

## BIOL122 HUMAN ANATOMY AND PHYSIOLOGY II LAB SYLLABUS

Spring 2013  
Pierce 125  
R 1:40pm – 4:40pm

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### REQUIRED MATERIALS

Marieb, E.N. Human Anatomy and Physiology Laboratory Manual (10<sup>th</sup> ed.) – Fetal Pig Version. San Francisco: Benjamin Cummings (2011) ISBN **0321735277**

### OPTIONAL MATERIALS

Hutchinson, M. et al. A Brief Atlas of the Human Body. San Francisco: Benjamin Cummings (2003). (NOTE – this is usually bundled with the text and lab manual)

### DESCRIPTION

This syllabus describes in more detail the laboratory component of the BIOL122 course. The laboratory exercises explore the structure and function of the cardiovascular system (heart and blood vessels); respiratory system; urinary system; reproductive system; and endocrine system. Activities are designed to illustrate morphology of organs as well as physiological concepts. **Participation in and completion of the laboratory component is mandatory.**

### PREREQUISITE

To enroll in this course, successful completion (with a grade of C or better) of either BIOL121 (or an analogous human anatomy and physiology course with laboratory component) or BIOL141 is STRONGLY ENCOURAGED.

### GRADING SCHEME

Grades will be based on the following:

#### Exams

Exams will include practical and essay questions.

#### Quizzes

#### TOTAL

### POINTS

250

50

300

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.

**Lab Calendar s2013 (check page numbers)**

<b>January 17</b>	<p><b>Lab 1: Exercise 27 – Functional Anatomy of The Endocrine System</b> (Activities 1-2, pp. 405-410)</p> <p><b>Homework Assignment</b> (due for Lab 2): Review Sheet Exercise</p>
<b>January 24</b>	<p><b>Lab 2: Exercise 30 – Anatomy of the Heart</b> (Activities 1 – 4, pp. 443-449; cow heart dissection, pp. 449-452)  <b>Exercise 31</b> – Conduction System of the Heart and Electrocardiography (pp. 457-460 – no activities)  <b>Dissection Exercise 4</b> (Activities 1 – 4, pp. 727-736)</p> <p><b>Homework Assignment</b> (due for Lab 3): Review Sheet Exercise 30: Anatomy of the Heart (pp. 453-456)</p>
<b>January 31</b>	<p><b>Lab 3: Exercise 32 – Anatomy of Blood Vessels</b> (Activities 1 – 7, pp. 469-484)  <b>Dissection Exercise 4</b> (Activities 1 – 4, pp. 727-736)</p> <p><b>Homework Assignment</b> (due for Lab 4) Review Sheet Exercise 32: Anatomy of Blood Vessels (pp. 485-490)</p>
<b>February 7</b>	<p><b>Lab 4: Exercise 32 – Anatomy of Blood Vessels, continued</b> (Activities 1 – 7, pp. 469-484)  <b>Dissection Exercise 4</b> (Activities 1 – 4, pp. 727-736)</p> <p><b>Homework Assignment</b> (due for Lab 5) Review Sheet Exercise 32: Anatomy of Blood Vessels (pp. 485-490)</p>
<b>February 14</b>	<p><b>Lab 5: Exercise 33A – Human Cardiovascular Physiology: Blood Pressure and Pulse Determinations</b> (Activities 1-2, pp. 491- 495; Activity 5, pp. 497-499; Activity 7, pp. 500-502)  Also, see the handout for exercises</p> <p><b>Homework Assignment</b> (due for Lab 6) Review Sheet Ex. 33A – Blood Pressure ... (pp. 505-510)</p>
<b>February 21</b>	<p><b>Lab 6: Exercise 29A – Blood</b> (Activity 2, 426-428; Activity 7, pp. 434-435 – use artificial blood samples)  <b>Exercise 29B</b> – Blood Analysis: Computer Simulation (Activity 1, pp. PEx 65-PEx 68; Activity 3, pp. PEx72-PEx73; Activity 4, pp. PEx 73-PEx75)</p> <p><b>Homework Assignment</b> (due for Lab 7) Review Sheet Exercise 29: Blood (omit hematologic tests) (pp. 437-442)</p>
<b>February 28</b>	<b>LABORATORY TEST #1</b>
<b>March 7</b>	<p><b>Lab 7: Exercise 38 Digestion</b> (Activities 1-6, pp. 575-587; Activity 8, pp. 589-590)  <b>Exercise 39B</b> – Computer Simulation: Chemical and Physical Processes of Digestion (Activities 1-4, pp. PEx125 - PEx135)  <b>Homework Assignments</b> (due for Lab 8)  Review Sheet Exercise 38: Anatomy of the Digestive system (pp. 591-596)  Review Sheet Exercise 39B (pp PEx137-PEx139)</p>

<b>March 14</b>	<b>Spring Break – Labs do not meet</b>
<b>March 21</b>	<p><b>Lab 8: Exercise 36 – Anatomy of the Respiratory System</b> (Activity 1, pp.537-543; Activity 3, pp. 543-544)  <b>Exercise 37A – Respiratory System Physiology</b> (Activity 1, pp. 549-551;  Activity 7, p. 567)  <b>Exercise 37B – Respiratory Mechanics: Computer Simulation</b></p> <p><b>Homework Assignment:</b> (due for Lab 9)  Review Sheet Exercise 36 - Anatomy of the Respiratory System</p>
<b>March 28</b>	<p><b>Lab 9: Exercise 40 – Anatomy of the Urinary System</b> (Activity 1,  pp. 609-612; Dissection – sheep kidney, pp. 612-613;  Activity 2, pp. 613-616)  <b>Exercise 41A - Urinalysis</b> (Activity 1, pp. 621-624,  with artificial urine samples)</p> <p><b>Homework Assignment:</b> (due for Lab 10)  Review Sheet Exercise 40 - Anatomy of the Urinary System (pp. 617-620)  <b>Exercise 40 – Anatomy of the Urinary System</b> (pp. 609-616)  Exercise 41A - Principles of Urinalysis (pp. 621-624) continued</p>
<b>April 4</b>	<b>Lab 10: Acid-Base Balance – You Be the Doctor</b>
<b>April 11</b>	<p><b>Lab 11: Exercise 42 - Anatomy of the Reproductive System</b>  (Activities 1-5, pp. 629-636)</p> <p><b>Homework Assignment:</b> (due for Lab 12)  Review Sheet Exercise 42 – Anatomy... (pp. 637-640)  Review Sheet Exercise 43 - Physiology of Reproduction (pp. 649-652)</p>
<b>April 18</b>	<p><b>Lab 12: Exercise 43 – Physiology of Reproduction</b>  (Activities 1-2, pp. 641-644; Activities 4-5, pp. 646-647)</p> <p><b>Homework Assignment:</b> (due for Lab 12)  Review Sheet Exercise 42 – Anatomy... (pp. 637-640)  Review Sheet Exercise 43 - Physiology of Reproduction (pp. 649-652)</p>
<b>April 25</b>	<b>LABORATORY TEST # 2</b>

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

## POLICIES

**ATTENDANCE:** Attendance is required at all labs. Please refer to the Biology Department's Absence Policy (attached).

**LABORATORY SUPPLIES:** Supplies are provided for student use. Equipment, models, slides, etc. may not be removed from the lab.

**LABORATORY EXAMS:** Lab tests are to be taken on the day scheduled. Emory University ID or valid picture ID may be required for entrance into the laboratory exam.

**Laboratory exams are timed.** No student will be allowed to exceed the allotted time for any laboratory exam. Students arriving more than 5 minutes late to a laboratory exam may be asked to take the exam during the open lab time, if space and resources allow. Each lab exam is composed of a written portion (with fill-in-the-blank and essay questions) and a practical portion. Each lab exam will be worth 125 points, for a total of 250 points contributing to the overall course grade.

**Opportunities for make-up exams are extremely limited and are at the discretion of the laboratory coordinator.** If a lab exam is to be missed, the laboratory coordinator is to be notified immediately. Students needing to miss a laboratory exam must obtain permission from the Laboratory Coordinator to take a make-up exam. **Only students having written permission from the instructor will be allowed to take the make-up exam. No student will be allowed to make up more than one lab exam.** Students missing a second laboratory exam will be assigned a score of 0 of the missed exam.

Students who are unable to take the lab exam during a regularly scheduled exam time may have the option of taking a COMPREHENSIVE make-up exam at the end of the semester. This comprehensive lab exam may replace one missed lab exam only. Only students who have earned 55% of the possible lab points (ie, 165 out of 300 possible points) will have the option of taking the comprehensive lab exam. Students who are not eligible to take the comprehensive lab exam will receive a 0 score for the missed exam. The comprehensive lab exam may NOT be used to replace a low score on a lab exam.

**Laboratory exam papers remain the property of the NHWSN and Oxford College.** Students will have an opportunity to review their performance on each exam and discuss their grade with their instructor. Students may NOT keep their exam papers. Students who do not return their exam papers to their instructor will be considered in violation of the Student Code of Conduct regarding theft of University property.

**HOMEWORK ASSIGNMENTS:** If you answer all of the Lab Manual Homework Assignments listed in the Lab Syllabus you can earn up to **5 points** on each lab exam score.

**OPEN LAB TIME:** The A&P lab will be open for student self-review. A teaching assistant will be present to assist students with questions and review. Time TBA.

**CHILDREN and VISITORS IN LAB:** Children should never accompany students to lab. Students bringing children to lab will be asked to leave.

Adult visitors may be welcome in the lab at the discretion of the instructor. Adult visitors are expected to abide by the policies and procedures outlined in this syllabus. Adult visitors may be asked to leave at any time, for any reason.

**GRADES:** Grades will be available via Blackboard throughout the semester. You may contact the course instructor to obtain your grade in person. NO GRADES WILL BE PROVIDED VIA TELEPHONE OR EMAIL.

## **OTHER**

### **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 "Regulations," under Conduct and Honor, pages 96-100 of the 2011-2012 Catalog. An electronic version of the complete policy regarding academic integrity and conduct can be found at <http://oxford.emory.edu/academics/catalog/regulations/code-and-honor/>

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](http://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 course instructors, guest lecturers 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. Laptops are permitted for notetaking only.

The course instructors reserve the right to end a class at any time, for any reason, including the disruptive or rude behavior of anyone in the classroom.

## 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.

## **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.**

## LABORATORY SAFETY POLICIES

1. Students should wear shoes with closed toes to lab. Safety goggles, gloves (excepting latex gloves) or lab coats are not required.
2. Students should arrive on time for lab. Those needing to arrive late or leave early should contact the TA.
3. Unauthorized laboratory experiments are NOT permitted.
4. Students are expected, at all times, to consider the safety and comfort of those around them. Students acting in an unsafe or disruptive manner will be asked to leave immediately.
5. **Food is absolutely prohibited in the laboratory.**
6. Electronic devices (CD players, iPods, etc.) should be turned off when coming to lab. Cell phones and pagers should be turned off or set on “vibrate” mode. Students speaking on cell phones during the laboratory exercise will be considered disruptive and may be asked to leave.
7. Students are expected to clean up after themselves. Equipment, slides and models should be returned to their places, spills cleaned and trash discarded. Dissecting tools should be cleaned with soap and water. Grade reductions may be taken if a work area is left unclean or unsafe for others working in the laboratory.
8. Injuries should be reported to the TA immediately. Students should familiarize themselves with the location of the safety equipment (ie, safety shower, eye-wash stations, fire blankets and extinguishers, sinks, etc...)
9. Do not operate any equipment until you are instructed in its proper use.