

## Oxford College of Emory University

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### BIOL 121 – Human Anatomy and Physiology I Laboratory Course Syllabus – Fall 2016

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#### Course: BIOL 121

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Office hours: Tuesdays/Thursdays 10:50 am to 11:50 am or by appointment

**Class Hours:** Tuesdays 1:40 pm – 4:40 pm

**Classroom:** Science Building 301

#### REQUIRED MATERIALS

Allen, C., and Harper, V. Laboratory Manual for Anatomy and Physiology (5thed.) Hoboken: John Wiley and Sons (2014)

**Bundled with WileyPLUS ISBN 9781118946466**

- **Access code (Course ID) 534158    Class Section Name:** BIOL OX121\_L-B3 (TUESDAY)

#### DESCRIPTION

This syllabus describes in more detail the laboratory component of the BIOL121 course. The laboratory involves overview and review of general biological concepts (osmosis, diffusion and movement of substances across a semipermeable membrane; cell anatomy, mitosis and meiosis); an introduction to the language of anatomy and physiology; an introduction to tissue types and classification schemes; and in-depth study of organ systems including integument, bone, muscle and nervous system. Activities are designed to illustrate morphology of organs as well as physiological concepts. **Participation in and completion of the laboratory component is mandatory.**

#### Technology Requisites

Students should bring laptops to lab. System requirements for WileyPLUS can be found at <http://help.wileyplus.com/browsercheck/index.html>

Students should know how to access course materials via Canvas and post questions / replies to the discussion board feature.

#### Learning Community Overview

Lab is intended to be hybrid in format, with in-class activities accompanied by online resources and activities that can be completed outside of the scheduled lab times. Students should expect to work and communicate in several media, traditional and electronic, and should expect to find themselves

working in groups and independently. Many jobs require that people work together in teams - this is particularly true in healthcare settings, where evidence indicates that effective teamwork leads to improved patient care and outcomes. Collaborative work also increases the effectiveness of learning. The laboratory learning community is a bit less formal and structured than that in the classroom.

### LEARNING OUTCOMES:

By the end of this course, students will be able to

- use and describe anatomical terms related to location and direction
- identify and describe basic physiological processes of cells
- compare and contrast active and transport processes, and discuss their importance in living systems
- identify and describe tissue types, and predict organ function based on the types of tissues found within
- describe the composition and functions of the musculoskeletal, nervous, and integumentary systems, and predict their functions based on the organs comprising them

### GRADING SCHEME POINTS

Grades will be based on the following:

Item	Points
2 Lab Exams @ 100 points each	200
Assignments (ART assignment)	25
Quizzes	50
<b>Online glossary of anatomical terms</b>  (For ONE module, students will contribute to the course bibliography)	<b>10</b>
<b>Online bibliography</b>  (For ONE module, students will contribute to the course bibliography)	<b>15</b>
<b>Total</b>	<b>300</b>

(NOTE - the points earned in lab contribute to the overall grade for BIOL121-OX. See the course syllabus for the details related to the grade assignments for the course)

### Mid-Term Report:

**A mid-term grade is not assigned or posted for this lab. The last day to withdraw from class without academic penalty is Friday, October 14<sup>th</sup>, 2016.** It is each student's responsibility to keep up with their academic progress in this laboratory. At any time, If you have any questions as to whether or not you are making satisfactory progress, please contact your instructor BEFORE October 14, 2016.

### **Course Schedule:**

Be sure to check the schedule often for changes in the due dates of assignments throughout the Fall 2016 semester. **Please note that the course schedule is tentative and subject to change. More importantly, due dates for assignments may be changed at the instructor's discretion. You are responsible for keeping track of due dates and turning in your work when it is required.**

**In addition to the lab manual, course documents may be found on canvas.** Students are required to review and **COMPLETE** this material **BEFORE** each week's laboratory meeting. It is your responsibility to be prepared for each and every weekly lab meeting, so you should check with your instructor to verify what is required.

Date	Laboratory Topic and Lab Manual Exercises
<b>August 30 (Tuesday)</b>	<b>Introduction to course; safety information</b>  <b>MODULE 1 - Review of Basic Cellular Anatomy and Physiology; Introduction to Anatomical Terminology (and Microscopes )</b>  Lab 1: Exercise 1 – Anatomical Language (Activities 1-4, pp. 2-6) Exercise 2 – Organ Systems and Body Cavities (Activities 1-4, pp.13-18)  Exercise 4 – Cell Structure and Cell Cycle (Activities 1-3, pp. 31-36)  Homework Assignment ( due 2nd lab meeting): Reviewing / Using Your Knowledge, Exercises 1 (pp. 7-12); 2 (pp. 19-22); 4 (pp. 37-40)  M1 online quizzes OPEN
<b>September 6 (Tuesday)</b>	Lab 2: Exercise 6 – Tissues (Activities 1-4, pp. 51-73) Exercise 7 – The Integumentary System (Activities 1-4, pp. 83-90)  Organ Systems (Rat Dissection); Histology Part I
<b>September 13 (Tuesday)</b>	<b>MODULE 2 - Tissues</b> Lab 3: PowerPhys Experiment 1, Enzyme Activity or TBA Introduction to RealAnatomy use  Transport/Osmosis/Diffusion – Exercise 5 (In-Lab experiment)

	<p>Homework Assignment (due next lab meeting): Reviewing / Using Your Knowledge, Exercise 6 (pp. 75-82)</p> <p>M1 online quizzes CLOSE</p> <p>M2 online quizzes OPEN</p>
<b>September 20 (Tuesday)</b>	<p>Lab 4: Histology II --Exercise 6 (continued) – Tissues (Activities 1-4, pp. 51-73) Exercise 7 (continued) – The Integumentary System (Activities 1-4, pp. 83-90) Homework Assignment (due next lab meeting)</p> <p>Reviewing / Using Your Knowledge, Exercise 7 (pp. 91-94) Chapters 1 &amp; 4</p>
<b>September 27 (Tuesday)</b>	<p><b>MODULE 3 - Skeletal System</b> Lab 5: Axial Skeleton</p> <p>Exercise 8 - Bone Structure and Function (Activity 1, p. 96; Activities 3-5, pp. 97-100); Exercise 9 – The Axial Skeleton (Activity 1-10, pp. 95 -130) Homework Assignment (due next lab meeting): Reviewing / Using Your Knowledge, Exercises 8 (pp. 101-104); 9 (pp. 131-136) M2 online quizzes CLOSE</p> <p>M3 online quizzes OPEN</p> <p><b>Bring your Atlas to Lab (if you have one)</b></p> <p><a href="#">Skeletal System Review Page</a></p>
<b>October 04 (Tuesday)</b>	<p>Lab 6 – Appendicular Skeleton</p> <p>Exercise 10 – The Appendicular Skeleton (Activities 1-6, pp. 146-156)</p> <p>Homework Assignment (due next lab meeting): Reviewing / Using Your Knowledge, Exercise 10 (pp. 153-158)</p> <p><b>Bring your Atlas to Lab (if you have one)</b></p> <p><a href="#">Skeletal System Review Page</a></p>
<b>October 11 (Tuesday)</b>	<b>NO LABS THIS WEEK-- FALL BREAK</b>
<b>LAST DAY TO DROP WITHOUT ACADEMIC PENALTY IS FRIDAY, OCTOBER 14<sup>th</sup></b>	
<b>October 18 (Tuesday)</b>	<p><b>LABORATORY TEST #1</b> NOTE: The exam will be given during the scheduled lab time, beginning</p>

	<p>at 1:30pm. (Make-up exam by permission only)</p> <p>M3 quizzes CLOSE</p>
<p><b>October 25 (Tuesday)</b></p>	<p><b>MODULE 4 - Muscles and Joints</b>            Lab 7: Exercise 11 – Joints and Synovial Joint Movements (Activities 1-5, pp. 159-168; Activities 5-10, pp. 174-182)</p> <p>Exercise 12 - Skeletal Muscle Structure (Activities 2-4, pp. 189-192)            Exercise 14 - Skeletal Muscles...(Activities 1-5, pp. 197-224)            (Emphasis upon head and neck muscles, back, thorax, and abdomen.)</p> <p>Homework Assignment            Reviewing / Using Your Knowledge, Exercises 11, 12, 14            (pp. 169-172; 181-184; 225-232)</p> <p>M4 quizzes OPEN</p>
<p><b>November 1 (Tuesday)</b></p>	<p>Lab 8: Continue Exercise 14 - Skeletal Muscles...(Activities 1-5, pp. 197-224 - Emphasis upon muscles of arms, legs, pectoral and pelvic girdles)</p> <p>Homework Assignment (above)</p>
<p><b>November 8 (Tuesday)</b></p>	<p>Lab 9: Continue Exercise 14 - Skeletal Muscles...(Activities 1-5, pp. 197-224 - Emphasis upon muscles moving wrist, fingers, lower leg)</p>
<p><b>November 15 (Tuesday)</b></p>	<p><b>MODULE 5 - Brain, Spinal Cord and Nervous Tissue</b>            Lab10: Exercise 16 – Nervous Tissue (Activities 1-5, pp. 255-264)            Exercise 17 – Spinal Cord... (Activities 1-3, pp. 269-272)</p> <p>Homework Assignment (due next lab meeting)            Reviewing / Using Your Knowledge, Exercises 16 (pp. 275-278)</p> <p>M4 online quizzes CLOSE</p> <p>M5 online quizzes OPEN</p>
<p><b>November 22 (Tuesday)</b></p>	<p>Lab 11: Exercise 19 – Somatic Reflexes (Activities 1-6, pp.289-294)            Exercise 20 - Brain Structure... (Activities 1-6, pp. 299-310; Activities 9-10, pp. 310-314)            Exercise 21 - Cranial Nerves (Activities 1-2, pp. 323-327)</p> <p>Homework Assignment (due next lab meeting)            Reviewing / Using Your Knowledge, Exercises 19 - 21 (pp. 275-278; pp. 317-322; pp. 329-332)</p>

<b>November 29 (Tuesday)</b>	Lab 12: Exercise 22 – Autonomic Nervous System.... (Activities 1-3, pp. 333-338; Activity 5, p. 340) cow eye dissection, pp. 368-369; Activities 5-11, pp. 371-374) Exercise 23 – General Senses (Activities 1-6, pp. 345-354) Exercise 24 - Special Senses (Activities 1-3, pp.359-363; Activity 5-13, pp. 365-376) Homework Assignment (due next lab meeting) Reviewing / Using Your Knowledge, Exercises 19 - 21 (pp. 275-278; pp. 317-322; pp. 329-332)
<b>December 6 (Tuesday) (last day of class)</b>	<b>LABORATORY TEST # 2</b> NOTE: The exam will be given during the scheduled lab time, beginning at 1:30pm. (Make-up exam by permission only)

\*This schedule is tentative and may change.

### **COURSE 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 100 points, for a total of 200 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 test 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.

**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.

#### **QUIZ/LABORATORY EXAM POLICIES:**

- During quizzes and exams, all electronic device such as cell phones, iPads, palm pilots, pagers, calculators, MP3 players etc. are PROHIBITED. Possession and/or use of these items above or any electronic device during a quiz or exam will result in a grade of zero.
- Points can be lost from an exam or quiz if during test time, a cell phone or other electronic device makes a noise such as beeping, buzzing, chiming, ringing, etc. which disrupt the testing environment. The responsible student will be held accountable and lose points.

**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. These are individual assignments.

**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 Canvas 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 policies:**

##### **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](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.

Access, Disability Services and Resources (ADSR) works with students who have disabilities to provide reasonable accommodations. In order to receive consideration for reasonable accommodations, students must contact ADSR and complete the registration process. Faculty may not provide disability accommodations until an accommodation letter has been processed; accommodations are not retroactive. Students registered with ADSR who receive a letter outlining specific academic accommodations are strongly encouraged to coordinate a meeting time with their professor to discuss a protocol to implement the accommodations as needed throughout the semester. This meeting should occur as early in the semester as possible. Contact Access, Disability Services and Resources for more information at (770) 784-4690 or [adsroxford@emory.edu](mailto:adsroxford@emory.edu). Additional information is available at the ADSR website at <http://equityandinclusion.emory.edu/access/students/index.html>.

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.

### **E-mail policy:**

Emails are highly welcomed however to ensure that I can address your issue in a timely manner, the following requirements should be included in your email:

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; so that I can tell that it is not spam or a virus)
5. the deadline if applicable 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. Keep in mind that emails that do not meet these requirements may not receive a response. (Messages sent through Blackboard will have this information included automatically.)

### **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 sever 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 tardiness 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.**

**PLEASE NOTE that changes or additions to this syllabus, including specified readings, exam dates, grading, and course policies can be made at the discretion of the instructor at any time.**

**IMPORTANT REMINDER: The last day to withdraw without academic penalty is Friday, October 14, 2016.**

*Last Updated: 8/19/2016*

## LABORATORY SAFETY POLICIES

1. Students should wear shoes with closed toes (Absolutely NO SANDALS or FLIP-FLOPS) and proper attire to lab. Unpermitted items include but not limited to skirts and skorts.

Safety goggles and gloves **must be worn** during dissections. Long hair needs to be pulled back and AVOID wearing hanging jewelry during lab. Points can be lost for a specific lab due to students who attend lab without appropriate attire or footwear as you will not be permitted to take part in lab on that day.

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. (Water bottles are not allowed.)**
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.