Course Syllabus

BIOL 221 Human Anatomy and Physiology 1
Spring – 2022
Lecture & Lab: In-person/online

Lecture Instructor: Mausumi Bandyopadhyay, Ph.D
Office: RITA 204
Phone: 843-953-7112
Office hours: Tuesdays and Thursdays before and after lab.
E-mail: bandyopadhyaym@cofc.edu (please type “Biol221” in Subject Line).

Lab Instructor: Jaap Hillenius, Ph.D.
Office: RITA 293
Phone: 843-953-2297
Office hours: Tuesdays and Thursdays 10:40 – 11:40am, and by appointment
E-mail: hilleniusw@cofc.edu (please type “Biol221L” in Subject Line).

We will reply to email correspondence within 48 hrs.

Text Book:
Required Text: OpenStax: Anatomy and Physiology: https://openstax.org/details/books/anatomy-and-physiology. This online textbook is your main source of reference, review and learning (hard copies may be purchased through the publisher).
Other Recommended Resources: Complete Anatomy (app), Mastering A&P (Pearson)

Required Lab Resources: Visible Body: https://visiblebody.com
Histology Guide: http://histologyguide.com

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

Recommended Materials:
Sketch pad, colored pencils or pens

Lecture time and location: Lecture will meet in Room 152 in the Rita Liddy Hollings Science Center (RITA) from 8:00 am to 9:15 am on Tuesday and Thursday each week. I will be out of the country from 11th February to 24th February. Lectures will be asynchronous online for these days.

Lab time & location: Laboratory sections will meet in RITA 275. Additional lab materials are available on OAKS. (Note that the lecture and lab sections have separate OAKS pages!)
Course Description: BIOL 221 Human Anatomy & Physiology 1 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 hands-on 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.

Prerequisites: Biology 111 and 112 with labs.

Course Objectives and Student Learning outcomes:
- Students will attain a basic understanding of the human body as well as structure-function relationships between different parts of the body.
- Students will learn the standard terminology necessary to properly describe the fundamental relationships and orientation of structures in the human body.
- Students will be able to relate physiology to human health and disease.
- Students will demonstrate an understanding of the scientific method and experimental design.
- Students will demonstrate continued development of written, oral, and computational skill sets.

Grading:
Lecture grades
- Lecture exams: 3 exams 100 points each ........................................ 300pts
- Final Exam.................................................................................................................. 200pts
- Quizzes 7 quizzes 15 points each .................................................................100pts (5 pts extra)
  I will give you 9 lecture quizzes and two lowest quiz grades will be dropped
- Total 600 Points from Lecture

Laboratory Grades
- Lab practical I ........................................................................................................100pts
- Lab practical II .......................................................................................................100pts
- Lab Final ..................................................................................................................100pts
- 7 Quizzes @ 15 pts each ......................................................................................100pts (5 pts extra)
- Total 400 Points from Lab

Note: The lecture and laboratory components both count towards the final grade in BIOL 221. They are not assessed as separate units.

Letter grades are based on the following scale (percentage):

- A 93 - 100
- A- 90 - 92
- B+ 87 - 89
- B 83 - 86
- B- 80 - 82
- C+ 77 - 79
- C 73 - 76
- C- 70 - 72
- D+ 67 - 69
- D 63 - 66
- D- 60 - 62
- F less than 60
You are encouraged to take advantage of the Center for Student Learning’s academic support services. You will be offered a variety of services, including study strategies, speaking and writing strategies, and course content. The center provides tutoring, supplemental instruction, and workshops. A SI will also be available for lectures.

Computer Requirement:
Please make sure that you have ready access to a computer to keep up with course materials. Additionally, this will be crucial in the event that students need to quarantine due to COVID. A **reliable, high-speed internet connection is required.** For online quizzes and exams, a computer with a web cam and Respondus Lockdown Browser is required. Google Chrome appears to be the best browser choice for working with OAKS. Tablets, smartphones, or other mobile devices are not guaranteed to work for all College of Charleston OAKS courses and should not be your primary/only means of accessing your course material.

Attendance Policy:
It is expected that you attend all lecture classes and labs. We expect you to inform us every time you miss a class or a test, and in conjunction, we will trust that your explanation is honest and truthful.

In the event that you have missed a quiz or exam due to your illness, medical emergency, or family emergency, you must inform your instructors promptly; we may be able to arrange a make-up for you. If you need to quarantine due to COVID19 or other sickness, please inform us as early as possible, in accordance with the pertinent CofC protocols, so we can determine reasonable accommodations for you to continue in the course. Failure to notify your 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.

CofC Covid Protocols: The pertinent CofC Covid-related protocols are updated regularly; the most up-to-date information can be found [here](#).

Supplementary lecture and lab materials are available on OAKS. Although in principle, both the lecture and the lab portions of the course are expected to be conducted in-person, in the event of concerning COVID infection incidents on campus or among students in the class, the instructors reserve the right to cancel in-person instruction and move class activities and/or assessments online. This includes, but is not limited to: 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, wide-scale risk of exposure to the CofC student body.

If you are affected by Covid and/or must quarantine, course materials as well as quizzes/exams are available through OAKS for both the lecture and lab portions of the course. In such cases, you are expected to complete assessments online, either in a **synchronous** (lecture) or **asynchronous** (lab) fashion. If any medical complication arises during COVID infection that prevents your synchronous participation in lecture or lab activities and assessments, please communicate with us 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
from lab. Likewise, failure to notify your 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 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 me 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 in the CofC “Back-on-the-Bricks” site. 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 recommended period. Do NOT attend lecture and/or lab during this isolation 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 and omicron variants 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.

Disabilities: The College will make reasonable accommodations for individuals with documented disabilities. Students should apply for services at the Center for Disability Services/SNAP located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying their instructors as soon as possible.

Academic Dishonesty: Academic dishonesty is not tolerated at the College of Charleston. Academic dishonesty includes but is no limited to cheating on an exam, stealing exam questions, substituting one person for another at an exam, falsifying data, destroying, tampering with a computer program or file, and plagiarizing. Students are responsible for adhering to all policies and procedures in the College of Charleston Student Handbook.

Guidelines for this course will follow the College of Charleston Undergraduate Catalog policies for Academic Integrity and the Honor Code, Student Code of Conduct, and Classroom Code of Conduct. Students can find the complete Honor Code and all related processes in the Student Handbook at http://www.cofc.edu/generaldocuments/handbook.pdf

If you are caught cheating, you will be reported to the Dean of Students and the Honor Board, and you will receive a grade of 0 point for the paper, project, or exam in which the dishonesty was observed. Additionally, you may also receive an F for the course and may receive additional disciplinary action from the Dean of Students and Honor Board. Furthermore, students may receive a XXF for the course to indicate course failure as a result of academic dishonesty. This notation will remain for two years, after which the student may petition to have it expunged. However, the F will remain on the student’s record. Individuals may also be subject to disciplinary probation, suspension, or expulsion from College of Charleston by the Honor Board.
## Lecture Schedule, Spring, 2022
(Subject to change with notice)

<table>
<thead>
<tr>
<th>Week of</th>
<th>Chapter</th>
<th>Subject</th>
<th>Quiz/Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10</td>
<td>1</td>
<td>An introduction to the human body</td>
<td></td>
</tr>
<tr>
<td>1/17</td>
<td>3</td>
<td>The cellular level of organization</td>
<td>Quiz 1 (Ch 1) 1/20</td>
</tr>
<tr>
<td>1/24</td>
<td>3</td>
<td>The cellular level of organization</td>
<td>Quiz 2 (Ch 3) 1/27</td>
</tr>
<tr>
<td>1/31</td>
<td>4</td>
<td>The tissue level of organization</td>
<td>Quiz 3 (Ch 4) 2/3</td>
</tr>
<tr>
<td>2/7</td>
<td>5</td>
<td>The integumentary system</td>
<td>Exam 1 (Chs 1, 3, and 4) 2/8</td>
</tr>
<tr>
<td>2/14</td>
<td>6</td>
<td>The bone tissue and skeletal system</td>
<td>Quiz 4 (Ch 5) 2/17</td>
</tr>
<tr>
<td>2/21</td>
<td>7, 8</td>
<td>The axial and Appendicular skeleton</td>
<td>Quiz 5 (Ch 6) 2/24</td>
</tr>
<tr>
<td>2/28</td>
<td>9, 10</td>
<td>Joints; Muscle tissue</td>
<td>Quiz 6 (Chs 7-8) 3/1</td>
</tr>
<tr>
<td>3/14</td>
<td>10;12</td>
<td>Excitable Cell Physiology; Muscle tissue</td>
<td>Quiz 7 (Ch 9) 3/15; Exam 2 (Chapters 5-9) 3/17</td>
</tr>
<tr>
<td>3/21</td>
<td>10;12</td>
<td>Excitable Cell Physiology; Muscle tissue</td>
<td>Quiz 8 (Ch 12, open book quiz) 3/24</td>
</tr>
<tr>
<td>3/28</td>
<td>11;17</td>
<td>The muscular system; Endocrine system</td>
<td>Quiz 9 (Ch 11) 3/31</td>
</tr>
<tr>
<td>4/4</td>
<td>17</td>
<td>Endocrine system</td>
<td>Quiz 10 (Ch 17) 4/7</td>
</tr>
<tr>
<td>4/11</td>
<td>24</td>
<td>Metabolism and nutrition</td>
<td>Exam 3 (Chs 10, 11, 12 and 17) 4/14</td>
</tr>
<tr>
<td>4/18</td>
<td>24</td>
<td>Review</td>
<td>Open book Quiz – Ch 24 4/21</td>
</tr>
<tr>
<td>4/25</td>
<td></td>
<td>Final Exam (Cumulative)</td>
<td>4/28 (8am to 10am)</td>
</tr>
</tbody>
</table>

**COVID-19 safety guidance:**
To reduce the impact of COVID-19 outbreak conditions, all students are required to use face coverings at all times in campus. Stay home if you are sick. Follow the posters reminding you to wear masks, wear gloves when handling models, wash your hands (when you enter the lab and before you leave lab), and disinfect surfaces (when you enter and before you leave lab).
## Lab Schedule, Spring, 2022
(Subject to change with notice)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Book Chapters</th>
<th>Quizzes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/13</td>
<td>No Lab</td>
<td>3, 4</td>
<td></td>
</tr>
<tr>
<td>1/20</td>
<td>Cell; Histology</td>
<td>4</td>
<td>Q1 - Cells &amp; epithelia</td>
</tr>
<tr>
<td>1/27</td>
<td>Histology</td>
<td>4</td>
<td>Q2 - Connective &amp; muscle tissues</td>
</tr>
<tr>
<td>2/3</td>
<td>Integument</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2/10</td>
<td>Exam 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/17</td>
<td>Bone, Axial Skeleton</td>
<td>6, 7</td>
<td>Q3 - Bone microstructure, skull ID</td>
</tr>
<tr>
<td>2/24</td>
<td>Axial Skeleton</td>
<td>7</td>
<td>Q4 - Skull landmarks &amp; vertebrae</td>
</tr>
<tr>
<td>3/3</td>
<td>Appendicular Skeleton</td>
<td>8</td>
<td>Q5 - Appendicular Skeleton</td>
</tr>
<tr>
<td>3/10</td>
<td>Spring Break (no Labs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/17</td>
<td>Joints</td>
<td>8, 9</td>
<td>Q6 - Muscle microstructure, muscles of head &amp; throat</td>
</tr>
<tr>
<td>3/24</td>
<td>Exam 2</td>
<td></td>
<td>Q7 - Muscles of torso &amp; arms</td>
</tr>
<tr>
<td>3/31</td>
<td>Muscle Microstructure &amp; Head Muscles</td>
<td>10, 11</td>
<td></td>
</tr>
<tr>
<td>4/7</td>
<td>Muscles of the Torso &amp; Arms</td>
<td>11</td>
<td>Q6 - Muscle microstructure, muscles of head &amp; throat</td>
</tr>
<tr>
<td>4/14</td>
<td>Muscles of the Hips &amp; Legs; Endocrine</td>
<td>17</td>
<td>Q7 - Muscles of torso &amp; arms</td>
</tr>
<tr>
<td>4/21</td>
<td>Exam 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Important Dates:
- Tuesday, January 18 – Drop/Add
- Friday, March 25 – last day to withdraw with a “W” grade
- Thursday, April 28 – Lecture Final