

BIOL121 - OX
Human Anatomy and Physiology I
Fall 2014
Pierce 102
TR 10:00am – 11:40pm
R 1:40pm – 4:40pm

Ann Massey, PhD
Clinical Assistant Professor
HUM 205C, (770) 784-4692
or
NHWSN 332, (404) 727-6946
ann.massey@emory.edu
Office Hours: T 1pm – 2:30pm

TEXT **Principles of Anatomy and Physiology** (13th ed). Tortora, Gerard J., and Derrickson, B. New York: John Wiley and Sons (2012) **ISBN 978-0470-56510-0**

Other Required Materials

Marieb, E.N. Human Anatomy and Physiology Laboratory Manual (10th ed.) – Fetal Pig Version. San Francisco: Benjamin Cummings (2011) **ISBN 0321735277**
Be sure you purchase a NEW, UNUSED lab manual

OBJECTIVES

This course, the first in a 2-course sequence, is an introduction to the structure and function of the human body. The course begins with cell structure, function, and biochemistry, characteristics of tissues, and control systems and homeostasis. In-depth study of skeletal, muscle, and nervous systems is emphasized. Upon completion of the course, the successful student will be able to demonstrate understanding of structure, function and integration of these physiological systems.

GRADING SCHEME

Grades will be based on the following:

Exams

POINTS

450

There will be 4 hour-long, in-class exams during the semester, totaling 450 points. There will be no make up exams allowed. Exams may include multiple choice, short answer, true-false, matching or essay questions.

Quizzes

100

Weekly quizzes (either announced or “pop”) will be given. The ten best quiz grades will be included in the final grade.

Comprehensive Final Exam (OPTIONAL)

150

The final exam will include material from the entire semester. Students missing one regularly scheduled exam during the semester, or students wishing to replace a low exam score, may take the comprehensive final exam. (Students must take some combination of 4 of the 5 scheduled exams)

Laboratory

300

Periodic practical laboratory exams will be given.
**OPPORTUNITIES FOR MAKE-UP LABORATORY EXAMS
ARE EXTREMELY LIMITED AND MUST HAVE THE APPROVAL
OF THE LAB COORDINATOR.**

Grading Scale The overall point score will determine the letter grade according to the following: **A – 900-1000; B – 800-899; C – 700-799; D – 600-699; F – 0-599.** Borderline cases will be determined by class participation.

Lecture Calendar – Fall 2014

Date	Lecture Topics and Readings	Laboratory Exercises
8.28 (Thursday)	Review of syllabus and policies CH1 – Introduction to the Human Body: Homeostasis CH2 – The Chemical Level of Organization: Biochemistry - properties of water; acids, bases and salts; pH and buffers	Exercise 1 Exercise 3 Exercise 4
9.2 (Tuesday)	CH2 – The Chemical Level of Organization: Biochemistry - organic molecules (carbohydrates, proteins, lipids, nucleic acids)	
9.4 (Thursday)	CH3 – The Cellular Level of Organization: Structure and composition of the plasma membrane; transport across the plasma membrane; structure and function of receptors	Exercise 5A Exercise 5B
9.09 (Tuesday)	CH3 - The Cellular Level of Organization: Transport across the plasma membrane; structure and function of receptors; protein synthesis; cell division (mitosis and meiosis overview) CH4 – The Tissue Level of Organization: Review of tissue types	
9.11 (Thursday)	LECTURE EXAM 1	Exercise 6A Exercise 8 Exercise 7
9.16 (Tuesday)	CH4 – The Tissue Level of Organization: Review of tissue types CH5 – The Integumentary System: Structure; cells, organization and functions of the epidermis and dermis; glands and appendages; growth and repair of the skin	
9.18 (Thursday)	CH6 – The Skeletal System – Bone Tissue: Structure and organization of compact vs. spongy bone; cells of bone tissue	Exercise 6A Exercise 8 Exercise 7 (continued)
9.23 (Tuesday)	CH6 – The Skeletal System – Bone Tissue: role of bones in calcium homeostasis	
9.25 (Thursday)	CH6 – The Skeletal System – Bone Tissue: role of bones in calcium homeostasis CH9 – Joints: Structural and functional classification of joints; movements allowed at joints; accessory structures	Exercise 9 Exercise 10
9.30 (Tuesday)	CH10 – Muscular Tissue: Comparison of skeletal, smooth and cardiac muscle; organization of skeletal muscle and connective tissue coverings; microanatomy of skeletal muscle cells; organization of sarcomeres	
10.2 (Thursday)	LECTURE EXAM 2	Exercise 11 Exercise 12

Date	Lecture Topics and Readings	Laboratory Exercises
10.7 (Tuesday)	CH10 – Muscular Tissue: Structural protein organization of muscle fibers; sliding filament theory	
10.09 (Thursday)	Lab Exam 1	Lab Exam 1
10.14 (Tuesday)	FALL BREAK – No Class Tuesday	
10.16 (Thursday)	CH10 – Muscular Tissue: Neuromuscular junction; action potential initiation and propagation; excitation-contraction coupling	Exercise 13 Exercise 14 Exercise 15
10.21 (Tuesday)	CH10 – Muscular Tissue: Neuromuscular junction; action potential initiation and propagation; excitation-contraction coupling; Energy utilization in muscle fibers; control of muscle contraction	
10.23 (Thursday)	CH12 – Nervous Tissue: Cell types in the nervous system; generation and propagation of action potentials; signal transduction at synaptic terminals	Exercise 15 (continued) Exercise 16B
10.28 (Tuesday)	CH12 – Nervous Tissue: Signal transduction at synaptic terminals	
10.30 (Thursday)	CH13 – The Spinal Cord and Spinal Nerves: Organization of the spinal cord; information flow in the spinal cord	Exercise 14 Exercise 15 (continued)
11.4 (Tuesday)	LECTURE EXAM 3	
11.6 (Thursday)	CH14 – The Brain and Cranial Nerves: organization of the brain vs. spinal cord; overview of structures and functions	Exercise 17 Exercise 21 Exercise 18B
11.11 (Tuesday)	CH15 – The Autonomic Nervous System: Organization of the ANS; structural and functional characteristics of sympathetic and parasympathetic divisions	
11.13 (Thursday)	CH15 – The Autonomic Nervous System: Organization of the ANS; structural and functional characteristics of sympathetic and parasympathetic divisions	Exercise 19 Exercise 22
11.18 (Tuesday)	CH17 – The Special Senses: Structures of the eye; image formation; retinal microanatomy; mechanism of action of photoreceptors;	
11.20 (Thursday)	CH17 – The Special Senses: Mechanism of action of photoreceptors;	Exercise 24 Exercise 25 Exercise 26

Date	Lecture Topics and Readings	Laboratory Exercises
11.25 (Tuesday)	CH17 – The Special Senses: Structures of the ear; sound conduction through the ear; microanatomy of basilar membrane ; mechanism of action of receptors for hearing	
11.28 (Thursday)	THANKSGIVING HOLIDAY	
12.2 (Tuesday)	CH18 – The Endocrine System: Pituitary structure and function; regulation of endocrine systems by hypothalamus	
12.4 (Thursday)	Lab Exam 2	Lab Exam 2
12.09 (Tuesday)	LECTURE EXAM 4 – Last day of classes	Labs do not meet
12.12 (FRIDAY)	FINAL EXAM 9:00am – 12N Pierce 102	

This schedule is tentative. I reserve the right to make changes as deemed necessary.

Student work submitted as part of this course may be reviewed by Oxford College and Emory College faculty and staff for the purposes of improving instruction and enhancing Emory education.

Policies

Attendance and Enrollment

You, as a student, are responsible for managing your enrollment in this class. Students should add/drop/withdraw using OPUS. You may drop this class during the regularly scheduled registration period without academic or financial penalty. Students who need to withdraw from the class after the registration period (generally, the first two weeks of the semester) but before the midpoint will receive a grade of W.

You, as a student, are responsible for all information and material presented in class. Attendance at lecture is strongly encouraged by the Biology department at Oxford College. Students are allowed 4 absences from lecture, for any reason, during the semester.

Attendance in lab is mandatory. Students who miss more than two labs without contacting the instructor and without making up the exercise will receive a failing grade for the course.

See the Absence Policy later in this document for details related to class and laboratory attendance.

Make-up work

- There will be no make-up quizzes.
- There are no make-up exams. If you miss an exam, for any reason, you may be allowed to take the optional comprehensive final exam at the end of the semester.
- Make-up laboratory classes will be at the discretion of the laboratory instructor and the laboratory coordinator.
- A single, comprehensive make-up laboratory exam will be given at the end of the semester which may replace one missed laboratory exam. Only students who have earned 55% of the possible lab points (ie., 165 points out of 300 points) are eligible to take the comprehensive make-up laboratory exam. Students missing more than one laboratory exam will receive a grade of 0 for the additional missed exams. Students who miss a lab exam and who are not eligible for the comprehensive make up lab exam will receive a grade of 0 for the missed exam. **Only students having the express, written permission of the instructor may take the comprehensive make-up laboratory exam.**

Grade Challenges

If you receive a grade that you believe is in error, you may challenge the grade in writing. You must submit to me the question, the answer you originally submitted, the answer which received full credit, and brief explanation detailing your reasons for requesting an increase in your score. I will only consider written requests.

Academic Dishonesty

Dishonesty in the classroom will not be tolerated. The (abridged) policy regarding student dishonesty at Oxford College of Emory University can be found in "Honor Code," under Oxford College Code of Conduct, pages 112-116 of the 2014-2015 Catalog. An electronic version of the complete policy regarding academic integrity and conduct can be found at <http://oxford.emory.edu/academics/student-services/student-honor-code/>

Violations of the Student Code of Conduct will receive a grade of 0 for the assignment and a report of the incident will be forwarded to the Honor Council.

When appropriate, students may collaborate on experiments or assignments, however students will generally be expected to turn in their own work. Instructions regarding the nature of each assignment will be provided.

Americans with Disabilities Act

Oxford College of Emory University and Nell Hodgson Woodruff School of Nursing both comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Students with disabilities who seek academic accommodations must first take appropriate documentation to the Office of Disability Services, located on the main campus, University Administration Building, Suite 110 (www.ods.emory.edu) OR 100 Hamill Street on the Oxford College campus. It is the responsibility of ODS to assess the documentation of each student requesting academic accommodations based on disability.

If you believe that you possess a disability for which reasonable accommodation must be made, you must consult with the instructor before the close of the second class meeting. Should a disability requiring accommodation arise after the second class meeting, you must present documentation to the ODS for assessment as quickly as is possible.

“Civility Clause”

Students are expected to behave toward me and fellow students with courtesy and consideration. This means that talking and disruptive behavior will be kept to a minimum. Students who must arrive late to class should enter quietly and be prepared for class (ie, not fumbling with calculators, backpacks, papers, etc...) Students who need to leave a class early should sit near an exit, then leave quietly. Cell phones, pagers, and other electronic devices should be silenced in the classroom.

I reserve the right to end a class at any time, for any reason, including the disruptive or rude behavior of anyone in the classroom. Questions, comments or concerns may be addressed to me outside class, during office hours, via voicemail or email, as well as during class.

Emails

I love emails! I actually would prefer that you contact me this way for many reasons. To ensure that I can address your issue in a timely manner, please include the following in your message...

1. **the problem** (which should also be included in subject line) that requires a decision or action
2. **the background - why are you making this request?** What is the policy outlined in the syllabus?
3. **options available to you** - first choice, second choice, and why each is an option.
4. **your specific request** (which might also be included in the subject line)
5. **the deadline** by which your request must be met

The subject line should include LAST NAME, COURSE and CRN, and the problem or request stated very succinctly. Email messages without this information in the subject line may not receive a response.

More questions, concerns, comments? I welcome your input! Feel free to visit me in my office or after class, contact me via email or phone, or drop by.

Absence Policy – Biology Department, Oxford College

All students are expected to attend all lecture and laboratory sessions. However, emergencies may arise which will necessitate absences from class. Students are allowed 4 cuts in lecture and **NO CUTS** in lab. Students may only miss lab without penalty in cases of illness, family emergency or a school-sponsored event **which is cleared with the professor in advance**. Students are responsible for all material which is covered in laboratory and lecture. When possible, students will be allowed to “make-up” laboratory material missed due to an excused absence; however, because of the nature of the laboratory material, actual “make-up” of missed activities is usually impossible.

PENALTIES

Students who exceed the “4-cut” limit in lecture, for whatever reason, or have an unacceptable absence from laboratory will have their final grade reduced 5 points per absence. Students who miss 2 labs without acceptable reasons will fail the course (see below).

LECTURE ABSENCES

THERE ARE NO EXCUSED ABSENCES FOR LECTURE. Each student may be absent four (4) times without penalty. These four (4) cuts may be used for any reason: illness, studying, travel, family emergency, etc. However, ANY additional cuts will result in grade reduction. **USE YOUR CUTS JUDICIOUSLY**, e.g., for sick leave only.

ACCEPTABLE LABORATORY ABSENCES

Although no discretionary absences, ie, “cuts,” are allowed regarding laboratory exercises, on rare occasions, illness, family emergencies or certain school sponsored events may make it necessary for a student to miss a laboratory session. The instructor **MUST** be notified prior to the day of the absence in all but the most extreme emergencies.

In all cases, the final decision regarding whether or not an absence is acceptable will be made by the instructor.

AN UNACCEPTABLE ABSENCE FROM LABORATORY RESULTS IN A FIVE-POINT REDUCTION IN THE FINAL GRADE. TWO UNACCEPTABLE LABORATORY ABSENCES RESULT IN FAILURE OF THE COURSE.

MISSED TESTS

Ordinarily, tests cannot be made up, however, this is up to the instructor. If a student misses a test, and the absence is acceptable, the missed test will not count either for or against the student. If the absence is not excused, the grade will be a zero. Students are cautioned that any excuse for missing an exam will come under severe scrutiny by the instructor. **THE INSTRUCTOR MUST BE NOTIFIED PRIOR TO THE TIME OF THE EXAM, AND THE INSTRUCTOR MAKES THE FINAL DECISION REGARDING WHETHER OR NOT AN ABSENCE IS ACCEPTABLE.** Laboratory tests which are missed for a reason that is excused **MUST** be made up. The instructor must be notified prior to the time of the test.

RELIGIOUS HOLIDAYS

Students must notify the instructor one week in advance if they intend to be absent for a religious holiday.

TARDINESS

Being late to class is rude and distracting. Continued tardiness by any student will result in the assignment of absences and ultimately a reduction in the student's grade. Three tardies equal an absence. The tardy student is responsible for notifying the instructor that s/he entered the classroom late and therefore was not absent. The instructor reserves the option of excluding a person from further classroom or laboratory participation if the student is continuously tardy.

Falsification of information regarding absences from class or laboratory will be considered a breach of academic integrity.