BIOS3756-A1/A2/A3/A4/A5 Syllabus

Physiology Lab

1 Credit Hour

Note this syllabus is subject to change.

Class Location: Boggs 1-72 (Make groups of 3 students)

Instructors	**Email**	**Office Hours**
Onur Birol, Ph.D. School of Biological Sciences	onur.birol@biosci.gatech.edu	Thursday 10am or by appointment

Laboratory manager
Alison Onstine alison.onstine@biology.gatech.edu

Modality: In person

What to bring: Laptop and/or USB drive

Class Date/Time:
Section A1 M 12:30 pm - 3:15 pm
Section A2 T 12:30 pm - 3:15 pm
Section A3 T 3:30 pm - 6:15 pm
Section A4 W 12:30 pm - 3:15 pm
Section A5 R 12:30 pm - 3:15 pm
The first point of contact is the corresponding TAs except for issues requiring immediate assistance of the professor.

All students are welcome to office hours of any TA in their section. For office hours and links, please check the course canvas page.

Description: Students will perform laboratory experiments to explore fundamental physiological concepts and learn basic methods and interpretation of physiological measurements. The focus of the laboratory will be human physiology. Students will explore the functions of the nervous, muscular, cardiovascular, and respiratory systems.

Prerequisites: Human Anatomy. Undergraduate Semester level BIOS3753 Minimum Grade of D

Pre/Corequisites: Human Physiology. BIOS3755

Course Goals and Learning Outcomes

1. To learn basic physiological measurement techniques.
2. To interpret data within the context of known physiological concepts.
3. To organize and present data effectively.

Standard class procedure (tentative)
1. Complete preparation learning any time before attending the class
    a. Watch a lecture video if available (slide file may be available)
    b. Complete supplemental reading – No quiz questions here, this is for you.
    c. Read lab protocol – Quiz questions may come from here
2. Attend Lab class during the registered class time

a. Enter the classroom and sit at the assigned station
b. Access Canvas to open lab protocol and download worksheet file
c. Roll call
d. Quiz with post-experiment and pre-experiment questions
e. Brief explanation about the experiment by TAs
f. Experiment in groups of 3
    i. Prepare experiment
    ii. Collect all data (the person touching a subject wears gloves)
    iii. Analyze data and put results into a worksheet file on your laptop
    iv. Review results (re-collect data, if necessary)
    v. Get approval of data set from TA (re-collect data, if necessary)
    vi. Work on the worksheet problems in a group
    vii. Disinfect the equipment and area
    viii. Leave the classroom – The expectation is for you to stay the whole time. Rushing through experiments to get things done early to leave is not honorable.

3. Upload worksheet file to Canvas by the due date (mostly in 4 days. See schedule table).

Course Requirements & Grading:

Course Grading

1.	Lab Work Sheets	50%
2.	Lab Report	20%
3.	Quizzes (for participation)	15%
4.	Final Assessment	15%
Total		100%

Lab Work Sheets (50% of final grade): 8 Lab Work Sheets will be assigned throughout the semester. The lowest grade will be dropped. The due date of your worksheet is 4 days after the lab by midnight.

Lab Report (20% of final grade): 1 Lab Report (Pulse wave) will be assigned.

Quizzes (15% of final grade): A quiz will be administered every class before the class starts. These will have questions from previous and upcoming class to ensure you have read your assignments and are prepared in addition to understanding what happened in the previous week. These questions will be fairly simple, not comparable to an exam question. There will be for participation only and not accuracy. Missed quizzes may not be made up.

Final Assessment (15% of final grade): A final assessment will be made during the last class. The format will be multiple choice. It will assess physiology knowledge as well as your ability to synthesize the material and apply it to novel contexts. Closed book.

Late/Missed Assignments

Assignments (worksheets) and reports are due at 11:59 PM on their respective due dates. These items may be turned in after the deadline, but you will be eligible for fewer points once the deadline has passed: you will only be eligible for 90% of the total grade if it is submitted by 3 AM that night, and you will lose an additional 45% from the total for every 12 hour period it is late thereafter. Final report more than 2 days late will earn a grade of 0. Note that extensions will not generally be permitted, but if you think you are subject to an exceptional circumstance, please discuss it with me outside of class (and as soon as possible).

Grading Scale
Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

According to policy, grades at Georgia Tech are interpreted as follows:

A	Excellent (4 quality points per credit hour)
B	Good (3 quality points per credit hour)
C	Satisfactory (2 quality points per credit hour)
D	Passing (1 quality point per credit hour)
F	Failure (0 quality points per credit hour)

See https://registrar.gatech.edu/info/grading-system for more information about the grading system at Georgia Tech.

Course Materials:

Required materials: Short lectures and associated slide files will be posted on Canvas
Laboratory Protocols will be posted on Canvas
Completed worksheet to be uploaded to Canvas by the due date.

Supplemental Text: Vander's Human Physiology, Any addition
McGraw-Hill Education, ISBN 978-1-264-12573-9 or 978-1-264-45112-8

Course Website and Other Classroom Management Tools

We plan to use the following services.
Canvas: https://canvas.gatech.edu

Additional announcements, assignments, and resources will be posted to the course website on Canvas.

Additional Materials/Resources

Additional materials may be provided as needed.
Suggested reading: Ted Baumgartner, Larry Hensley. Conducting and Reading Research in Kinesiology. 5th Edition, McGraw-Hill, (any editions)

More Support for Course Texts and Materials:
Contact the TA or instructor if more support is needed.

Course Expectations & Guidelines:

Attendance and Participation
Class participation is a very important part of the learning process in this Lab course. You are expected to attend and actively engage in the class sessions unless you have a compelling reason not to do so.

This is a fast-paced and intensive course. Missing any class will put you at a serious disadvantage to complete the course requirements. If you are absent from class, you are still responsible for the work assigned for that day, as well as any information given out that day. For example, a missed quiz due to unexcused absence will result in a grade of zero. We encourage you to participate in class. If you have a question, the chances are good that someone else is wondering the same thing.

In case of absence due to COVID or other sickness, notify the TA and professor. If the student is capable, remote participation in the lab may be offered depending on the situation.

Note: Make-up laboratories will be considered only in the case of an emergency (documentation required) or if prior arrangements have been made. Laboratories are extremely difficult to make up, do not miss them! In the case of an emergency, you must contact the instructor within 24 hours and provide documentation of the emergency. If you know you will miss a class because of a school sponsored event or important personal issue, you must contact the instructor at least 1 week prior in order to make necessary arrangements to complete the missed work.

Laboratory Safety
All students are required to sign a lab safety agreement before performing any laboratory experiments.

Suggestions for getting the most from this course

1. *You will need to read the laboratory protocol and any assigned reading prior to the laboratory class.*
2. *Participate in conducting the experiments. You will be working with a lab partner. Do not allow your partner to do all the work!*
3. *Based on your knowledge of physiology, try to guess the outcome of the experiment prior to performing it (form a hypothesis). If the outcome is different from what you expected, try to form an alternative hypothesis.*

Laboratory protocols will be posted on CANVAS.
It is the student's responsibility to read them ahead of time.

Academic Integrity and Collaboration

Cheating, plagiarism, and all forms of academic dishonesty are expressly forbidden in this class, and by the university's Honor Code (https://osi.gatech.edu/content/honor-code). Any form of cheating will immediately earn you a failing grade for the entire course, and I will pursue further disciplinary actions according to Georgia Tech's policies and procedures.

Any student suspected of cheating or plagiarizing on a quiz, assessment, or assignment will automatically be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for any violations uncovered.

As a reminder, we consider the following behaviors to be cheating:

**using false excuse to delay completing a laboratory/test*
**learning what is on a test from someone who has already taken it*
**copying from another student on a test with or without their knowledge*
**helping someone else cheat on a test/lab report*
**using unauthorized notes on a test*
**using unauthorized electronic device to obtain information during test*
**working with others on an assignment when asked for individual work*
**paraphrasing/copying from written or internet source without referencing it*

**fabricating/falsifying a bibliography*
**turning in work copied from/done by another*
**obtaining paper from term paper mill*
**fabricating or falsifying research data*

List adapted from McCabe, Donald. "Cheating among college and university students: a North American Perspective," International Journal for Educational Integrity, 1.1 (2005).

Collaboration & Group Work

Collection and data reduction will be performed as a group work. Further analysis and interpretation of data can be discussed in a group but performed as an individual. We expect all students to adhere to the university's Honor Code. Your work on all reports and assessments must be your own.

Campus Resources

You are permitted (and even encouraged) to make use of the academic support services offered by The Center for Academic Success (https://www.success.gatech.edu/) and the Communication Center (https://www.communicationcenter.gatech.edu/).

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or https://disabilityservices.gatech.edu/, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Extensions, Late Assignments, & Re-Scheduled/Missed Assessments

Final assessment may be rescheduled for pre-approved excused absences (sick with doctor's note, car accident in route to test, hospitalization, death in your immediate family). You should not assume that an absence is automatically excused. Please contact us as soon as possible to ensure that the absence will be excused. **You must provide proof in writing for any absence to be considered as excused.**

Student-Faculty Expectations Agreement

In order to create a mutually respectful classroom environment, I abide by the principles for student-faculty expectations laid out by Georgia Tech. This means that I will:

- create a positive, engaged academic environment;
- be available to meet with you outside of class at a mutually convenient time;
- provide you with all necessary materials so that you can complete all course assignments.

In turn, I expect that you too will fulfill your responsibilities. Specifically, I expect that:

- you will work with me to create a respectful, engaged academic environment;
- you will attend classes regularly and on time;
- you will attend presentations unless you have an emergency or formal, pre-approved excused absence;
- you will come to class prepared, having read the required material, and ready to engage in class discussions;
- you will adhere to the principles of Georgia Tech Student Honor Code.

You can review exactly what Georgia Tech's student-faculty expectations are at:
https://catalog.gatech.edu/rules/22/

Digital Etiquette: You are expected to turn on your camera and microphone available when attending the remote class unless instructed otherwise.

Student Use of Mobile Devices in the Classroom

Students are required to bring and use a lap-top computer to record the analyzed data in the classroom. Laptops and mobile devices will be allowed for class-related activity if the sound is turned off. Please do not abuse this privilege by checking email, Facebook, YouTube, web surfing, etc. during class. If this becomes a distraction in class, the right to deny this privilege to an individual or the entire class can be taken away at the discretion of the instructor(s).

As research on learning shows, unexpected noises and movement automatically divert and capture people's attention, which means you are affecting everyone's learning experience if your cell phone, pager, laptop, etc. makes noise or is visually distracting during class. The use of cell phones to make phone calls is not permitted during class time.

Additional Course Policies:

Institute-Approved Absences
As per Georgia Tech policy, you are permitted to be absent from class to participate in athletic events, official field trips, and religious observances. For planning purposes, please provide us with **written notice of your upcoming absence at least two weeks before the event, and ideally within the first two weeks of class**. When we receive this notice, we will discuss opportunities with you to make up any missed work in your absence. Please see https://catalog.gatech.edu/rules/4/ for more information about receiving official notice from the Registrar about the nature and timing of your upcoming Institute-approved absence.

Food and Drink
Food and drink of any kind, including chewing gum, are prohibited inside the lab. Secure water bottles in backpacks or purses before entering the room.

Freedom of Expression and Guidelines for Discussion
We respect your right to freedom of speech and peaceful assembly. We are also committed to maintaining an orderly learning environment for all students and ensuring that all facilities are used in a way that facilitates teaching, learning, and research. Therefore, we encourage you to voice your opinions respectfully, as long as they are related to the content of this class and as long as doing so does not infringe unduly on the rights of others.

Re-grading and Re-submission
We try to be fair in our grading and generally try to give as much partial credit as possible. As such, please consider carefully any requests you have for regrading other than obvious errors in calculating your grade. Requests for regrading of a homework assignment, quiz or exam may be submitted in writing via email to Dr. Birol within one week of the day the grades are given back to the class (regardless of whether or not you attend class that day). You must justify in writing the technical basis for the regrade. If the regrading request is accepted, your entire homework or assessment will be regraded by Dr. Birol who is usually more strict than the TAs. Note that your grade may potentially decrease upon regrading, and you should not assume that your grade will always go up after regrading.

Statement of Intent for Inclusivity
As a member of the Georgia Tech community, we are committed to creating a learning environment in which all of our students feel safe and included. Because we are individuals with varying needs, we rely on your feedback to achieve this goal. To that end, we invite you to enter into dialogue with us about the things we can stop, start, and continue doing to make our classroom an environment in which you feel safe to participate in learning.

CARE Center, Counseling Center, Stamps Health Services, and the Student Center
These uncertain times can be difficult, and many students may need help in dealing with stress and mental health. The **CARE Center** and the **Counseling Center**, and **Stamps Health Services** will offer both in-person and virtual appointments. Face-to-face appointments will require wearing a face covering and social distancing, with exceptions for medical examinations. Student Center services and operations are available on the **Student Center** website. For more information on these and other student services, contact the Vice President and Dean of Students or the **Division of Student Life**.

AI Policy: AI may be used in any capacity in any non-exam assignment for this course, and any use of AI must be acknowledged appropriately in the AI Contributions section of the assignment. The AI Contributions portion should be included in every assignment and must include the following: a) identify the AI you used; b) describe how you used it/what you used it for; c) state the reason you chose to use AI in this way; d) describe what steps you took to verify the accuracy of the AI output. A separate entry should be included for each AI platform that you use.
If you did not use any form of AI in your assignment, then your AI Contributions section must include that AI was not used.
Any indication that AI was used without proper acknowledgement may result in referral to OSI for investigation of academic misconduct.
With any use of AI, you should always scrutinize any editing or response you get from the AI; although AI tools are becoming more sophisticated and can generate answers to increasingly complex questions, this does not mean that they are the correct answers.