identify the blood supply, innervation, and musculature of the lower limbs, including the hip, knee, ankle, and foot; 4) define the components of the nervous system that affect the musculoskeletal system, limbs, vertebral column, and back and discuss nerve lesions; 5) discuss how herniated disks, fractures of the upper and lower limbs, and impingement of nerve roots can result in musculoskeletal abnormalities, and 6) analyze and identify anatomic structures in plain films and/or other imaging modalities.
Taught by: James S. White, PhD
Prerequisites: Students who have completed ANAT 512 are NOT eligible for this course.
Activity: Online Course
1 Course Unit

ANAT 516 Human Anatomy: Endocrine and Reproductive Systems
Taught by: This 0.5 CU human anatomy course will cover anatomy, embryology, histology, and imaging of the endocrine and reproductive systems. The objectives are to: 1) define mechanisms of hormonal signaling; 2) describe the anatomic relationships and gross structure of major endocrine and reproductive organs, including the hypothalamus, pituitary glands, thyroid gland, parathyroid glands, pancreas, adrenal glands, gonads, breasts, and male and female reproductive systems; 3) characterize the microscopic anatomy of major endocrine and reproductive organs; 5) assess the regulation of major hormonal axes and intuit pathophysiologic effects of hormonal dysregulation; 6) explain the effects of significant hormones on their respective target tissues; 7) trace the embryologic origins of the endocrine and reproductive organs, including the pharyngeal apparatus.
Activity: Online Course
0.5 Course Units