

**MOREHEAD STATE UNIVERSITY
DEPARTMENT OF BIOLOGY AND CHEMISTRY**

Human Anatomy & Physiology I (BIOL 234)

**Course Syllabus
Spring 2012**

- CATALOG DESCRIPTION:** **BIOL 234. Human Anatomy and Physiology I. (3-0-3); I, II, III.** A study of human tissues and organ systems (integumentary, nervous, skeletal, and muscular) with a focus on the interrelationships of form and function. Homeostatic regulatory mechanisms will be continually emphasized. BIOL 234 is required for the Biology Area Teaching Option. BIOL 234 is not acceptable for credit in the Biology Area Non-Teaching or Environmental Options or for the Minor in Biology.
- COURSE ORGANIZATION:** **Section 004:** Lectures TTHF 9:10-10:10 in Lappin 130
- PREREQUISITES:** ACT Composite of 18 or BIOL 105 or Equivalent
- INSTRUCTOR:** Dr. Darrin DeMoss, Ph.D.
Office: 327H Lappin Hall
Laboratory: 341 Lappin Hall
Office Phone: (606) 783-5388
d.demoss@moreheadstate.edu
Office hours: To be Announced / By Appointment
- REQUIRED TEXT:** *Principles of Anatomy and Physiology 13th Edition* by Tortora and Derrickson, Wiley Higher Education, 2012. ISBN-978-0-470-56510-0
- SUPPLEMENTAL MATERIAL:** *A Photographic Atlas of the Human Body 2nd Edition* by Tortora, Wiley Higher Education, 2004. ISBN-0-471-42064-6
- WileyPlus Website contains resources that support multiple learning styles, www.wileyplus.com/WileyCDA/
- Real Anatomy CD* (First Edition), 2009.
- i>Clicker2:** i>Clicker2 is a response system that will be used for the quizzing component of this course. Thus you will need to purchase the device and register it immediately. To register your clicker go to www.iclicker.com/registration and complete the fields with your first name, last name, student ID, and remote ID. Your student ID starts with the letter m (Example m0443767) while the remote ID is the series of numbers and sometimes letters found on the bottom of the back of your i>clicker2

remote. It is your responsibility to remember to bring your clicker to class and to make sure that it is functioning.

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 an 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.

“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 the best national and international scholarship, research, literature, and experiences specific to Appalachia, thus 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 (CFO's):

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 education 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 and are capable to utilize 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 LEARNING OUTCOMES (SLO's): Biology 234 **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. 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
 - E) A study of human tissues and organ systems (Integumentary, Nervous, Skeletal, and Muscular) with a focus on the interrelationships of form and function.
- 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 the physiological principles.

NCATE/ EPSB Accreditation Alignment of CFOs and SLOs:

Program: Biology -Teaching		BIOL 234 Human Anatomy and Physiology I
Aligned with → Assessment → (point values)	National Science Teacher Association – Teacher Content Knowledge	Description of assignment
Lecture exams (450) CFO: 1, 2 SLO: 1, 2, 3, 4, 5	A.2.a.1,6,8,10,15 A.2.b. 5 A.2.c.20	Exams will assess content knowledge and conceptual understanding of the course material from lecture. Exams will be taken during scheduled class time.
Lecture quizzes (150) CFO: 1, 2 SLO: 1, 2, 3, 4, 5	A.2.a.1,6,8,10,15 A.2.b. 5 A.2.c.20	Lecture quizzes will assess content knowledge and conceptual understanding of the course material from lecture. Quizzes will be taken during scheduled class time.

Special Note: *The EPSB Standards 1-4, while they are utilized in these courses by the instructors as they follow best practices, are not overtly instructed nor included in the assessment pieces listed above.*

Required Field Experience Hours: 0

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 university excuse (such as for illness/injury, military service, death in the family, or university-

sponsored activity, etc....) should **promptly notify Dr. DeMoss** 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. If your absence is an extended one, the **Dean of Students, Kevin Koett**, 211 ADUC, ((606) 783-2014) should be notified.

AMERICANS WITH DISABILITIES ACT (ADA): In compliance with the Americans with Disabilities Act (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, Evangeline Day, in 204-E ADUC, at 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 <http://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.

ADD/DROP: The last date to register for a class is **Tuesday January 24th** and the last date to drop this class with a grade of **W** is **Wednesday March 15th**.

EXAMINATIONS: A student with a valid excuse (verification required) for missing an exam should notify **Dr. DeMoss, beforehand if possible**, in order to schedule a make-up examination 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**, be contacted. An exam missed without an acceptable excuse will be recorded as a **Zero**. All exams will be available for review for one week after the exam grades are returned. Students may review exams in **Dr. DeMoss's office 327H Lappin Hall** or during the scheduled tutor session. The Final Exam is comprised of 2 Exams (Exam IV worth 100 points and a Comprehensive Exam worth 50 points).

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, I have it prepared. Every quiz given will be counted until your total quiz score reaches a **maximum of 150 points**. Quizzes will be given at the start of class so being on time is critical. Quizzes will be either visual/matching or multiple choice or some combination thereof and they require the use of your i>clicker2.

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

Exam I

100pts

Exam II	100pts
Exam III	100pts
Exam IV	100pts
Comprehensive Final	50pts
Quizzes	150pts
	600pts

GRADING SCALE:

A = 90-100%	(537 - 600pts)
B = 80-89%	(477 - 536pts)
C = 70-79%	(417 - 476pts)
D = 60-69%	(357 - 416pts)
E ≤ 59%	(≤ 357pts)

TUTOR SESSION: A tutor session for Dr. DeMoss's BIOL 234, Anatomy and Physiology, Section 004 will be announced as soon as possible. Additional 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 with the EAGLE: 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.

Consistent Tardiness is not acceptable. You are expected to be in your seat and ready for class prior to 9:10 every TTHF unless Lappin 130 is locked.

Cell Phones (including Blackberry's and iphones), Walkie Talkie's, PDA's, and Beepers must be shut off upon entering the classroom. **This means NO TEXTING!!!** MP3 Players, iPod's or any other device requiring the use of headphones are not permitted during class. If I observe the use of any of these devices I will collect the device and you can pick it up immediately following class, following your second offense you will be excused from class and you will have to schedule an appointment with me in order to return to class. The appearance of any of these devices during an exam will result in the collection of the device, failure of the exam and potentially the course following a meeting with the Dean of Students.

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.

Anyone caught with a cell phone out while reviewing an exam will have it confiscated immediately given a **ZERO** for the Exam and sent immediately to visit the Dean of Students.

Human Anatomy and Physiology I BIOL 234, Section 004

Dr. DeMoss

Lecture Syllabus, Spring 2012

January

17	Introduction to Anatomy and Physiology Homeostasis, Levels of Organization	Chapter 1
19	Inorganic Chemistry Atoms, Ions, Molecules, pH	Chapter 2
24	Organic Chemistry Lipids, Carbohydrates, Proteins, Nucleic Acids	Chapter 2
26	Enzymology	Chapter 2
27	The Cell Cytosol, Nucleus & Organelles	Chapter 3
31	Plasma Membrane & Membrane Transport Structure, Design & Diffusion	Chapter 3

February

2	Plasma Membrane & Membrane Transport Osmosis, Active Transport, Vesicular Transport	Chapter 3
7	Cell Division Mitosis	Chapter 3
9	Cell Division Meiosis	Chapter 3
10	Primary Tissues: Epithelial Cell Junctions, Epithelial Tissue, Basement Membrane	Chapter 4
14	EXAM I	
16	Primary Tissues: Nervous & Muscle	Chapter 4
21	Primary Tissues: Connective Extracellular Matrix & Membranes	Chapter 4
23	Anatomical Terminology & Survey of Organ Systems Position, Planes, Directional Terms & Body Cavities	Chapter 1

24	The Integument Skin & Accessory Structures	Chapter 5
28	Osteology Histology & Bone Remodeling	Chapter 6
March		
1	Skeletal System / Axial Skeleton Cranial Bones, Facial Bones, Vertebral Column & Thorax	Chapter 7
6	Skeletal System / Appendicular Skeletal Pectoral Girdle and Forelimbs & Pelvic Girdle and Hindlimbs	Chapter 8
8	Joints Classification & Kinesiology	Chapter 9
9	Nervous Tissue The Neuron, Neuroglia, CNS & PNS	Chapter 12
13	Membrane Potential & Electrical Activity Resting Membrane Potential, Action Potentials	Chapter 12
15	EXAM II	
17-25	Spring Break	
27	Membrane Potential & Electrical Activity Action Potentials	Chapter 12
29	Synapse and Neurotransmitters Electrical Synapse, Chemical Synapse & Neurotransmitters	Chapter 12
April		
3	Neural Integration EPSP, IPSP, Summation & Neural Circuits	Chapter 12
5	Central Nervous System I The Spinal Cord & Spinal Nerves	Chapter 13
6	Central Nervous System II Lobes, Blood-Brain Barrier & Meninges	Chapter 14
10	Central Nervous System III Functional Arrangement of the Cerebrum & Cranial Nerves	Chapter 14
12	EXAM III	
17	Autonomic Nervous System	Chapter 15

Sympathetic Division, Parasympathetic Division

19	Muscular System Motor Unit, Twitch, Recruitment & Neuromuscular Junction	Chapter 10
20	Muscular System / Mechanism of Muscle Contraction Muscle Proteins, Sliding Filament Theory	Chapter 10
24	Muscular System / Mechanism of Muscle Contraction Excitation-Contraction Coupling	Chapter 10
26	Muscular System / Metabolism & Fiber Types ATP Production, Muscle Fatigue & Fiber Types	Chapter 10
May		
1	Smooth & Cardiac Muscle	Chapter 10
3	Muscular Identification	Chapter 11
4	Muscular Identification	Chapter 11
7	EXAM IV (Monday May 7th, 10:15-12:15) Final Exam will be comprised of the fourth content section (worth 100pts) and a comprehensive portion (worth 50pts or 33% of the Final Exam). The comprehensive portion will consist of questions covering all four content exams.	

***** Any significant changes to the syllabus will be announced/discussed during scheduled class time. *****

Student Information Sheet

Name:

Permanent Home (County & State):

High School Attended:

Campus/Morehead Address:

Email:

Phone: Cell →

 Dorm →

 Home →

Classification:

Major:

Pre:

Advisor:

Junior & Senior Biology Courses

Previous College Biology Courses:

Disabilities that I need to be Aware of:

University Sport or Extracurricular Activity: Please include Coach's/Sponsor's Name:

Student Classroom Conduct Agreement

I understand that cheating/plagiarism or the inability to adhere to the rules described by Dr. DeMoss can and will result in severe consequences. If I cheat on an exam, the consequence will be an “E” for the exam (a “0” will be my recorded score). If I cheat on a quiz, the consequence will be an “E” for my quiz grade for the entire course quiz component (a “0” will be my recorded score). If I plagiarize someone else’s material in any format written, oral, or presentation, the consequence will be an “E” for that component of the course (a “0” will be my recorded score). In addition, my name and activities will be reported to my Advisor, the Chair of the Department of Biology & Chemistry and the Dean of Students.

I understand and agree to abide by Dr. DeMoss’s attendance policy, quizzing policy, testing policy and electronic device policies.

My inability to adhere to any of the policies/rules described in my syllabus and explained on January 17th, 2012 by Dr. DeMoss allows him to penalize me fairly in accordance with my inability to follow proper classroom conduct.

Please Sign and Date Using a Pen

Course/Section: BIOL 234, Section 004, Anatomy & Physiology I

Signature: _____

Date: January 17th, 2012