BIOL 221L – Section 13 – Human Anatomy & Physiology I Lab – Fall 2021
Thursdays, 2:05PM – 5:05PM
RITA 277

Jump to:
Lecture Schedule
Lab Schedule
Assessment
Absence Policy
Course Conduct
Helpful Tips

Contact Info
Instructor: Andrew Clark, Ph.D.
e-mail: clarkaj@cofc.edu
Office Hours: By appointment via Zoom
Correspondence via e-mail will be returned within 48 hours.

Course Description
BIOL 221, Human Anatomy & Physiology I, explores the gross morphology, microscopic anatomy, structure and function of the integumentary, skeletal, nervous, muscular (skeletal, cardiac, and smooth) and endocrine systems of the human body. In addition, the lab presents the histology and gross anatomy of these tissues, organs and organ systems, and provides experience for learning the topics and principles of physiology presented in the lecture. This course is intended for pre-allied health, pre-nursing, and physical education majors.

Learning Outcomes
1. Identify and use the basic vocabulary of human anatomy and physiology.
2. Reiterate key physiological processes, and the relationship between structure and function.
3. Relate physiology to human health and disease.
4. Demonstrate an understanding of the scientific method and experimental design.
5. Demonstrate continued development of written, oral, and computational skill sets.

Course Hub: OAKS
Required Materials: Anatomy and Physiology, openstax open-access textbook: https://openstax.org/details/books/anatomy-and-physiology
Visible Body: https://visiblebody.com
Histology Guide: http://histologyguide.com/

Required Technology: Personal computer with reliable, high-speed internet access; webcam; Respondus Lockdown Browser.

Recommended Materials: Sketch pad, colored pencils or pens

Back to the Top
### Lecture Schedule

<table>
<thead>
<tr>
<th>Week of:</th>
<th>Topic</th>
<th>Book Chapters</th>
<th>Notes, Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23</td>
<td>Intro, Homeostasis and Cell</td>
<td>1, 3</td>
<td>Exam 1 - 9/17, Quizzes 1-5 due 9/17</td>
</tr>
<tr>
<td>8/30</td>
<td>Cell, Tissues</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>9/6</td>
<td>Tissues</td>
<td>4</td>
<td></td>
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<tr>
<td>9/13</td>
<td>Integumentary System</td>
<td>4, 5</td>
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<tr>
<td>9/20</td>
<td>Bone - Structure, Development</td>
<td>6</td>
<td></td>
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<tr>
<td>9/27</td>
<td>Bone - Development, Growth</td>
<td>6</td>
<td>Exam 2 - 10/8, Quizzes 6-9 due 10/8</td>
</tr>
<tr>
<td>10/4</td>
<td>Bone - Growth, Repair</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>10/11</td>
<td>Excitable Cell Physiology, Neurons</td>
<td>3, 12</td>
<td>Exam 3 - 11/5, Quizzes 10-15 due 11/5</td>
</tr>
<tr>
<td>10/18</td>
<td>Action Potentials, Graded Potentials</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>10/25</td>
<td>Skeletal Muscle - Structure, Excitation</td>
<td>10</td>
<td></td>
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<tr>
<td>11/1</td>
<td>Muscle - E-C Coupling, Contraction</td>
<td>10</td>
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<tr>
<td>11/8</td>
<td>Cardiac and Smooth Muscle</td>
<td>10, 19</td>
<td></td>
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<tr>
<td>11/15</td>
<td>Metabolism</td>
<td>10, 24</td>
<td></td>
</tr>
<tr>
<td>11/22</td>
<td>Endocrine System</td>
<td>17</td>
<td>Thanksgiving</td>
</tr>
<tr>
<td>11/29</td>
<td>Endocrine System</td>
<td>17</td>
<td>Exam 4 - 12/8, 10:30am, Quizzes 16-20 due 12/8</td>
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</tbody>
</table>

### Lab Schedule

<table>
<thead>
<tr>
<th>Week of:</th>
<th>Topic</th>
<th>Book Chapters</th>
<th>Quizzes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23</td>
<td>No Lab</td>
<td></td>
<td></td>
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<tr>
<td>8/30</td>
<td>Cell, Histology</td>
<td>3, 4</td>
<td>Q1 - Cell, Histology</td>
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<tr>
<td>9/6</td>
<td>Histology</td>
<td>4</td>
<td>Q2 - Histology</td>
</tr>
<tr>
<td>9/13</td>
<td>Integument</td>
<td>5</td>
<td>Q3 - Integument</td>
</tr>
<tr>
<td>9/20</td>
<td>Exam 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/27</td>
<td>Osteology, Axial Skeleton</td>
<td>6, 7</td>
<td>Q4 - Osteology, Skull</td>
</tr>
<tr>
<td>10/4</td>
<td>Axial Skeleton</td>
<td>7</td>
<td>Q5 - Skull, Vertebrae</td>
</tr>
<tr>
<td>10/11</td>
<td>Appendicular Skeleton</td>
<td>8</td>
<td>Q6 - Appendicular</td>
</tr>
<tr>
<td>10/18</td>
<td>Joints</td>
<td>8, 9</td>
<td>Q7 - Joints</td>
</tr>
<tr>
<td>10/25</td>
<td>Exam 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/1</td>
<td>Muscle Microstructure and Head Muscles</td>
<td>10, 11</td>
<td>Q8 - Muscles: Micro/Head</td>
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<tr>
<td>11/8</td>
<td>Torso and Arm Muscles</td>
<td>11</td>
<td>Q9 - Muscles: Torso/Arms</td>
</tr>
<tr>
<td>11/15</td>
<td>Leg Muscles and Endocrine System</td>
<td>17</td>
<td>Q10 - Legs &amp; Endocrine</td>
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<tr>
<td>11/22</td>
<td>Thanksgiving Break - No Lab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/29</td>
<td>Exam 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Back to the Top]
Assessment
Assessment of the course will be in the form of 4 lecture exams and 20 online quizzes; 3 lab practical exams, and 10 lab quizzes. The Laboratory component will make up 40% of your overall BIOL 221 grade. The lecture and laboratory components both count towards the final grade and are not assessed as separate units.

Exams will cover material presented in the textbook, lecture and lab (in person, on Zoom, and pre-recorded videos), and content guides; these are non-cumulative and will test the material presented since the previous exam. Lecture exams will consist of a multiple-choice and short-answer questions, and will take 60 minutes. Lab exams will consist of short, typed responses and will take 60 minutes. Exams will be administered on OAKS using the Respondus LockDown Browser + Webcam, and multiple-choice scores are logged to the gradebook automatically; short, typed responses are graded automatically, but please allow 48-72 hours for your instructor to manually review your exam submission and update your grade. The lab exams are to be taken within the time period allotted for this lab section (Thursdays, 2:05PM – 5:05PM). You must complete your lab exam by 5:05PM on the date of the lab exam.

Quizzes will cover material presented during the previous lecture or lab section. Lecture quizzes will take 10 minutes; they may be taken twice, with the highest of the two attempts recorded. Lab quizzes will take 10 minutes; they may be taken once. The lab quizzes must be completed by 11:59 pm on the evening before the next lab (Wednesday evenings, for these Thursday labs). Quizzes will be administered on OAKS using the Respondus LockDown Browser + Webcam, and multiple-choice scores are logged to the gradebook automatically; short, typed responses are graded automatically, but please allow 48-72 hours for your instructor to manually review your exam submission and update your grade.

### Lecture
- Exams (4 @ 100 pts each) 400 pts
- Quizzes (20 @ 10 pts each) 200 pts

### Lab
- Practical Exams (3 @ 100 pts each) 300 pts
- Quizzes (10 @ 10 pts each) 100 pts

**Total** 1000 pts

**Grade Policy**
- 93-100% A;
- 90-92% A-;
- 84-86% B+;
- 80-82% B-;
- 77-79% C+;
- 73-76% C;
- 70-72% C-;
- 67-69% D+;
- 63-66% D;
- 60-62% D-;
- 0-59% F

The last day to withdraw from this course with a grade of “W” is October 29, 2021.
Absence Policy

Students are encouraged to regularly attend lecture and laboratory. However, should you miss lecture, the lecture will be live-streamed on Zoom, and supplemental lecture materials are available on OAKS. If you miss lab, you may miss in-person instruction provided by your lab instructor; however, relevant lab materials are going to be available on OAKS. Unless specified otherwise, you are expected to complete the relevant lab quiz.

Students who miss lecture or lab assessments for illness, medical emergency, family emergency/tragedy should contact both the lecture and lab instructor to report the absence and coordinate accommodation for the assessment. Failure to notify your lecture and lab instructors of your absence in a timely manner may result in no accommodations; i.e. zero points earned on those missed assessments. Failure to complete assessments on the (re)scheduled dates/times will result in zero points earned for that assessment(s), similar to an unexcused absence from lab or a missed quiz or exam in lecture. Please note that family reunions, weddings, and events as such are not considered excusable absences.

Please adhere to CDC and SC DHEC Guidelines for quarantine and isolation due to COVID-19 close-contact exposure and/or infection. For close-contact exposure to somebody infected with COVID, vaccinated students may continue attending lecture and lab while wearing a mask (regardless of the status of the CofC mask mandate). Unvaccinated students who are exposed to somebody infected with COVID need to quarantine at home for 14 days, starting from the last date of exposure to the infected individual (at any time during their 10-day isolation period). Quarantine may be shortened to 10 days if no symptoms are experienced, or to 7 days if no symptoms are experienced and a negative COVID result from a test completed on 5-7 days following last exposure. For vaccinated and unvaccinated individuals who have been exposed to COVID, it is advised that you monitor for symptoms daily, and obtain COVID testing 5-7 days after last exposure, even if asymptomatic.

Any student who tests positive for COVID needs to isolate for 10 days following the onset of symptoms, or 10 days following a positive-test result if they are asymptomatic. If, following 10 days of isolation, you are still presenting a fever and/or require medicine to reduce fever, please continue to isolate.

For unvaccinated students who need to quarantine at home for 14 days due to COVID exposure, or students who need to isolate at home for 10 days due to COVID infection, please notify your lecture and lab instructors to inform them of your quarantine/isolation status. Lecture materials are available on OAKS and lectures are streamed on Zoom. Lab materials are also available online and you are expected to complete those related assessments on the date(s)/time(s) scheduled by your lab instructor. If any medical complication arises during COVID infection that prevents your participation in lecture or lab assessments, please communicate those issues to your lecture and lab instructors as soon as possible in order to modify accommodations. Failure to complete assessments on the scheduled dates/times will result in zero points earned for that assessment(s), similar to an unexcused absence. Failure to notify your lecture and lab instructors of your absence and/or medical hardship in a timely manner may result in no accommodations; i.e. zero points earned on those missed assessments.

Your lecture and lab instructors reserve the right to cancel in-person instruction and move all class activities completely online if there is a concerning incidence of COVID infections and/or exposures among students in the class. This includes, but is not limited to: one or more students absent for an extended period of time due to COVID-19 (quarantine or isolation); single incidents of infection exposing multiple unvaccinated students and subsequent quarantine of those students; multiple incidents of infection (either simultaneously or within a short timeframe) exposing multiple vaccinated or unvaccinated students; large-scale incidents of infection on campus (such as associated with large lecture sizes, academic or campus events, dormitories, cafeterias, etc) that present a reasonable, broad risk of exposure to the CofC student body.
Timely notification of COVID exposure or infection impacts the ability of your instructors to provide accommodations for course materials and assessments, and may further impact the health of your fellow students and instructors, both in this course and across CofC.

Your responsibility:

- If you have developed ANY of the following: respiratory symptoms, fever, loss of taste/smell or other symptoms associated with COVID; please do not attend class or lab in-person. Notify your instructors as soon as possible and seek COVID testing and/or medical consultation.
- If you have had close-contact with an individual who has tested positive for COVID, please follow the CDC/SC DHEC quarantine guidelines as summarized above. If you are unvaccinated and need to quarantine at home, notify your instructors as soon as possible.
- If you have tested positive for COVID, isolate at home for the 10-day period as summarized above. Do NOT attend lecture and/or lab during this 10-day period. Notify your instructors as soon as possible.

Please consider the following: if you are unvaccinated, the COVID-19 vaccine significantly reduces your chances of COVID infection, and reduces your chances of severe COVID-related symptoms or complications if infected. The current resurgence of COVID infections and hospitalizations due to the COVID delta variant is occurring in predominantly unvaccinated individuals (>90% of hospitalizations). Furthermore, consider the risk of infection associated with attending indoor events where social distancing cannot be maintained and/or mask-use is not widespread. It is our hope that you remain healthy throughout the semester, and we will attempt to provide reasonable accommodations if quarantine or isolation is necessary. However, if repeated and/or extended accommodations are requested, you may be referred for a medical withdrawal from the course.
Student Conduct

1. Students will follow all College-mandated COVID precautions, use of face-masks and other PPE (where directed), and social-distancing guidelines while in the classroom and/or lab. Please visit OAKS for the most current policies/procedures.

2. There is to be no talking during the instruction period of the lecture. If you have a question, please raise your hand (or indicate in Zoom) prior to asking the question. While answering a student’s question, please remain quiet so that the student and other class members can hear the reply.

3. No outside/unauthorized materials may be used during quizzes or practical exams, and all quizzes/exams will use the Respondus LockDown Browser.

4. Please silence cellular phones before lecture/lab begins. If you use your cell-phone rings during lecture, Dr. Vance will likely glare at you and/or ridicule your choice of ring-tone.

5. It's essential that you maintain an active presence in the course, including: attending lectures in person or live-streamed on Zoom; reviewing the VoiceThreads assigned to each topic; taking quizzes and exams at the times scheduled; attending office hours and review sessions on Zoom; using the study materials posted to Quizlet; and, attending SI sessions when available.

6. Please observe the following "netiquette" when meeting with others on Zoom review sessions or office-hours, or when participating in online discussions:
   a. **Be kind and ethical.** Avoid using sexist, racist, and homophobic language in your writing and speaking; it will not be tolerated.
   b. **Be aware** of how your communication may be perceived by others. For example, if you use ALL CAPITAL LETTERS, folks may interpret you are angry or shouting. Avoid sarcasm, as it is prone to misinterpretation.
   c. **Be forgiving.** We all make communication faux pas, so ask clarifying questions rather than attacking. But if you experience any questionable or outright inappropriate behavior from your colleagues, please let me know.
   d. **Cite your sources.** When you share information, it’s important to support your claims with sources. This doesn’t mean that you must have a citation for everything you post, but providing evidence will strengthen your arguments and will also provide additional resources for your colleagues. Furthermore, whenever you are using the intellectual property of others, you must always cite your sources.
   e. **Help each other.** If you notice a colleague has asked a question or written about a problem, jump in and offer assistance. This is especially true in the OAKS discussion board.

7. No form of academic dishonesty is acceptable. Dishonesty includes, but is not limited to: cheating on an exam; stealing exam questions; substituting one person for another at an exam; falsifying data; destroying, tampering with, or stealing a computer program or file; and plagiarizing (using as one’s own the ideas and writings of another). Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Students can find the complete Honor Code and all related processes in the **Student Handbook** at [http://www.cofc.edu/generaldocuments/handbook.pdf](http://www.cofc.edu/generaldocuments/handbook.pdf)

8. If you have a documented disability than may require assistance, you will need to contact the Center for Disability Services for coordination of your academic accommodations. If the CDS will be involved in administering an exam, I request that you inform me in advance so that adequate accommodations can be made (e.g. the day before the exam is not acceptable).

9. No College of Charleston employee or student should be subject to unwelcome verbal or physical conduct. It is expected that students, faculty and staff will treat one another with respect. Individuals who violate this policy are subject to discipline up to and including termination and/or expulsion from the College and the possibility of civil and criminal prosecution.
Helpful Tips

- Please log into OAKS daily for important announcements and course content, which includes Zoom links, VoiceThreads, quizzes, exams, posted grades, etc. Despite the hybrid format, this class is organized like a traditional course: quizzes, exams, and online content will be delivered synchronously. The lecture and lab materials are incremental and designed to be accessed/viewed according to the schedule to provide adequate time for learning, retention, and comprehension. **This is not a self-paced study! Please budget your time accordingly and avoid falling behind schedule.**

- The **Course Objectives** under the Content menu on OAKS effectively serves as a study-guide for the course. It may not be necessary to read the entire book chapter prior to a given topic on the schedule; however, please refer to the Course Objectives for the relevant book sub-chapters and figures that will be covered in each topic.

- You will be provided a link to sign up for study material on Quizlet. This material has been compiled by prior students of my course, and reflects information these students found to be important for their success in the course. In addition, Quizlet will provide you opportunities for self-assessment to gauge your progression through the material at introductory, intermediate and advanced levels of difficulty. Use it often!

- **Lecture quizzes** on OAKS must be completed by 11:59pm on the date of the Exam for that respective Module. The best score out of the two attempts will be recorded in the gradebook. Please note, however, that quizzes pull from questions randomly from a library, so you may not necessarily see the same questions on the second quiz attempt. It is advised that you complete both attempts of the scheduled quizzes, as this will help you become familiar with the types of questions that might be asked on exams. You may request to review your quiz submission during office hours on Zoom to further help you study for the subsequent quiz attempt (or exam).

- **Visible Body** provides a practice quiz environment that will allow you to test your knowledge of the anatomy prior to the scheduled lab quizzes and practical exams. Your success identifying the assigned anatomical structures on these practice quizzes are a good predictor for success on the graded quizzes and exams. Whether using Quizlet, answering lecture video concept questions, or utilizing the learning tools on Visible Body, self-assessment is critically important for preparing for the graded lecture and lab quizzes and exams. Please consider incorporating these tools into your study habits!

- **Draw it out!** The anatomy component of “A&P” requires visual learning. Understanding the physiology of specific structures first requires that you recognize and differentiate related structures. Some video lessons will request that you draw/illustrate a process alongside my lecture.