



COURSE SYLLABUS
Morehead State University
College of Science and Technology
Department of Biology and Chemistry
Human Anatomy and Physiology II - traditional
BIOL 235 Section 001 Fall 2009

COURSE ORGANIZATION: Lecture 9:10am-10:10pm Tuesday, Thursday, and Friday 2 in Lappin Hall 307

INSTRUCTOR: Dr. Michael Fultz
327F Lappin Hall.
Phone: 606-783-5440
Email: m.fultz@moreheadstate.edu

OFFICE HOURS: Monday through Friday 10:20am -11:20am, or by appointment

CATALOG DESCRIPTION: BIOL 235. Human Anatomy & Physiology II. (3-0-3); I, II, III.

Prerequisite: BIOL 234. This course is a study of human organ systems (endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary) with focus on the interrelationships of form and function. Not acceptable as credit for Biology Area Nonteaching Option or Environmental Option or minor in biology. Required for the Biology Area Teaching Option.

NUMBER OF REQUIRED FIELDWORK HOURS: 0

“Community Engagement: A Light to and From the Mountains”

The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by best national and international scholarship, plus research, literature, and experiences specific to Appalachia- preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

Conceptual Framework Outcomes:

The Unit and the faculty within individual programs assess the degree to which its graduates:

- 1) Master the content knowledge, professional and the twenty first century skills needed to make an optimal contribution to “whole” student learning in educational settings
- 2) Are competent in the collection and use of data to inform decision- making and to demonstrate accountability for student learning.
- 3) Demonstrate professional dispositions.
- 4) Are culturally competent and understand the regions from which they have come utilizing knowledge and experiences to effectively “bridge the gaps” (economic, achievement, and geographic) ensuring optimal learning for all students.
- 5) Engage in authentic field experiences in collaboration with committed school based partners and are empowered to improve the quality of education throughout this region and beyond.

STUDENT LEARNER OUTCOMES: Biology 235 is not a memorization course; it is an application course. The Constructivist Philosophy is an accepted theme in that learning is an active process. Although you will develop a large scientific vocabulary, what is required in this course is that you apply what you learn. Each of you must learn to think scientifically and to critically analyze material presented. Each student will be expected to develop a positive disposition and come to class well prepared and to develop the personal discipline for academic success. Learner outcomes will be assessed through regular quizzes and exams as well as student responses registered using the i>clicker system. The course content and expectations include, but are not limited to:

- 1) Learning, understanding and applying biological (anatomical and physiological) principles basic to all body systems. These include:
 - A) The organization of biomolecules
 - B) The role of enzymes
 - C) The homeostatic principles required for the regulation of molecular, cellular, and organ/systems anatomy and physiology
 - D) Cellular and organismic transport
- 2) The development of a vocabulary sufficient for the comprehension of the complex world of this multidisciplinary science comprised of eleven organ systems.
- 3) The development of a solid foundation upon which subsequent Nursing and Allied Health or Biology courses can depend.
- 4) An understanding of the thinking processes through which scientists operate.
- 5) The application of quantitative principles utilized in mathematics and the interpretation of graphed data in order to understand physiological principles.

NCATE/ EPSB Accreditation Alignment of CFOs and SLOs:

Program: Biology - teaching Human Anatomy and Physiology II BIOL 235					
Aligned with▶ Assessment▼ (point values)	Kentucky Teacher Standards (KYTS)	Kentucky Department of Education Core Content for Assessment (KDECCA)	Education Professional Standards Board (EPSB)	National Science Teachers Association (NSTA)	NCATE
Lecture exams (450) CFO: 1, 2 SLO: 1, 2, 3, 4, 5	1,	3, 4	Literacy	1, 2	1
Lecture quizzes (125) CFO: 1, 2 SLO: 1, 2, 3, 4, 5	1	3, 4	Literacy	1,2	1
i>clicker participation (25) CFO: 1, 2 SLO: 2, 3, 4, 5	1	3,4	Literacy	1,2	1

Assignment Descriptions:

Program: BIOLOGY – SECONDARY TEACHING Human Anatomy and

Physiology II (BIOL 235)	
Assessment (point value)	Description
Lecture and Lab exams (450)	Exams will assess content knowledge and conceptual understanding of the course material from lecture. Exams will be taken during scheduled laboratory time.
Lecture quizzes (125)	Lecture quizzes will assess content knowledge and conceptual understanding of the course material from lecture. Quizzes will be taken during scheduled class time.
i>clicker participation(25)	This exercise will allow the instructor and student to assess content knowledge and conceptual understanding before quizzes/exams. I>clicker participation will be performed during scheduled class time.

GRADING POLICY: Grades will be assigned on a % basis of 600 points.

Exam I	100pts	GRADING SCALE:	A = 90-100%
Exam II	100pts		B = 80-89%
Exam III	100pts		C = 70-79%
Exam IV	100pts		D = 60-69%
Exam IV Comprehensive	50pts		E ≤ 59%
Quizzes	125pts		
<u>i>clicker participation</u>	<u>25pts</u>		
	600pts		

REQUIRED TEXT: Principles of Anatomy and Physiology (Twelfth Edition) by Tortora and Derrickson, Wiley Higher Education. 2009. ISBN: 9780470281000

i>clicker: You are required to purchase an i>clicker remote for in-class participation. i>Clicker is a response system that allows you to respond to questions I pose during class, and you will be graded on that feedback and/or participation. In order to receive this credit, you will need to register your i>clicker remote online within the first 3 days of class. You must have come to class at least once and voted on at least one question, in order to complete this registration properly. Once you have voted on a question in my class, go to www.iclicker.com/registration. Complete the fields with your first name, last name, student ID, and remote ID. Your student ID should be your MSU ID, for example, m0135624. The remote ID is the series of numbers and sometimes letters found on the bottom of the back of your i>clicker remote. The i>clicker response system will be used every day in class, and you are responsible for bringing your remote daily.

WileyPLUS WEBSITE: <http://edugen.wiley.com/edugen/class/cls124592>

SUPPLEMENTAL MATERIAL (optional): A Photographic Atlas of the Human Body (Second Edition) by Tortora. Wiley Higher Education. 2004. ISBN 0-471-42064-6

COURSE PHILOSOPHY: Simply stated, anatomy and physiology are the study of human form and function. However, even the most tantalizing subject matter can be drudgery to study and difficult to comprehend if not effectively presented. Therefore, you will be presented the information in a logical, understandable format that is unencumbered by unnecessary details and emphasizes how each concept is an integral part of the whole subject matter. Too often, students view isolated sections of anatomy and physiology courses as separate entities; by understanding how each component of the body depends on other components; a student can appreciate the integrated functioning of the human body. We will focus on the mechanisms of body function and the course is organized around the central theme of homeostasis (how the body meets changing demands while maintaining the integral constancy necessary for all cells and organs to function). To keep pace with today's rapid advances in the health sciences, students in the health professions must be able to draw on their conceptual understanding of anatomy and physiology. Therefore, this course is designed to promote understanding of the basic principles and concepts of anatomy and physiology rather than memorization of details. In order to help the

student ascertain that he or she is assimilating the material, quizzes and exams utilizing the principles and theories of human anatomy and physiology will be given periodically throughout the semester.

ATTENDANCE POLICY: There is a strong correlation between class attendance and success in Biology Courses; therefore, attendance to all lectures is critical and you are expected to attend. A student with a valid, documented excuse (such as for illness/injury, death in the family, or university-sponsored activity) should promptly notify his/her instructor in order to make up the material missed. Students are expected to prepare themselves for each lecture session by reading any related material prior to attending the lectures. Please do not be late because it puts you at a disadvantage and can easily disrupt the instructor and your peers.

AMERICANS WITH DISABILITIES ACT (ADA): In compliance with the ADA, all students with a documented disability are entitled to reasonable accommodations and services to support their academic success and safety. Though a request for services may be made at any time, services are best applied when they are requested at or before the start of the semester. To receive accommodations and services the student should immediately contact the Disability Services Coordinator at: 204-E ADUC, 606-783-5188, or e.day@moreheadstate.edu.

CAMPUS SAFETY STATEMENT: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at www.moreheadstate.edu/emergency

USE OF TECHNOLOGY: Students will be expected to use the internet, e-mail, word processing, and any other appropriate software needed to complete assignments.

IMPORTANT DATES:	September 7	Labor Day (no class)
	October 8, 9	Fall Break (no class)
	October 12	Mid-term grades due
	October 30	Last day to drop with grade of "W"
	November 9-13	Advance registration for Spring
	December 7	Final Exam 10:15am-12:15pm

EXAMINATIONS: A student with a valid excuse (verification required) for missing an exam should notify Dr. Fultz beforehand if possible or within 24 hours of the missed exam in order to schedule a make-up examination. Dr. Fultz is to be notified within 48 hours of a missed exam and the exam is to be made up within one week following return to class. If your absence is going to be an extended one, it is recommended that the Dean of Students, Kevin Koett (783-2014) be contacted. An exam missed without an acceptable excuse will be recorded as a Zero. All exams will be available for review for two weeks after the exam grades are returned. Students may review exams in the instructor's office. The Final Exam (Exam IV) will contain an additional 50 point comprehensive section.

QUIZZES: A number of quizzes worth varying point values will be given and **cannot** be made up; they can however be taken in advance of your absence if your excuse for missing class is designated acceptable by the institution and more importantly if I have it prepared. Every quiz given will be counted until your total quiz score reaches a maximum of 125 points. Quizzes will be given at the start of class so being on time is critical. Quizzes will be either visual, matching, multiple choice, fill in the blank, short answer, or some combination thereof.

TUTORING: Free tutoring may be received by making an appointment or through the Learning Lab in 208 Allie Young Hall (783-5200).

CLASSROOM BEHAVIOR:

Academic Dishonesty: Plagiarism or cheating in any form will not be tolerated and will be dealt with in accordance Appendix A of the student handbook and the University Undergraduate Catalog. Academic dishonesty, as defined by the

University, occurs when you do not do your own work, fail to give credit for the work of others, or use resources inappropriately. (www.moreheadstate.edu/dsl/eaglehandbook).

Consistent Tardiness is not acceptable. You are expected to be in your seat and ready for class.

Cell Phones (including Blackberry's and I phones), Walkie Talkie's, PDA's, and Beepers must be shut off upon entering the classroom. MP3 Players, iPod's or any other device requiring the use of headphones are not permitted during class.

Laptops and Tape recorders are welcome but must be kept at your desk. It is a safety issue to have power cords running across the floor (It is your responsibility to have a fully charged battery). If I discover that you are doing anything other than course related material on your laptop during class I will collect your computer and you can pick it up immediately following class, following your second offense you will lose your privilege to bring your laptop back to class.

Any disruptions to lecture will not be tolerated, and the student will be asked to leave.

Tentative Lecture Syllabus
Human Anatomy and Physiology II
Dates are subject to change. Changes will be announced in lecture.
Learner outcomes are indicated in ().

The Special Senses (4 Lectures/hours) (SLOs 1, 2, 3, 5)

Sensory, Motor, and Integrative Systems	Chapter 16
Sensory Receptors, Somatic Sensations, Sleep, Memory	
Special Senses I	Chapter 17
Taste, Smell & Vision	
Special Senses II	Chapter 17
Vision & Hearing	
Special Senses III	Chapter 17
Hearing & Equilibrium	

The Endocrine System (5 Lectures) (SLOs 1, 2, 3, 4, 5)

Principles of Endocrinology	Chapter 18
Amines, Peptides & Steroids	
Principles of Endocrinology	Chapter 18
Amines, Peptides & Steroids	
The Endocrine System	Chapter 18
Hypothalamus, Pituitary Gland & Pineal Gland	
The Endocrine System	Chapter 18
Thyroid, Parathyroid, Adrenals & Heart	
The Endocrine System	Chapter 18
Pancreas & Calcium Metabolism	

EXAM I

The Cardiovascular System (9 Lectures) (SLOs 1, 2, 3, 4, 5)

Cardiovascular System	Chapter 19
Blood's Formed Elements	
Cardiovascular & Lymphatic Systems	Chapter 20
Heart Structure, Systemic & Pulmonary Design	Chapter 22
& The Lymphatic Connection	
Cardiovascular System	Chapter 20
Cardiac Cycle	
Cardiovascular System	Chapter 20
Electrical Activity & ECG	

Cardiovascular System	Chapter 21
Vessel Histology & Capillary Exchange	
Cardiovascular System	Chapter 21
Cardiac Output & Venous Return	
Cardiovascular System	Chapter 21
Blood Volume, Resistance & Blood Pressure	
Cardiovascular System	Chapter 21
Arterial Vasculature	
Cardiovascular System	Chapter 21
Venous Vasculature, Fetal Circulation & Lymphatics	Chapter 22

EXAM II

The Respiratory System (4 Lectures) (SLOs 1, 2, 3, 4, 5)

Respiratory System	Chapter 23
Organs & Muscles of Respiration	
Respiratory System	Chapter 23
Ventilation & Respiratory Mechanics	
Respiratory System	Chapter 23
Gas Exchange	
Respiratory System	Chapter 23
Hemoglobin & Gas Transport	

The Renal System (4 Lectures) (SLOs 1, 2, 3, 4, 5)

Urinary System	Chapter 26
Structures of Urine Formation	
Urinary System	Chapter 26
Glomerular Filtration	
Urinary System	Chapter 26
Resorption & Secretion	
Urinary System	Chapter 26
Plasma Clearance & Diuretics	

Acid Base (1 Lecture) (SLOs 1, 2, 3, 5)

Acid Base Balance	Chapter 27
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EXAM III

The Digestive System (3 Lectures) (SLOs 1, 2, 3, 5)

Digestive System	Chapter 24
Stomach, Small Intestine & Large Intestine	
Digestive System	Chapter 24
Liver	
Digestive System	Chapter 24
Gall Bladder & Pancreas	

The Reproductive System (4 Lectures) (SLOs 1, 2, 3, 4, 5)

Reproductive System	Chapter 28
Sexual Development & Spermatogenesis	
Reproductive System	Chapter 28
Oogenesis	
Reproductive System	Chapter 28
Ovarian Cycle & Menstrual Cycle	
Reproductive System	Chapter 28
Fertilization, Pregnancy (Development) & Parturition	Chapter 29

EXAM IV : Final Exam 12/7/2009 10:15am-12:15pm

The Final exam will be comprised of the fourth content section and a comprehensive portion (together worth 150 points). The comprehensive portion will consist of questions covering material from the three previous exams.