PHYS 2211 M

Summer 2022

Q&A Info Session

Please **mute your mic** unless you want to ask a question

You don't need to have your video turned on, but you can if you want to

Nice to meet you! ☺

- **Name:** Dr Emily Alicea-Muñoz
  - ❖ Please call me **Dr Alicea**

- How to contact me:
  - ❖ Email: **ealicea@gatech.edu**
    - ➢ Please put "PHYS 2211" somewhere in the subject line (I'm also teaching 2212)
    - ➢ If three days pass without a response, re-send the message

- All your **course administration questions** (excused absences, ODS accommodations, grades, etc) go to me

On edstem →

Nice to meet you! ☺

Office Hours (2211)

- Information is on the front page of the class canvas site

- Mondays and Fridays

- 2:00pm-3:00pm EDT

- On MS Teams: **linky link**

- You can also schedule **one-on-one meetings** with me as needed if the office hours timing doesn't work with your schedule

On edstem →

Nice to meet you! ☺

- **Dr Ed Greco** is our backup instructor, who'll cover for me when I have to travel this summer

- **Wesley Toler** (wtoler6@gatech.edu), who is a Physics PhD student, is our Head TA

- **Carolina Ramos Ocasio** (cocasio6@gatech.edu) is our PLUS Leader

- Your **lab GTAs** are physics graduate students, and you will meet them later this week

Dr Greco

Carolina

Wesley

TA contact info and lab meeting links can be found in Canvas

PHYS 2211 M - Sumer 2022 - GPS/Lab Meeting Schedule					
Day	**Section**	**Time (EDT)**	**GTA Name**	**GTA Email**	**MS Teams Link**
		Head TA	Wesley Toler	wtoler6@gatech.edu	n/a
Tuesday	M01	12:30pm - 4:45pm	Dmitriy Zhigunov	Dzhigunov3@gatech.edu	https://tinyurl.com/physicspain
	M09	12:30pm - 4:45pm	Alexander Rogers	arogers66@gatech.edu	https://tinyurl.com/3nsbse8f
	M02	2:00pm - 6:16pm	Jiahao Chen	jchen983@gatech.edu	https://tinyurl.com/msrjk268
	M10	2:00pm - 6:16pm	Omar Alnimasi	Oalnimasi3@gatech.edu	https://tinyurl.com/3ta8tsn8
	M05	5:00pm - 9:15pm	Chujie Chen	cchen641@gatech.edu	https://tinyurl.com/4cbmwx64
Wednesday	M03	12:30pm - 4:45pm	Noel Dudeck	ndudeck3@gatech.edu	https://tinyurl.com/mr23u48d
	M06	12:30pm - 4:45pm	Mateo Reynoso	mreynoso@gatech.edu	https://tinyurl.com/3cdnfpzx
	M11	12:30pm - 4:45pm	Sophie Martin	amartin347@gatech.edu	https://tinyurl.com/2p96fadn
	M04	2:00pm - 6:16pm	Marc Guasch	Mguasch3@gatech.edu	https://tinyurl.com/yn745hu6
	M14	2:00pm - 6:16pm	Thomas Li	Jli3266@gatech.edu	http://bit.ly/3yzTb05
Thursday	M13	12:30pm - 4:45pm	Neel Singh	nsingh324@gatech.edu	https://tinyurl.com/yc2kehya
	M07	2:00pm - 6:16pm	Zhexin Shen	zshen321@gatech.edu	https://tinyurl.com/5vjv7h8u
	M08	5:00pm - 9:15pm	Raunak Dey	rdey33@gatech.edu	https://tinyurl.com/55pwxw92
	M12	5:00pm - 9:15pm	Vinod Gaire	vgaire3@gatech.edu	https://tinyurl.com/mp64zsxf
	M15	5:00pm - 9:15pm	Wangwei Lan	wlan8@gatech.edu	https://tinyurl.com/2nbazbhv

Welcome to Physics 1!

- Mechanics: motion and energy

- The main goal of this course is to have you model a broad range of physics phenomena using a small set of powerful fundamental principles:

  - ❖ The Momentum Principle (Newton's 2nd Law)
  - ❖ The Energy Principle
  - ❖ The Angular Momentum Principle

- You will use computational modeling using the VPython language in the Glowscript platform (https://www.glowscript.org), mainly in the lab experiments but may also show up in HW/tests

$$\vec{F}_{\text{net}} = \frac{d\vec{p}}{dt}$$

$$\Delta E_{\text{sys}} = W_{\text{surr}} + Q$$

$$\vec{\tau}_{\text{net}} = \frac{d\vec{L}}{dt}$$

The class websites

- **Canvas** (https://gatech.instructure.com/courses/251362)

  ❖ Main hub for **EVERYTHING** this summer

  ❖ Read the Syllabus!!!

  ❖ The class schedule and all assignments are in **MODULES**

- **Edstem** (https://edstem.org/us/courses/22201/discussion/)

  ❖ The class forum, linked from Canvas

  ❖ Head TA and I will be there answering questions

  ❖ Faster than email, efficient since many people may have the same question, and you can ask questions **completely anonymously**

  ❖ ALL class announcements and deadline reminders will be posted there

The class websites (continued)

- **edX**
  - ❖ Where the homeworks live
  - ❖ Can be accessed through Canvas
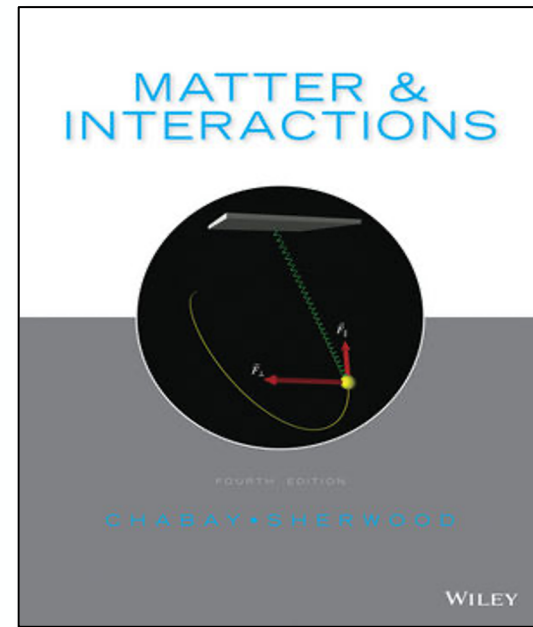
- **Gradescope**
  - ❖ Where you'll take your tests and final exam
  - ❖ Can be accessed through Canvas

- **Microsoft Teams (better to use the app than the website)**
  - ❖ Where the lab meetings will happen, as well as exam proctoring
  - ❖ Each lab section has their own Team
  - ❖ Spreadsheet with lab TA contact info and lab links is in Canvas

Course Details

- No required textbook, but we recommend **Matter & Interactions (Vol 1)** by Chabay & Sherwood (any edition)
  - ❖ Can also use the Student Wiki: physicsbook.gatech.edu

- Asynchronous lectures: short pre-lecture videos, longer recorded live lectures (from my Spring 2022 class)
  - ❖ Some weeks have more videos than others
  - ❖ Pre-lecture videos cover physics material and also coding/lab information

- Weekly lab meetings are **synchronous** and happen through MS Teams

- Testing period (Monday 6:30pm) is **synchronous**, and will only be used on test days (and today, obvs) – and also happen through MS Teams

Tests & Final Exam

- Testing period: **Monday 6:30pm – 7:45pm**

- Three tests and a final exam:

  - ❖ Test 1 – June 6 (Week 4)

  - ❖ Test 2 – June 27 (Week 7)

  - ❖ Test 3 – July 11 (Week 9)

  - ❖ **Final Exam – Friday July 29, 6:00pm – 8:30pm**

- Tests on Gradescope; write your work on paper (or tablet/ipad; no notebooks or index cards allowed), then scan/upload images to Gradescope

- Tests are **1hr15min long**, plus **15 minutes** afterwards to scan/upload

- Final Exam is **2 hours long**, plus **20 minutes** to scan/upload (the extra 10min is for wiggle room)

Tests & Final Exam

- Tests are video proctored in your lab section's team on MS Teams

- Students with ODS accommodations for extended testing time will be proctored separately

- Students who are in timezones where the tests would be inconveniently timed, meaning that they fall in the middle of the night, **must contact me AS SOON AS POSSIBLE** so that I can arrange alternative testing for them

- Students with conflicts on the day of the final exam must contact me so I can put you in the conflict final list – day/time of conflict final TBD

The Lab Meetings

- This week there are no proper lab meetings, just a short meeting for GTAs and students to introduce themselves and see how Teams works

- Lab meetings begin properly on **Week 2** (week of May 23)
  - ❖ No lab meetings on Week 8 (4th of July), but there's still a GPS to be done

- Lab meetings are scheduled on OSCAR as two blocks separated by a 15min break – ignore this and consider it to be one solid block of time
  - ❖ Although the meetings are scheduled for 4 hours, in reality they should last between 2 and 3 hours

- In the lab meetings: GPS (main) and help with lab experiments (optional)

- **READ THIS!!!** Canvas → Modules → Getting Started → What to expect during Lab Meetings

GPS – Group Problem Solving

- Every week from Week 2 to Week 10

- All the problem sets are already in Canvas (Files → GPS)

- **In the lab meeting, students must work in small groups to collaboratively solve the problems** (audio and video must be on)

- GTAs will be around to guide/help and give hints, but not to give solutions
  - ❖ The GTAs will go from group to group in ~10-15 min intervals, but students need to be working even when there's not a TA with them

- No deliverable – **graded on participation** (0/50/100)

- No solution PDFs will be provided; solution videos will be posted in Canvas in each weekly Module (in a page called "Video Solutions – GPS Week N")

The Lab Experiments

- Four at-home labs:
  - ❖ Lab 1: Constant Velocity (due May 29)
  - ❖ Lab 2: Motion of a Falling Object (due June 12)
  - ❖ Lab 3: Black Hole (due June 26)
  - ❖ Lab 4: Oscillations (due July 10)
- Labs have an experiment part and a coding part (except lab 3 which is all coding), and you do them on your own time on a two-week cycle
- Deliverable is a 5-minute video lab report
- Lab reports are peer-graded
- **READ THIS!!!** Canvas → Modules → Getting Started → Working on Lab Experiments

Lab Assignments

- Two assignments for each lab:

    - **Lab Submission & Peer Evals**

        - Submit your lab report as a youtube (or wherever) link or a media upload

        - This is also where you grade your assigned peers

        - Peer graders are assigned **24hrs after the lab submission** (so you can consider that as a grace period for submitting a lab late)

        - Your lab submission grade is the average of the 3 peer grades you receive

    - **Lab Peer Participation Points** – 0 if you graded none, 50 if you graded one or two, 100 if you graded all three of your assigned peers

- **IMPORTANT!!!** If you submit your lab report AFTER peer graders are assigned (on Monday night), you get a 50% late penalty AND a zero in peer participation points

Peer Grading Rubric

- Can be found in Canvas → Files → Course Documents

- Twenty-five items that are graded yes/no (for the most part)

- Make sure to read the rubric before creating your video lab report

Criteria	Ratings			Pts
1. The lab report has an introduction	**10 pts** Yes	**0 pts** No	**0 pts** **Zero credit: no submission, video cannot be opened, wrong video uploaded**	10 pts
2. The introduction describes the purpose of the lab	**6 pts** Yes	**0 pts** No	**0 pts** **Zero credit: no submission, video cannot be opened, wrong video uploaded**	6 pts
3. The introduction describes the models and fundamental physical principles used in this lab	**6 pts** Yes	**0 pts** No	**0 pts** **Zero credit: no submission, video cannot be opened, wrong video uploaded**	6 pts
4. The introduction includes a brief preview of the main result of the lab	**6 pts** Yes	**0 pts** No	**0 pts** **Zero credit: no submission, video cannot be opened, wrong video uploaded**	6 pts
5. The main physics ideas are ONLY mentioned but not described/defined	**5 pts** No	**0 pts** Yes	**0 pts** **Zero credit: no submission, video cannot be opened, wrong video uploaded**	5 pts

Coding in Glowscript

- https://www.glowscript.org/ – log in with a Google account

- We give you starter codes for you to edit

- No coding experience needed

- There are pre-lecture videos explaining some of the coding

- **READ THIS!!!**
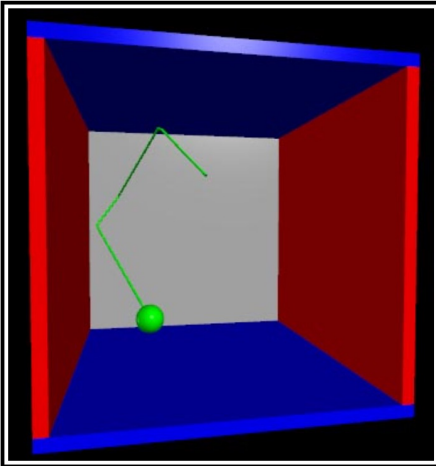 Canvas → Modules → Getting Started → Some useful coding things

glowscript.org

Signed in as **ealicea**(**Sign out**)
Help

GlowScript is an easy-to-use, powerful environment for creating 3D animations and publishing them on the web. Here at glowscript.org, you can write and run GlowScript programs right in your browser, store them in the cloud for free, and easily share them with others.

The Help provides full documentation.

You are signed in as **ealicea** and your programs are **here**. Your files will be saved here, but it is a good idea to backup your folders or individual files occasionally by using the download options that are provided.

G l o w S c r i p t   3.0

Example programs | **Forum**

Homework, Extra Credit

- Weekly **homeworks** are done on edX
  - ❖ "Due" every Sunday night, but this is a soft deadline – NO LATE PENALTY
  - ❖ Hard deadline: Sunday July 24 at 11:59pm EDT
  - ❖ Graded on accuracy but you have infinite attempts at all the problems
- Two chances for **extra credit**, up to 1pt total added to your final grade
  - ❖ **Pre-Test** – due May 22 (this coming Sunday!) – earns you 0.5pt extra credit just for completing it
  - ❖ **Post-Test** – due July 24 – can earn you UP TO 0.5pt extra credit, calculated as (your score/47)*0.5

Calculating your final course grade

- **40% Tests** (weighted, lowest to highest grade: 5%, 15%, 20%)

- **25% Final Exam** (comprehensive)

- **15% GPS** (lowest one dropped)

- **15% Lab Experiments** (includes submission AND peer points)

- **5% Homework**

- Extra Credit = up to 1 full point added to final course grade

- **READ THIS!!!** Canvas → Modules → Getting Started → How to accurately calculate your final course grade (you MUST use the WhatsMyGrade spreadsheet, not the canvas gradebook)