

Tentative Syllabus for BIO2233 – Mammalian Anatomy

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Course Description: Anatomy is the study of the structure of living systems. However, much of the progress in anatomy has come from studying the dead. A constant point of interest even in the beginnings of anatomy was not just understanding and naming the parts, but how these parts fit together and lead to what we observe in the living, called functional anatomy. At first this link only occurred at the gross scale, that which is observable to the naked eye. With the advent of the microscope came an interest in the anatomy of cells, microscopic anatomy. Between these two there was found an interest in embryology which later became developmental anatomy. In this course we will utilize this suite of viewpoints into the structure of the body to understand how we and the living things around us are put together, how these parts interact, and how we might better maintain or fix them should they break.

Required Texts: 1. Moore Essential Clinical Anatomy by Moore, Agur and Dalley, 2013. ISBN: 1469887258

Clickers: We will attempt to use some form of device to record attendance; record answers for occasional lecture quizzes, and useful in general feedback for course.

Grading: The lecture grade and the laboratory grade are combined to determine your final grade for the course. The lecture and the laboratory are worth, respectively, 70% and 30% of your final grade. Details on laboratory grading will be presented in lab. Numeric grades will be given on the quizzes, tests and assignments on Blackboard at the end of each mid-term exam. Final letter grades will be issued at the end of class based on the standard scale set forth by Temple University.

Lecture Grades will be determined as follows:

There will be four mid-term exams with the three highest scores each equally counting towards 30% of the lecture grade. There will also be a comprehensive final exam worth 30% of the lecture grade, all of which are closed book. The final 10% of your lecture grade will come from required pre-lecture, in class and post-lab quizzes.

There will be no makeup lecture exams. If you miss an exam it will count as your lowest exam score. There will be no make-up or late quizzes. The quizzes will be up for one week. You need to log in and take the quiz during that week, or not receive credit.

Tentative Lecture Schedule

Date	Topic	Reading in text by chapter
M Aug 28	Attendance, Goals of Course, Course Mechanics, and How to Study – General Introduction	
W Aug 30	Back I: Back Basic body plan and development Contents of spinal chord Diseases associated with malformation	
F Sep 1	Back II: Back Differentiation of spinal vertebrae for function Two specialized neck bones Repurposing notochord Injuries and disease of spinal column	
M Sep 4	Labor Day	
W Sep 6	Upper limbs: Basic Bone anatomy Building blocks of bone Structure: static or dynamic Imaging Bone	
F Sep 8	Upper limbs I: Basic Joints Proximal joints in upper and lower limbs Beyond bone what else reduces movement Keeping joints healthy	
M Sep 11	Upper limbs II: Joints Distal joints in upper and lower limbs Imaging joints Injuries to proximal and distal joints: causes and cures	
W Sep 13	Upper limbs III: Neuromuscular System basic nerve parts and function basic muscle parts and function function of brachial plexus and injuries	
F Sep 15	Upper Limbs IV: Musculoskeletal System muscle recruitment muscle injuries muscle tests	
M Sep 18	Exam 1	Exam is on material through Sep 15
W Sep 20	Lower limbs I: Changes with age Growth plates	

	<p>Angle of femoral neck Found bones: young human or other small mammal</p>	
F Sep 22	<p>Lower limbs II: Misuse and Abuse Types of breaks Fixing breaks and wear Social responsibilities</p>	
M Sep 25	<p>Lower limbs III: Compartments What forms them? How are they useful? Surface topology and its uses</p>	
W Sep 27	<p>Lower limbs IV: Things that go wrong with supply chain Varicose veins Injury to nerves</p>	
F Sep 29	<p>Thorax I: Cardiovascular system imaging soft tissue basic structure and function of lung how do we breathe and a knife fight</p>	
M Oct 2	<p>Thorax II: Cardiovascular System basic structure and function of heart Development of heart and lungs EKGs</p>	
W Oct 4	<p>Thorax III: Cardiovascular system Normal circulation through adult Normal circulation through developing fetus Diagnosis and cures for cardiovascular disease</p>	
F Oct 6	<p>Thorax IV: Lymphatic system basic structure and function of lymphatic system basic mechanism of cancer Why check lymph in cancer patient</p>	
M Oct 9	<p>Abdomen I: The Wall basic structure and function of abdominal wall development of sex organs and their placement Issues with abdominal wall and descent of sex organs</p>	
W Oct 11	<p>Abdomen II: The Guts development of the guts basic structure and function of the guts imaging the guts</p>	
F Oct 13	<p>Abdomen III: Supply to the guts arterial and lymphatic supply</p>	

	nervous system supply common issues with guts	
M Oct 16	Exam 2	Exam is on material through Oct 7
W Oct 18	Abdomen IV: Forgotten walls the basic structure and function of diaphragm the basic structure and function of posterior abdominal wall common issues with posterior wall and diaphragm	
F Oct 20	Pelvis and Perineum I: Hard and Soft structure of Pelvis the basic structure and function of the hip girdle the basic structure and function of the pelvic floor common problems with hard and soft structures	
M Oct 23	Pelvis and Perineum II: Reproductive organs sex organs basic anatomy and function Embryonic origin of sex organs role of hormones in sex organ development	
W Oct 25	Pelvis and Perineum III: Ovulation and pregnancy normal cycle of ovulation and menstruation how things change when eggs fertilized further development for implantation of embryo	
F Oct 27	Head I: Hard and soft structures of head major bones of skull structure and function scalp and cranial meninges structure and function fractures to cranium	
M Oct 30	Head II: Arteries and nerves major arteries of skull position and supply major nerves of skull and function fractures to cranium	
W Nov 1	Head III: The brain major structure and function of brain signals from brain: electrical and chemical how a neuron works	
F Nov 3	Head IV: The brain How neurons work together how brain acts as central control and filter movement disorders	
M Nov 6	Head V: The eye basic structure and function muscles of eye and function things that go wrong with eyes	

W Nov 8	Head VI: The Jaw temporomandibular joint bones and muscles nervous supply things that go wrong with TMJ	
F Nov 10	Head VII: The oral region the teeth basic shape and function tooth formation with age? the palate hard and soft basic structure and function of tongue	
M Nov 13	Exam 3	Exam is on material through Oct 28
W Nov 15	Head VIII: The nose and ears bones of nose and ear soft tissues of nose and ear issues with nose and ears	
F Nov 17	Neck I: Muscles of the neck major muscles of neck and innervations endocrine glands of neck issues with endocrine glands	
M Nov 20-26	Fall Break	
M Nov 27	Neck II: Trachea and associated structures major cartilages of trachea muscles involved in swallowing things that go wrong	
W Nov 29	Exam 4	Exam is on material through Nov 28
F Dec 2	Final review	
Dec 21 8 AM	Comprehensive Final Exam	TBC