

BIO 290. Human Anatomy. 4 Credits
Summer 2009. First 4-Week Term
James Madison University

Instructor: Dr. Mark Gabriele
Offices: Burruss 312
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Office Hours: Location and Dates TBD

Sections:	Lecture:	MTWTF 8:00-10:00	ISAT/CS 0159	Gabriele
	Labs:	MTWTF 10:30-12:15	DD Modular 3	Rifai
		MTWTF 12:30-2:15	DD Modular 3	Kancler
		MTWTF 2:30-4:15	DD Modular 3	Phillips
		MTWTF 11:30-1:15	DD Modular 3	Jaynes

Required Texts: *BIO 290 Human Anatomy Coursepack*; Gabriele
Atlas of Human Anatomy; Netter (Third or Fourth Edition)
Human Anatomy Laboratory Manual: A Regional Approach; Keffer & Babcock
- lab manual on BlackBoard

GRADING POLICY: Lecture and Laboratory each compose 50% of your final grade. Three exams are scheduled for both lecture and laboratory. Letter grades will be assigned on a 10-point numerical basis (*i.e.* 100-90% = A).

Lecture Exam 1	20%
Lab Exam 1	20%
Lecture Exam 2	15%
Lab Exam 2	15%
Lecture Exam 3	15%
Lab Exam 3	15%

HONOR SYSTEM: All students are expected to be familiar with and to abide by the University Honor Code at JMU. A complete description of the University Honor System can be found in the JMU Student Handbook.

ATTENDANCE: Attendance is absolutely critical to the successful completion of this course. You will not be allowed to attend a laboratory section other than the one in which you are registered. Officially excused absences from a laboratory must be approved with your laboratory instructor **prior** to the absence. Make-ups for **lecture and laboratory exams** will be given for **officially excused absences ONLY** (official school business, illness with M.D. excuse, death in the family). If you are unable to attend a lecture exam, you must contact your lecture instructor or the Biology Office (8-6225 or 8-6733) **prior** to the scheduled exam time.

OFFICE OF DISABILITY SERVICES: Mission statement: James Madison University is committed to the full and total inclusion of all individuals and to the principle of individual rights and responsibilities. To this end, policies and procedures will ensure that persons with a disability will not, on the basis of that disability, be denied full and equal access to and enjoyment of academic and co-

curricular programs or activities or otherwise be subjected to discrimination under programs or activities offered by the University. This policy was developed to ensure equal access at the University for individuals with disabilities and to ensure full compliance with all pertinent federal and state legislation.

It is the student's responsibility to provide documentation from the Office of Disability Services to the lecture instructor to ensure that appropriate arrangements are made.

GOALS AND OBJECTIVES FOR THE COURSE:

GOAL 1: Provide a conceptual background in the organismal biology of vertebrates with specialization in the anatomy of humans.

Objectives: By providing instruction in human anatomy, students will:

- A. develop an understanding of the relation between structure and function in organismal vertebrate biology. These principles will be applied to an understanding of the regions and systems of the human body.
- B. understand the regional variation present within the human body by examining the organization of the skeletal, muscular, nervous, gut, urogenital, circulatory, and integumentary systems in each region (abdomen, thorax, pelvis, perineum, head, neck, and limbs).
- C. incorporate principles of vertebrate evolution and development (homology, ontogeny, and phylogeny) as a means for understanding and explaining human structure and function. Topics of emphasis include somites, pharyngeal arches, and their derivatives present in the human body.

Goal 2: Foster the development of problem-solving skills and critical thinking in the study of human form and function.

Objectives: By providing lecture and laboratory instruction in human anatomy, students will:

- A. gain proficiency in the analysis and interpretation of two and three-dimensional images of the human body from various planes of view. Skills include regional and structural identification, comparison, and interpretation using prosected cadavers and cross-sectional images.
- B. be able to interpret variable or anomalous structural patterns. Since these patterns are quite common, analytical skills must include an awareness of the degree of variation in human morphology and its relevance to understanding human structure and function.

Goal 3: Provide an appropriate foundation in human structure and function for future activities.

Objectives: This course will provide:

- A. introductory level background for those students interested in pre-professional and health science programs.
- B. basic information necessary for those students interested in teaching at the pre-college level.
- C. basic information important for informed decision making as a citizen and/or employee in biologically related programs that impact on human health and human biology.

Goal 4: Present human anatomy as a dynamic science that involves divergent conceptual and theoretical interpretations.

Objective: This course will provide a historical perspective of the explanation of human structure and function in science and medicine.

Goal 5: Develop an integrated understanding and appreciation of human form as a reflection of our own biology and interaction in the environment.

Objective: Lectures and Laboratory experiences in this course will foster awareness of human anatomy as a study of “self”. In addition to being a source of individual expression, human anatomy is an ongoing scientific endeavor with many developmental, evolutionary, and functional questions that are still unresolved and poorly understood.

Goal 6: Develop communication skills.

Objectives: Student participation in lecture and laboratory will enhance skills by:

- A. having students self-organize small learning and discussion group activities in each laboratory.
- B. expecting students to respond to short essay questions on examinations.

Goal 7: Develop an integrated understanding and appreciation of human anatomy and its relevance to science, society, and technology.

Objective: This course will provide an active awareness and experience of human anatomy as a cornerstone to health care, basic science research, and medical technology. For example, an understanding of cross-sectional anatomy forms the basis of modern diagnostic methodology and practice (CT and MRI scanning technology).

BIO290 Summer 2009
Tentative Lecture Schedule

WEEK 1:	May 18 th May 19 th May 20 th May 21 st May 22 nd	Introduction, Axial and Appendicular Skeleton Epaxial/Hypaxial Muscles and Intro to Nervous System Review Spinal Cord and Spinal Nerve; Thorax I Thorax II, ANS, start Abdomen I Abdomen II; Start P & P and diaphragms
WEEK 2:	May 25 th May 26 th May 27 th May 28 th May 29 th	MEMORIAL DAY: NO CLASSES Review abdomen; Finish P & P REVIEW FOR EXAM; Intro to Limbs First Lecture Exam (Unit I) Hip and Thigh and Intro leg – Posterior compartment
WEEK 3:	June 1 st June 2 nd June 3 rd June 4 th June 5 th	Finish Leg; Intro Upper Limb Bony Skeleton Shoulder and Brachium; Start Antebrach. and Hand Finish Antebrachium and Hand; Brachial Plexus REVIEW FOR EXAM; Intro skull Second Lecture Exam (Unit II)
WEEK 4:	June 8 th June 9 th June 10 th June 11 th June 12 th	Special Senses and the Brain Cranial Nerves and Arches I and II Arches III and IV-VI; Begin Nonpharyngeal Neck Finish Nonpharyngeal Neck; REVIEW FOR EXAM Third Lecture Exam (Unit III)

**** The lecture portion of the course accounts for 50% of your final grade.**

BIO290 Summer 2009
Tentative Laboratory Schedule

WEEK 1:	May 18 th	Lab1:	Introduction, Directional Terms, Vertebrae, Axial Skel
	May 19 th	Lab1:	Appendicular Skeleton & Epaxial Muscles
	May 20 th	Lab2:	Spinal Cord, Spinal Nerve, and Body Wall muscles
	May 21 st	Lab3:	Inside the Thorax
	May 22 nd	Lab3/4:	Finish Inside the Thorax; Start Inside the Abdomen
WEEK 2:	May 25 th	-----	MEMORIAL DAY: NO CLASSES
	May 26 th	Lab4/5:	Finish Inside the Abdomen; Start Pelvis & Perineum
	May 27 th	Lab5:	Finish Pelvis & Perineum and REVIEW FOR EXAM
	May 28 th	Labs1-5:	First Lab Exam (Unit I: 50 questions)
	May 29 th	Lab6:	Lower Limb Skeleton and Hip and Thigh
WEEK 3:	June 1 st	Lab6/7	Finish Hip and Thigh; Start Leg and Foot
	June 2 nd	Lab7/8:	Finish Leg and Foot; Start Upper Limb Skeleton
	June 3 rd	Lab8/9:	Finish Shoulder & Brachium; Start Antebrachium - Flexors
	June 4 th	Lab9:	Finish Antebrachium – Ext and BP; REVIEW FOR EXAM
	June 5 th	Labs 6-9:	Second Lab Exam (Unit II: 50 questions)
WEEK 4:	June 8 th	Lab10:	The Skull
	June 9 th	Lab11:	Nose, Eye, Ear, Brain
	June 10 th	Lab12:	Pharyngeal Arches and Dorsal Root Cranial Nerves
	June 11 th	Lab13:	Nonpharyngeal Neck; REVIEW FOR EXAM
	June 12 th	Labs 10-13:	Third Lab Exam (Unit III: 50 questions)

**** The laboratory portion of the course accounts for 50% of your final grade.**

*NOTE: Attendance is **absolutely mandatory**. You will not be allowed to attend a laboratory section other than the one in which you are registered.*

Officially excused absences from a laboratory must be approved by the instructor prior to the absence.