

## **BIOL 252L: Fundamentals of Human Anatomy & Physiology Laboratory**

Lab Director:  
Seth Alexander  
[seth\\_alexander@med.unc.edu](mailto:seth_alexander@med.unc.edu)

Lead Teaching Assistant:  
Kaylyn Pogson  
[kaylyn\\_pogson@med.unc.edu](mailto:kaylyn_pogson@med.unc.edu)

### **Spring 2020 Course Goals and Student Expectations:**

The BIOL 252L lab presents human structure and function using a hands-on approach utilizing anatomical models and preserved human organ specimens. Dissection is kept to a minimum due to time constraints and huge number of students in this course (500 per semester). Since this is only a one-semester A&P course (252 & 252L), lab will run parallel with lecture, but will not often intersect. In the lab, we will learn gross (visible) anatomy. In addition to simply naming the parts, we will learn the function and relative position of structures in the body. You are expected to read the laboratory text chapter being covered prior to lab. Pre-lab assignments will be made available for you to complete before lab as a means of insuring a minimum level of preparation prior to lab.

### **Lab Schedule:**

Labs will meet once a week at the assigned time and room as per the schedule listed below. To confirm your lab time, please check ConnectCarolina. In the event of adverse weather, the lab director reserves the right to adjust the schedule accordingly.

### **Required Materials:**

We will be using Complete Anatomy available for purchase here: [3d4med.com/unc](https://3d4med.com/unc). This application will be a resource for your study. You will learn about how to use it during lab orientation and in your lab groups. The lab text is available FREE and is found on the course's Sakai page ([sakai.unc.edu](https://sakai.unc.edu)).

### **Homework:**

The pre-laboratory assignments will be delivered through Sakai. You will be tasked with reviewing the lab text relevant to each lab and completing a brief quiz on the material. This will need to be completed before lab. 1 assignment per day of lab, due before the beginning of lab. Late assignments will be accepted at 75% credit.

### **Anatomy Labs:**

You are expected to learn all anatomical terms presented in the lab text and be able to identify those structures on dissected specimens, models, or illustrations (i.e. printouts or complete anatomy images) during each of the lab exams. The majority of time in lab will be spent looking at specimens and models in order to identify these structures. In addition, you WILL be held responsible for any and all information provided in the laboratory text.

### **Exams:**

Three exams will be given over the course of the semester. These exams constitute 80% of your laboratory grade. Each exam consists of **identification questions**, where you must

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identify the labeled structures on a model, specimen, or illustration. The remaining **practical questions** will assess your understanding of the material covered in the lab text and supplements. Such information includes function, relative location of structures in the body, and other anatomical concepts. The 3rd exam is cumulative. Any and all information expected on previous exams should be considered applicable for the 3rd exam. The exam

### Grades:

Grades are calculated based on points earned. The points are distributed as follows:

**Pre-lab Guided Reading Questions (20%)**

**Post-lab Quizzes (10%)**

**Exams 1 & 2 (22.5% each)**

**Exam 3 (25%)**

### Grading scale:

Your total points earned will be applied to a 10 points grade scale. There is no curving in this course. If your score is <0.5% from the next grade level, your score will be rounded up.

		87-90	B+	77-80	C+	67-70	D+
93-100	A	83-86	B	73-76	C	60-66	D
90-92	A-	80-82	B-	70-72	C-	<60	F

### How your exams will be graded:

Lab exams will be graded for accuracy. Anatomy is a very detailed subject, where it is important to know many things precisely. On the lab exams you will have to be as specific as possible or you will not receive the points. Most exam questions will be worth a single point, with no opportunities for partial credit. Some examples to wrap you're head around this idea...

- Although it is commonly referred to as the "bicep muscle," it's correct name is biceps brachii. Without both words, you have failed to communicate the accurate term.
- If you are asked for the 2nd major branch of the aorta, "carotid artery" is wrong. There are two carotid arteries, the left carotid artery is a branch of the aorta while the right carotid is a branch of another artery.

**Honor code:** Students are expected to abide by the UNC honor code at all times. Your participation in all activities and assignments implies compliance to the letter and intent of the *Instrument of Student Judicial Governance* ([instrument.unc.edu](http://instrument.unc.edu)). Course resources of any kind are not to be made publicly available. Make sure that anything you upload to websites (for example, Quizlet) is not publicly viewable. This policy is to protect copyright of images, and to limit the distribution of information that might assist another student in cheating. It applies to all images, any screenshots you may take, documents, or summaries of any provided resource.

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### Attendance Policy:

If you know you will be missing a lab or exam, you must notify your lab TA as soon as possible. If you need to miss lab, you will need to attend the make-up session (usually held the Monday after the lab with section 424; see schedule below). If you do not attend the make-up section, you will be responsible for reviewing the material on your own time. If you miss an exam and fail to reschedule it, you will have an oral examination. To reschedule your exam, you must obtain special permission and should contact your TA as soon as possible for further instructions.

### Diversity and Inclusion:

The Department of Biology values the perspectives of individuals from all backgrounds reflecting the diversity of our students. We broadly define diversity to include race, gender identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. We strive to make this classroom and this department an inclusive space for all students.

### How to be successful in lab:

Because you will be tested in 2 different ways (identification & practical/application) you should have two strategies for learning the material.

**(1) Identification:** the biggest obstacle for many is the amount of new terminology. Couple that with identifying things you've never seen before, and you've got a challenge. To master the identification of anatomical structures, I suggest 3 things: repetition, variety, and visualization. The more often you see something (**repetition**) and ask yourself to identify it, the better you'll get. If you only look at a single model or a single image of something, you can't understand it. You must look at many sources of information (**variety**). Look at other textbooks, images of dissected cadavers, wikipedia, etc. The variety will fill in the holes in your mental image. Lastly, attempt to **visualize** the structures. Read a description of the deltoid tuberosity, or ask yourself to trace the path of blood through the heart, or attempt to "see" the attachments of the gastrocnemius muscle in that weird guy that sits near you in your chemistry class and wears shorts even in winter. In addition to this strategy, I recommend that students quiz each other to test what you've learned. You have no better self-assessment than to have someone point to a structure and you try to identify it. That's what the exam will look like, so that's the proficiency that you should aim for.

**(2) Practical/function/application:** you will be expected to answer questions about the anatomical structures. The best way to approach learning this material is to take a look at the "learning objectives" provided in each lab manual chapter. If you can do what the objectives indicate, you'll be in good shape. Secondly, for every anatomical structure you attempt to identify, you should ask yourself what it does. There are very few anatomical structures that you need to learn that do not have an associated function or relevance. Actively seek these relationships in your studying.

Most importantly, have a strategy. Learning large quantities of information does not happen by accident. Ask your TA to help you develop a *study-strategy!*

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### BIOL 252L Laboratory Schedule

Dates	Lab Topic
Jan 9 - 10*	Lab Orientation, 5:30 - 6:30PM
Jan 13 - 17	Nervous System: Spinal cord, Spinal Nerves
Jan 20 - 24	NO LAB
Jan 27 - 31	Nervous System: Brain Anatomy & Function
Feb 3 - 7	Axial Skeleton
Feb 10 - 14	<b>Lab Exam I</b>
Feb 17 - 21	Appendicular Skeleton
Feb 24 - 28	Muscles of Upper Limb
Mar 2 - 6	Muscles of Lower Limb
Mar 9 - 13	NO LAB - Spring Break
Mar 17 - 23**	<b>Lab Exam II</b>
Mar 24 - 30	Cardiovascular and Respiratory Systems
Mar 31 - Apr 6	Digestive & Urogenital Systems
Apr 14 - 20	<b>Lab Exam III</b>

\* Lab orientations will be held in a location TBD. Only attend 1 of the 2 orientation sessions.

\*\* Please note that mid-semester, the schedule will shift to allow students the opportunity to review for the second and third exam taking into account University Holidays and breaks.

### Make-up Lab Schedule (Section 424)

Dates	Lab Topic
Jan 27	Nervous System: Spinal cord, Spinal Nerves
Feb 3	Nervous System: Brain Anatomy & Function
Feb 10	Axial Skeleton
Feb 17	<b>Lab Exam I</b>
Feb 24	Appendicular Skeleton
Mar 2	Muscles of Upper Limb
Mar 16	Muscles of Lower Limb
Mar 23	<b>Lab Exam II</b>
Mar 30	Cardiovascular and Respiratory Systems
Apr 6	Digestive & Urogenital Systems
Apr 20	<b>Lab Exam III</b>