



**BIOLOGY 321L Section 01 Fall 2020  
GENERAL AND COMPARATIVE PHYSIOLOGY LAB**



\*\*\*\*\*LAB WILL BE CONDUCTED FULLY ONLINE\*\*\*\*\*

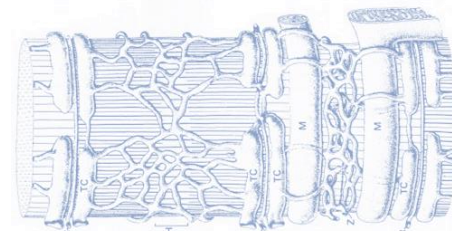
**Instructor: Dr. Jeffrey D. Triplehorn**

**E-mail: [triplehornj@cofc.edu](mailto:triplehornj@cofc.edu)**

**Office location: RITA 117**

**Phone: 953-5848**

**Office hours: by appointment conducted via Zoom**



**1. Prerequisites and Co-requisite(s) or Prerequisite(s)**

*Prerequisite:* BIOL 111/BIOL 111L, BIOL 112/BIOL 112L, BIOL 211/BIOL211D, and BIOL 305; one year of chemistry. CHEM 232 can be substituted for BIOL 211 and BIOL 305.

*Co-requisite(s) or Pre-requisite(s):* MATH 250 or equivalent course in statistics

**2. Course description**

A study of the principles of the functional mechanisms that underlie the life processes of all organisms with emphasis on the ways in which diverse organisms perform similar functions. Lectures three hours per week; laboratory three hours per week.

**3. Instructional objectives and student learning outcomes**

- a) Students will be able to write sections of a scientific paper in a clear and organized manner in formats used in the primary literature.
- b) Students will be able to prepare and present recorded oral presentations on physiological subjects in a clear and understandable manner.
- c) Students will be able to conduct biological experiments using simulations and data sets to collect and analyze physiological data in the context of simple experimental questions and physiological principles.

**4. Required text**

Animal Physiology, 4<sup>th</sup> edition, 2018, Richard W. Hill, Gordon A. Wyse and Margaret Anderson, Sinauer Associates, Inc., Sunderland, MA

**5. Required software**

PhysioEx 10.0: Laboratory Simulations in Physiology Plus Website Access Code Card for PhysioEx 10.0 -- Access Card Package, 1st edition Peter Zao, Timothy Stabler, Lori A. Smith, Andrew Lokuta, Ed Griff Published by Pearson (December 10th 2019) - Copyright © 2020 1st edition.

**6. Course policies and procedures**

The class will be conducted solely [asynchronously online](#).

**7. Evaluation**

The lab component contributes to **30%** of your overall BIOL 321 General and Comparative Physiology course grade. The lab grade will be based on the following:

Source	Approx. % of Lab Grade	Number of Points
Scaling lab worksheet	8%	25
Ammonia excretion worksheet	8%	25
Enzyme and transport worksheet	8%	25
Nervous system worksheet	8%	25
Endocrine and skeletal muscle worksheet	8%	25
Cardiovascular worksheet	8%	25
Student participation in final presentations	5%	15
Presentation workshop video	10%	30
Final presentation video	15%	45
Lab practical	20%	60
<b>Total</b>		<b>300</b>

## **8. Late assignment policy**

Unless otherwise specified, written assignments will be submitted via Dropbox in OAKS as Word files only (i.e. no PDFs). All assignments are due by 11:59 pm EST on the dates indicated in the lab schedule (Section below). You are expected to turn in assignments on time. Assignment grades will be reduced by 10% for each calendar day late. No assignment will be accepted after ten days late. [Please note, computer failure or unavailability do not constitute an excuse for not completing assignments on time.](#)

## **9. College of Charleston Honor Code and Academic Integrity**

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

[Students should be aware that unauthorized collaboration—working together without permission—is a form of cheating. Performing the lab simulations, the written assignments and lab practical are individual assignments and no collaboration during the completion of each of these is permitted.](#) Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the *Student Handbook* at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

## **10. Online Courses with Exam Proctoring**

This course will require the use of an exam proctoring service for the lab practical. The College has purchased a license for Respondus, which is a lockdown browser and monitoring software system and students should not be responsible for the cost of this service. However, since this is a very recent development, if Respondus is not provided as planned, then students will be responsible for registering, scheduling and the cost of the service prior to the lab practical. In either case, instructions and additional information for online proctoring will be provided later in the semester.

## **11. Accommodations for students with disabilities**

Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged. [Center for Disability Services/SNAP](#)

## **12. OAKS**

OAKS, including Gradebook, will be used for this course throughout the semester to provide the syllabus and class materials and grades for each assignment, which will be regularly posted.

### **13. Center for Student Learning**

The Center for Student Learning's (CSL) academic support services provide assistance in study strategies, speaking & writing skills, and course content. Services include tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at <http://csl.cofc.edu> or call (843) 953-5635.

### **14. Mental and Physical Well-being**

At the college, we take every students' mental and physical wellbeing seriously. If you find yourself experiencing physical illnesses, please reach out to student health services (843.953.5520). And if you find yourself experiencing any mental health challenges (for example, anxiety, depression, stressful life events, sleep deprivation, and/or loneliness/homesickness) please consider contacting either the Counseling Center (professional counselors at <http://counseling.cofc.edu> or 843.953.5640 3<sup>rd</sup> Robert Scott Small Building) or the Students 4 Support (certified volunteers through texting "4support" to 839863, visit <http://counseling.cofc.edu/cct/index.php>, or meet with them in person 3<sup>rd</sup> Floor Stern Center). These services are there for you to help you cope with difficulties you may be experiencing and to maintain optimal physical and mental health.

### **15. Food and Housing Resources**

Many CofC students report experiencing food and housing insecurity. If you are facing challenges in securing food (such as not being able to afford groceries or get sufficient food to eat every day) and housing (such as lacking a safe and stable place to live), please contact the Dean of Students for support (<http://studentaffairs.cofc.edu/about/salt.php>). Also, you can go to <http://studentaffairs.cofc.edu/student-food-housing-insecurity/index.php> to learn about food and housing assistance that is available to you. In addition, there are several resources on and off campus to help. You can visit the Cougar Pantry in the Stern Center (2nd floor), a student-run food pantry that provides dry-goods and hygiene products at no charge to any student in need. Please also consider reaching out to your instructor if you are comfortable in doing so.

### **16. Reaching your instructor**

If you have any questions, please use email to reach me. During the week, I will deliver my responses for emails within 24 hours. My response emails will be delivered within 48 hours on the weekend. Since we are not meeting face-to-face for labs, I expect you to regularly log into OAKS to review plans and expectations for lab activities and to be informed of course updates posted in the news feed on the lab course homepage. Please check your email regularly as I will email updates to the class through OAKS to update you on class events and assignments. **Computer failure or unavailability does not constitute an excuse for incomplete or late assignments.** If you feel uncomfortable with technology, the College offers a number of resources to help you develop your technological competency, in general, but specifically within the context of this online class. Visit <http://blogs.cofc.edu/studentreadinessforonlinelearning/> to access those resources. If you experience technological problems during the class, please contact me immediately at [triblehornj@cofc.edu](mailto:triblehornj@cofc.edu).

**17. Tentative laboratory schedule**

	<b>Week of</b>	<b>LABORATORY</b>	<b>ASSIGNMENT</b>
<b>1</b>	<b>8-24</b>	No lab	None
<b>2</b>	<b>8-31</b>	Scaling lab	Worksheet due 9/4 (Friday)
<b>3</b>	<b>9-7</b>	Ammonia excretion in marine organisms: Standard curves	Standard curve and calculations due 9/11 (Friday)
<b>4</b>	<b>9-14</b>	Ammonia excretion in marine organisms: Excretion rates in different conditions	Worksheet due 9/18 (Friday)
<b>5</b>	<b>9-21</b>	Enzyme activation-Digestion	Enzyme activation and Membranes, channels, transport lab worksheet due 10/2 (Friday)
<b>6</b>	<b>9-28</b>	Membranes, channels, transport	
<b>7</b>	<b>10-5</b>	Nervous system	Worksheet due 10/9 (Friday)
<b>8</b>	<b>10-12</b>	Presentation workshop	Presentation video due 10/16 (Friday)
<b>9</b>	<b>10-19</b>	Endocrine system	Endocrine system and skeletal muscle physiology worksheet due 10/30 (Friday)
<b>10</b>	<b>10-26</b>	Skeletal Muscle physiology	
<b>11</b>	<b>11-2</b>	Election Day: No lab	Vote!
<b>12</b>	<b>11-9</b>	Final presentations due	Final presentation video due 11/13 (Friday)
<b>13</b>	<b>11-16</b>	Cardiovascular physiology and dynamics	Worksheet due 11/20 (Friday)
<b>14</b>	<b>11-23</b>	Thanksgiving: No lab	Eat!
<b>15</b>	<b>11-30</b>	Lab practical	Practical during scheduled lab day