

ADVANCED HUMAN ANATOMY & PHYSIOLOGY LABORATORY BIOL 253L

Lab instructors: Sections 401 & 403 - Sofia de la Serna delasern@live.unc.edu
Sections 402 & 404 - Jade Blackwell blackwelljade@unc.edu

Lab director: Corey Johnson johnsonc@bio.unc.edu

Meeting pattern: 401 = Tues, 9:05am - 12:05pm in Wilson 112
402 = Tues, 2:00pm - 4:45pm in Wilson 112
403 = Thurs, 9:05am - 12:05pm in Wilson 112
404 = Thurs, 2:00pm - 4:45pm in Wilson 112

Requirements: Advanced A&P (BIOL 253) is the co-requisite

Spring 2019 Lab Information: This laboratory course is intended to provide the student with the opportunity to observe many of the physiological principles that are essential to human function. It will help students develop physiology-related skills and techniques used in clinical settings, improve student's problem solving skills, and enhance their ability to work both independently as well as working as a part of a group.

Instruction will involve inquiry-based laboratory activities as well as traditional direct instruction. Students will generate their own hypotheses, collect data from fellow students, analyze, interpret and present their findings. Topics of instruction include electromyography, electrocardiography, and spirometry analysis.

Required materials: We will be using a web-based software package called *Lt*, by AD Instruments. *Lt* (KuraCloud) will allow you to record data in the laboratory and analyze data in or out of the lab. The cost is approximately \$40 and a code for the subscription can be purchased at the campus bookstore. All pre-laboratory reading will be provided through this platform, so there will be no additional text to purchase. Students will be expected to bring a laptop to lab in order to complete their data collection.

Grading:

Pre-lab assignments = 15%
Lab activity = 5%
Post-lab assignment, case study = 25%
Presentations = 20%
Mid-term lab exam = 15%
Cumulative exam = 20%

Pre-lab assignment: Pre-lab assignments consist of introductory material relevant to the lab done that week. Student are to complete and submit the pre-lab module found in KuraCloud by the beginning of class. Late assignments will not be accepted.

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Post-lab assignment: Post-lab assignments consist of multiple-choice questions and open-ended questions designed to encourage critical thinking of the material presented in the pre-lab and the lab activity. Assignments are due at the start of the next class period.

Presentations: With your lab group (up to 4 people), you will explore a question of your choosing using any of the methods already performed in the previous weeks. On the week of student presentations, groups should prepare a 20-minute presentation outlining and justifying hypothesis, methods used, results gathered, analysis performed, conclusion and difficulties or errors encountered. All members of the groups should participate in the research and presentation and group names along with a reference list should be turned in to TA after the in-class presentation.

Equipment: None of the equipment used in lab may be removed from the classroom. At the end of lab, before any member of the group leaves, TA will check to make sure all components are present. Students will be held responsible for missing equipment.

Grading scale: The percentage of points earned will be applied to the scale below.

		93.0-100	A	90.0-92.9	A-
87.0-89.9	B+	83.0-86.9	B	80.0-82.9	B-
77.0-79.9	C+	73.0-76.9	C	70.0-72.9	C-
67.0-69.9	D+	60.0-66.9	D		
		<60	F		

Attendance Policy: If you know you will be missing a lab or exam, notify your lab TA as soon as possible to reschedule, although rescheduling may not always be possible. If you miss an exam, you will be given an oral examination or allowed a makeup exam at the discretion of the instructor.

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 honor code.

Month	Date	Lab Topic
Jan	15/17	Intro & Muscle fatigue
Jan	22/24	Skeletal muscle EMG
Jan	29/31	Blood pressure
Feb	5/7	ECG and Peripheral Circulation
Feb	12/14	Students collect data on group project
Feb	19/21	Students present projects
Feb	26/28	Midterm exam
Mar	5/7	Breathing & lung volumes
Mar	12/14	Spring break
Mar	19/21	Lung volumes II
Mar	26/28	Cardiorespiratory effects of exercise
Apr	2/4	Students collect data on group project
Apr	9/11	Students present projects
Apr	16/18	Case study
Apr	23/25	Lab final exam