

BIOL122_OX
Human Anatomy and Physiology II
Spring 2017

Oxford Science Building
TR10:00 – 11:40 am

Cristy Tower-Gilchrist, PhD
Lecturer

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or
SON room 321
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Office Hours: T 12:00pm – 1:30pm

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**.

***COURSE DESCRIPTION:** This course, the second in a two-course sequence, examines structures and functions associated with specific organ systems, and functional integration of these systems in homeostatic regulation of the body. The endocrine, cardiovascular, urogenital, respiratory, gastrointestinal, and reproductive systems will be studied. Laboratory exercises emphasize the composition and structure at both histological and gross levels of these organ systems and demonstrate associated physiological principles. Upon completion of this course, the successful student will be able to demonstrate understanding of structure, function and integration of these organ systems.

***COURSE OBJECTIVES:**

The student should be able to...

1. Outline the organization of the endocrine system and the mechanisms by which it impacts other organ systems
2. Identify and describe the gross and histological features of the heart; describe the electrical and mechanical functions of cardiac tissue, and factors that regulate cardiac function
3. Identify arterial and venous components of circulatory routes within the human body; describe the structure and functions of special circulatory routes
4. Identify and describe important histological features of blood vessels; outline and describe the short-term and long-term mechanisms that regulate blood pressure
5. Describe the physical characteristics and functions of blood; identify and describe the functions of the formed elements and plasma proteins (including immune functions)
6. Identify the structures and functions of the respiratory system; identify and describe the factors (chemical, physiological) that impact gas exchange, oxygen binding to hemoglobin and rate / depth of breathing
7. Identify and describe the gross and histological features of the kidney; list and describe the processes in the nephron involved with urine formation, and describe the mechanisms that regulate each
8. Identify and describe the gross and histological structure of the alimentary canal and associated digestive glands; describe hormonal and neural control of secretion in the

digestive system

9. Describe the actions of the respiratory system, the urinary system and the digestive system in maintaining the composition and pH of the body fluids; discuss clinical implications of imbalances
10. Outline and describe the processes of human sexual reproduction, and describe hormonal control mechanisms that regulate them

POLICIES RELATED TO THE NELL HODGSON WOODRUFF SCHOOL OF NURSING

The Undergraduate Student Handbook can be accessed at the following link:

<http://www.nursing.emory.edu/includes/documents/site-wide/handbooks/2015-2016-bsn-student-handbook.pdf>

The below policies are addressed in more detail in the Undergraduate Student Handbook.

Grading Scale: Please see p. 28 of the Undergraduate Student Handbook (link above) for information about the grading scale used in the School of Nursing.

Communication with Faculty: Emory University's policy for student-faculty communication states that email is the primary medium for official communication. "Students are expected to maintain their accounts and check their email regularly so that new mail will be properly received and read. Certain communications may be time-critical. While students may redirect email from their official University email address to another address (e.g., @hotmail.com, @aol.com), the University is not responsible for the delivery of email by other service providers". (Emory University Council of Deans and President's Cabinet, 2004)

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.

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. 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 ADSR for assessment as quickly as is possible.

Course Withdrawal Policy: Please see p. 21 in the Undergraduate Student Handbook for specific information about withdrawing from a class.

Registration may be cancelled by the student until the last day of the drop/add period and no entry for that semester will be made on the student's transcript.

Please see cancellation and withdrawal policy for Oxford College: Link provided below
<http://oxford.emory.edu/academics/courses/course-catalog/academic-regulations/cancellation-and-withdrawal/>

*Determination of academic standing in a course will be based on the points accumulated at the time of withdrawal. For instance, if a course grade is based on 4 tests worth 25 points each but only 3 tests were available to the student at the point of withdrawal, academic standing will be determined based on the performance of the 3 available tests. The student must have an average score of 70% or above based on the 3 available tests to receive a grade of "W" for the course. An average score on the 3 available tests of less than 70% will result in the assignment of a grade of "WF" for the course.

Midterm Deficiencies

Please read the terms of midterm deficiencies using the link below.

(<http://oxford.emory.edu/academics/courses/course-catalog/academic-regulations/grading-system/>)

IMPORTANT REMINDER: The last day to withdraw without academic penalty is Friday, March 3, 2017.

Inclement Weather: Please see p. 7 of the Undergraduate Student Handbook (link above) for information about inclement weather procedures. <http://policies.emory.edu/4.42>

Student Health Center: Please see p. 18 of the Undergraduate Student Handbook (link above) for information about the Student Health Center.

INFORMATION SPECIFIC TO THIS COURSE

TEXT Principles of Anatomy and Physiology (14th ed). Tortora, Gerard J., and Derrickson, B. New York: John Wiley and Sons (2014) **ISBN 9781118774564**

Other Required Materials

Allen, C., and Harper, V. Laboratory Manual for Anatomy and Physiology (5th ed.)
Hoboken: John Wiley and Sons (2014) **Bundled with WileyPLUS ISBN 9781118946466**

GRADING SCHEME

Grades will be based on the following:

POINTS
450

Exams

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 (as determined by the School of Nursing)

The overall point score will determine the letter grade according to the following:

Letter Grade	Numerical Grade (Total Points)
A+	970-1000
A	930-969
A-	900-929
B+	870-899
B	830-869
B-	800-829
C+	770-799
C	730-769
C-	700-729
D+	670-699
D	630-669
D-	600-629
F	Below 599

Lecture Calendar s2017

Date	Lecture Topics and Readings	Laboratory Exercises
January 10 (Tuesday)	CH18 – The Endocrine System: Overview and review; Pituitary and hypothalamus control; hormones of the adrenal glands and the pancreas	Allen, Exercise 25 M1 quiz OPENS
January 12 (Thursday)	CH18 – The Endocrine System: Overview and review; Pituitary and hypothalamus control; hormones of the adrenal glands and the pancreas	
January 17 (Tuesday)	CH20 - The Heart: Gross anatomy and histology review; conduction system and conducting cell properties; EKG	Allen, Exercise 27 M2a quiz OPENS
January 19 (Thursday)	CH 20 – The Heart: Cardiac cycle; cardiac output and Starling's Law	
January 24 (Tuesday)	CH 20 – The Heart: Cardiac cycle; cardiac output and Starling's Law (continued) CH 21 – Blood Vessels and Hemodynamics: Histology review; circulatory system overview; introduction to blood pressure and control	Allen, Exercise 29 – 30 M2b quiz OPENS
January 26 (Thursday)	CH 21 – Blood Vessels and Hemodynamics: Capillary and fluid-flow; blood pressure control mechanisms	
January 31 (Tuesday)	CH 21 – Blood Vessels and Hemodynamics: Capillary and fluid-flow; blood pressure control mechanisms; baroreceptor and chemoreceptor reflexes	LAB EXAM 1
February 2 (Thursday)	LECTURE EXAM 1 (Ch 18, 20, 21)	
February 7 (Tuesday)	CH 19 – Blood: Overview; structure and function of erythrocytes; hemostasis	Allen, Exercise 28
February 9 (Thursday)	CH 19 – Blood: Overview; structure and function of erythrocytes; hemostasis Begin CH22-The Lymphatic System and Immunity: Overview; innate; non-specific and specific defenses; Humoral and cell mediated responses	
February 14 (Tuesday)	CH22 – The Lymphatic System and Immunity: Humoral and cell-mediated responses	Allen, Exercise 26 M2c quiz OPENS
February 16 (Thursday)	CH22- The Lymphatic System and Immunity: Humoral and cell-mediated responses (continued)	

February 21 (Tuesday)	CH 24 – The Digestive System: Overview and anatomy review; acid secretion into the stomach and its control;	Allen, Exercise 34 – 35
February 23 (Thursday)	CH 24 – The Digestive System: Absorption, Control of digestive processes	M3 quiz OPENS
Feb. 28 (Tuesday)	CH24 – The Digestive System: Control of digestive processes (continued)	LAB EXAM 2
March 2 (Thursday)	LECTURE EXAM 2 (CHAPTERS 19, 22, 24)	
Friday March 3, 2017 Midterm Withdrawal Deadline without Penalty		
March 7 March 9	SPRING BREAK SPRING BREAK	Labs do not meet
March 14 (Tuesday)	CH23 – The Respiratory System: Overview and anatomy review; Pulmonary ventilation	Allen, Exercise 32 – 33
March 16 (Thursday)	CH23 – The Respiratory System: Gas exchange and transport; oxygen transport and the function of hemoglobin; control of respiration	M4 quiz OPENS
March 21 (Tuesday)	CH 26 – The Urinary System: Overview and anatomy review; Urine formation; Renal mechanisms regulating homeostasis	Allen, Exercise 36
March 23 (Thursday)	CH 26 – The Urinary System: Overview and anatomy review; Urine formation; Renal mechanisms regulating homeostasis	M5 quiz OPENS
March 28 (Tuesday)	LECTURE EXAM 3 (CHAPTERS 23, 26)	Allen, Exercise 36 (continued)
March 30 (Thursday)	CH 26 – The Urinary System: Renal mechanisms regulating homeostasis	Allen, Exercise 37 Acid-Base Balance (You Be the Doctor)
April 4 (Tuesday)	CH 26 – The Urinary System: Renal mechanisms regulating homeostasis CH 27 – Fluid, Electrolyte and Acid-Base Balance	Allen, Exercise 38 – 39
April 6 (Thursday)	CH 27 – Fluid, Electrolyte and Acid-Base Balance Begin CH28 – The Reproductive Systems: Overview, Male reproduction	M6 quiz OPENS
April 11 (Tuesday)	CH28 – The Reproductive Systems: Male and female reproduction overview	Allen, Exercise 38 – 39 (continued)
April 13 (Thursday)	CH28 – The Reproductive Systems: Female reproduction	

April 18 (Tuesday)	CH28 – The Reproductive Systems: Female reproduction (continued)	LAB EXAM 3
April 20 (Thursday)	LECTURE EXAM 4 (Last Day of Class)	
May 3 (Wednesday)	FINAL CUMULATIVE EXAM (optional) 2pm – 5pm	Labs do not meet

***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, Emory College, or School of Nursing faculty and staff for the purposes of improving instruction and enhancing Emory education.

POLICIES RELATED TO THIS COURSE

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.

challenge the grade in writing within one week of receiving the exam or quiz back .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.

“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.

Email Policy

Emails are highly welcomed as I love to receive emails from my students. However, 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. (Canvas will include all of this information automatically)

More questions, concerns, comments? I welcome your input! Feel free to visit me in my office or after class, contact me via email (preferred as I am between two campuses) 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.

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, March 3, 2017.

Last Updated: 01/05/2017