Course Title: PHY 2053 - Physics 1 - Summer 2025

Instructor Contact Information:

Instructors	Office	Email	Phone
TBD		phy2053@phys.ufl.edu	
TBD			

E-mail:phy2053@phys.ufl.edu

Use this email and only this for all communications with instructors; your emails must originate from the ufl.edu mail server. You may expect responses within 24 hours Monday to Friday 8 am to 5 pm. Emails to TAs do not necessarily need to be copied to the instructors.

NEVER use our individual emails; and do NOT use canvas messaging either. These messages will be ignored.

TA Contact Information:

TA	Office	Email
TBD		
TBD		

Note: TAs are not responsible for creating or interpreting course policies. Any questions/clarification required for course policies must be addressed to your instructors.

Office Hours:

Time	Period	Monday	Tuesday	Wednesday	Thursday	Friday
9:30 – 10:45 am	2					
11:00 – 12:15 pm	3					
12:30 – 1:45 pm	4					
2:00 – 3:15 pm	5					
3:30 – 4:45 pm	6					
5:00 – 6:15 pm	7					

Course Description

This course is the first in a two-part series intended for non-physics majors, offering an algebra and trigonometry approach to topics such as kinematics, dynamics, energy, momentum,

rotational motion, fluid dynamics, oscillatory motion, and waves. The course fosters analytical and critical thinking skills to promote a scientific understanding of the real world.

Student Learning Outcomes

Student Learning Outcomes:

- Students will solve analytical problems describing different types of motion, including translational, rotational, and simple harmonic motion using algebra and trigonometry. (SLO1)
- Students will apply newton's laws, and conservation laws by using algebra and trigonometry to solve analytical problems of mechanics. (SLO2)
- Students will identify and analyze relevant information presented in various formats such as graphs, tables, diagrams, and/or mathematical formulations. (SLO3)
- Students will solve real world problems using critical thinking skills and knowledge developed from this course. (SLO4)

These student learning outcomes correspond to the UF general education outcomes as follows:

Content*: Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s)*.

- **Identify, describe, and explain** the basic concepts, theories, discoveries, processes, and terminology of physics and the scientific method (e.g. the physics of mechanics, including the mathematical description of translational, rotational, and simple harmonic motion, Newton's laws, the work-energy theorem, conservation of energy, momentum and angular momentum, fluid dynamics, and the oscillatory motion, and waves).(SLO1 and SLO2) **(P)**. **Assessments:** Homework problems, quizzes, and exams.

Critical Thinking: *Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).*

- **Identify, describe, and explain** how the scientific theories apply to real world physical systems and can be tested, including applying techniques of discovery and critical thinking to evaluate outcomes of experiments. (SLO1, SLO2, and SLO4) **(P)**. **Assessments:** questions relating to experimental demonstrations on in-class activities and exams.
- **Critically analyze**, **evaluate, and synthesize** information in a problem using physics knowledge to develop a solution strategy consistent with logical reasoning skills as language of scientific criticism and producing a solution serving as an argument to the problem that is evaluated for validity using dimensional analysis or order of magnitude estimations (SLO3 and SLO4) **(P)**. **Assessments:** Homework, quizzes, exams.

Communication: *Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*

- **Develop and present** in writing quantitative and qualitative arguments for physics problem solutions using step by step logical reasoning in a clear and effective manner. (SLO1-4) **(P)**. **Assessments:** Hand graded quizzes.

Prerequisites

Skills: Algebra, Trigonometry: The course will rely heavily on trigonometry, solving systems of equations, and using variables. If you are not comfortable with this level of math, you should take the appropriate refresher course(s) before taking this class; otherwise, you will likely struggle to succeed.

General Education Requirements

General Education Subject Area: **GE-P** (physical science) with these Subject Area Objectives

The mapping of course learning outcomes to these subject area objectives are provided above.

Required material:

The following setup should be completed as soon as possible:

- **Viewing Canvas announcements in a timely manner.**
  - You are responsible for receiving Canvas course announcements in a timely manner; one way to do this is by configuring your canvas notifications accordingly.
- **Purchase access to the etext and the homework system.**
  - The textbook for the course is the electronic version of *College Physics: A Strategic Approach 4e* by Knight, Jones, and Field. The homework in this course is done online using the the Pearson Mastering system. It can be accessed by clicking the "Access Pearson" link in the le panel and then clicking "Open Pearson". From there, click "Open MyLab & Mastering", and you will find the link to the "eText".Note that the homework has been synced with Canvas. So you may go to "Assignments" and click on a parcular homework, then you will be able to access it by clicking "Open Pearson". For more instructions on getting access to Pearson content, see the handout here (hps://ufl.instructure.com/courses/525231/files/93704419?wrap=1) ..

 iClicker app on a mobile device.

- You must be registered using your ufl.edu gatorlink ID in iClicker app. Do NOT use an external email address; otherwise iClicker will be unable to match you in the gradebook. Please make sure that your name in Canvas and your name in the iClicker system are identical.
- Roster grade sync has been enabled for this course. This means that if you have already set up an iClicker account using your UF email address, you will be automatically added to the iClicker course when we begin the sync between Canvas and iClicker.
- We will sync the roster several times during the first weeks of the course to ensure that everyone is in the system, and we will have several practice questions before we start counting any points in your grade.

- **Scientific or graphing non-web-capable calculator.**
  - A scientific or graphing calculator is required to succeed in this course. Internet-capable calculators and cell phones as calculators are not allowed.

Course Schedule

A detailed course schedule appears at the end of the syllabus.

With appropriate advance notice, we reserve the right to make reasonable updates as dictated by the needs of the semester. Note that Exams 1 and 2 are evening assembly exams (8:20-10:10pm), whereas the Final Exam is at the time set by the registrar during Finals Week (12:30-2:30pm).

Assigned readings, including page numbers are included in the schedule. **It is expected that you have read the assigned sections *before* you come to class; we will be working under this assumption in making decisions about how we present our lectures.** Note: It is okay if you don't fully understand the material during or after your first read-through; not understanding is a key step in the path to understanding. The goal here is that lecture is *not* your first introduction to the material.

Grade Components

- **Homework**
  - We will use Pearson Mastering as our online homework system. Homework assignments can be accessed through the Assignments tab in the le-hand navigation menu. Each homework is designed to take 1-2 hours of work. While the number of problems in each homework varies, the average me it takes for students to complete an entire assignment is kept the same.
  - **Homework sets will be due on Monday at 12 pm.**
  - Question scoring guidelines are as follows:
    - For blank entry questions, you get 5 attempts to get the answer right, losing 3% of the part value per incorrect attempt.
    - For multiple choice questions (where N choices are available), the number of attempts students are given is the number of choices minus one (N-1).

The deduction for each incorrect submission is equal to %deduction = 100%/(N-1).
        - For True/False questions students are given one attempt and deduction amount for an incorrect answer is 100%.
    - Full solutions to homework will be available immediately after the due date in the homework system. *This means that it is not possible to offer makeups for the homework*; instead, we drop your two lowest homework scores in calculating your overall grade.
    - Follow appropriate practices of academic honesty when working on the homework problems: discussions with colleagues and/or tutors about methods of posing and solving a homework problem are acceptable and encouraged. ***Using a formula that is specific to the problem, derived by someone else to input answers is considered cheating***.
    - Treat the homework as practice for the exams and quizzes: derive, on your own, any result that you submit, and attempt to do so using your formula sheet and your calculator. It is generally best practice in physics to solve a problem with variables first and only plug numbers into your calculator at the very end of the problem when you have derived your final formula.
- **Quizzes**
    - Quizzes test how well you have learned the concepts and methods of the assigned homework problems. **The quiz questions will be related to, but not identical to, the preceding homework problems.**
    - We will supply any equations that you need in order to solve the quiz.
    - Quizzes are 20 minutes long and graded based on a total of 10 points per quiz.
        - Partial credit will be given on the quizzes based on the work you show in solving each problem. Your presentation should be neat and organized such that it clearly communicates your understanding of the problem.
    - **The deadline to request any re-grade of a quiz or to question a possible quiz grade discrepancy is 5 pm on Friday August 1, 2025.**
- **Exams**
    - Exams each have 15 multiple-choice questions.
        - Exam questions are not necessarily based on homework problems, but they will only cover the topics listed in the course schedule for each exam.
        - Exam questions may be either conceptual, numeric, or symbolic in nature.
    - Exams are **closed book/closed notes**; the only materials allowed are your pencil/eraser/pen/highlighter, and a scientific or graphing calculator, and your (hand written) formula sheets (1 for Exam 1, 2 for Exam 2, 3 for the Final)**.** The exam, the Scantron, and scratch paper will all be provided.
    - The Final Exam will be cumulative but emphasize the material encountered after the Exam 2 content.
    - **The answer you mark on your Exam Scantron is your final answer to a question.** We do not look back over your work, even if you think you solved your answer correctly on the scratch paper. However, please do mark your answers on the exams as well -- this is just a precaution in case your scantron is misplaced.
- **Extra Credit**
    - **iClicker questions**

- In-lecture clicker questions begin to count on **Thursday, May 22**. We will practice iClicker (for no points) on May 15 and 20.
- You must use either a computer or mobile device to participate in the clicker questions. **Responding for other students is considered cheating by both parties.** You must be in the lecture hall (NPB 1001) in order for your clicker app to work correctly.
- Correct responses to clicker questions are worth 2 points and incorrect responses are worth 1 point. Not answering gives 0 points.

Grading Scheme

Grading in this class is consistent with UF grade and grading policies

Your final score (out of 100 points possible) is the sum of the following:

- **3 exams (no drops):** worth 25 points each, 75 points total
- **12 weekly HW assignments (drop 1 lowest score):** 5 points combined
- **12 weekly discussion session quizzes (drop 2 lowest scores):** 20 points combined
- **iClicker questions - typically 1 per lecture (drop 5 lowest scores):** 5 extra credit points combined

Note: In case of cancellation of classes due to unforeseen circumstances (e.g. hurricanes), the number of HW and quiz assignments might be adjusted, while the maximum number of points earned in each category stays the same.

Total minimal scores ensuring a particular letter-grade are shown below. In other words, if everyone gets 85 or more, everyone gets an "A". *Do not expect scores to be curved.*

Letter Grade	Points Earned
A	≥85
A-	≥80
B+	≥75
B	≥70
B-	≥65
C+	≥60
C	≥55
C-	≥50
D+	≥45
D	≥40
D-	≥35
E	<35

Letter grades are assigned grade points as described at https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

Class Attendance & Makeups

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university attendance policies

- **Homework**
  - Homework solutions are released immediately after the due-date; thus *no late HW can be accepted for credit*. However, we do drop your lowest homework score from your overall grade calculation.
- **Quizzes**
  - Make-up quizzes are permitted provided you have a valid documented excuse (e.g. doctors excuse for illness, a letter stating your involvement in an official UF-sanctioned event, or a letter from the Dean of Students Office (DSO) for unforeseen personal circumstances severely impacting your learning).
    - Quiz makeups are arranged via your TA.
    - You must take your makeup quiz within 3 weeks of the missed quiz (and before the final exam for Quiz 12).
- **Exams**
  - A student who will miss an assembly exam due to an exam conflict or any other foreseeable reason that is approved under UF attendance policies should request **in advance** to take the makeup exam instead of the regular exam.

  - A student who has an unforeseeable absence from an exam should contact the instructor as soon as possible, normally **within 24 hours after the missed exam**. For an absence to be approved, documentation of the reason for absence must be provided. If the unforeseeable absence is excused by the instructor, the student will be expected to take the makeup exam unless they have another exam conflict or reason that is approved under UF attendance policies. The makeup exam will cover the same subject matter as the regular exam and in a similar format, although the exams will not be identical.
- **Extra Credit**
  - **There are no makeups for iClicker points**, but we will drop your 5 lowest iClicker question scores. As we will have one iClicker question per lecture, with two lectures per week, this is the equivalent of missing 2.5 weeks' worth of lectures without penalty.

Accommodations for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://disability.ufl.edu/ by providing appropriate documentation. Once registered, students will receive an accommodation document that must be sent to phy2053@phys.ufl.edu when requesting accommodation. Students should follow this procedure as early as possible in the semester.

NOTE: DRC Accommodation Letters received at least 4 business days in advance of a timed assessment will be in effect for all future assessments. If a letter is submitted with less than 4 business days until the next scheduled assessment, then the accommodations will apply after the next timed assessment. Failure to meet the announced 4 business days deadline prior to a timed assessment is not a valid rationale for requesting a makeup assessment.

Students with accommodations have two options for taking their discussion section quizzes:

1. You may take the quiz in your discussion section room with the rest of you section.
2. You may leave your discussion room before the quiz starts and take the quiz at the DRC.

You must pick which option to choose at the beginning of the semester and confirm your plan with your TA.

The Honor Pledge

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment".**

The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/ specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class."

Online Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/ Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under 2 GatorEvals, or via https://ufl.bluera.com/ufl/ Links to an external site. . Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/

Student Recording of Lectures

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. **Specifically, students may not publish recorded lectures without the written consent of the instructor.**

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or guest lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), **including but not limited to another student within the same class section**. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Health and Wellness

- *U Matter, We Care*: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 or visit U Matter,We Care website to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center* .: 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
- Student Health Care Center, 392-1161. Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website
- *University Police Department* , Visit UF Police Department website or call 392-1111 (or 9-1-1 for emergencies).
- GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website . or call 352-273-4450

Academic Resources

- *E-learning technical support* 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
- *Career Connections Center* Reitz Union, 392-1601. Career assistance and counseling.
- *Library Support* various ways to receive assistance with respect to using the libraries or finding resources. Call 866-281-6309 or email ask@ufl.libanswers.com for more information.
- *Teaching Center* 1317 Turlington Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.
- *Writing Studio* , Daytime (9:30am-3:30pm): 2215 Turlington Hall, 352-846-1138 | Evening (5:00pm-7:00pm): 1545 W University Avenue (Library West, Rm. 339). Help brainstorming, formatting, and writing papers
- Academic Complaints: Office of the Ombuds; Visit the Complaint Portal webpage for more information
- Enrollment Management Complaints (Registrar, Financial Aid, Admissions): View the Student Complaint Procedure webpage for more information.

Note: Discussion section quizzes typically occur during the first of your two discussion meetings for the week. Exceptions occur when Monday is a holiday and when we have Exam 1 (on Monday September 30th).

Monday	Tuesday	Wednesday	Thursday	Friday
5/12	**Read: Ch1** Units, conversions, displacement, vectors, velocity, speed (p.4-25) Discussion Section GP1: Trig, Vectors, displacement and velocity		**Read: Ch2** Acceleration and 1D motion and 1D projectile motion (p.32-61) Discussion Section GP2: Graphing Motion and 1D motion	

5/19 **Intro to Mastering** **Physics Primer** **HW 1**	**Read: Ch3** Vectors, Motion on a ramp, 2D projectile motion (p. 71-96) Quiz 1		**Read: Ch4** Newton's Laws Discussion Section GP3: 2D Motion practice (p.105-126)	
5/26 Memorial Day **HW 2**	**Read: Ch5, 1-4** Applications of Newton's Laws: Equilibrium, Normal Forces, Apparent Weight (p.134-144) Quiz 2		**Read: Ch5, 5-8** Applications of Newton's Laws: Friction, Inclined Planes, Ropes and Pulleys (p.146-165) Discussion Section GP4: Forces Practice	
6/2 **HW 3**	**Review** Quiz the TA (Exam review questions)	**Exam 1 Chapters 1-5 (DATE TBD)**	**Read: Ch 6,1-6** Circular Motion and Gravitation (p.175-197) Discussion Section GP5: Circular Motion	

6/9 **HW 4**	**Read: Ch 7,1-7** Rotational Motion (p. 205-231) Quiz 4		**Read: Ch 8, 1-2** Torque and Equilibrium (p.244-252) Discussion Section GP6: Rotational Motion	Makeup Exam
6/16 **HW 5**	**Read: Ch 8, 3-5** Hooke's Law (p.252-263) Quiz 5		**Juneteenth**	
6/23 Summer Break	Summer Break	Summer Break	Summer Break	Summer Break
6/30 **HW 6**	**Read: Ch 9, 1-4** Momentum (p.278-292) Discussion Section GP 7: Equilibrium, Springs, and Momentum Quiz 6	Quiz 6	**Read: Ch 9, 5-7** Applying Cons of Momentum (p.292-300) No Discussion	Independence Day No Discussion

7/7 **HW 7**	**Read: Ch10, 1-6** Energy and Work (p.309-331) Quiz the TA (Exam review questions)	**Exam 2 Chapters 6-9 (DATE TBD)** Quiz the TA (Exam review questions)	**Read: Ch10, 7-10** Energy Diagrams, Collisions, and Power (p.331-341) Discussion Section GP 9: Energy Problems	
7/14 **HW 8**	**Read: Ch13, 1-3** Fluid Statics (p.441-454) Quiz 8		**Read: Ch13, 4-7** Fluid Dynamics (p.454-470) Discussion Section GP10: Fluid Dynamics	
7/21 **HW 9**	**Read: Ch14,1-5** Simple Harmonic Motion (p.484-502) Quiz 9	Quiz 9	**Read: Ch15,1-7** Waves (p.518-541) Discussion Section GP11: Springs and Pendula	
7/28 **HW 10**	**Read: Ch16, 1-3** Standing Waves (p.549-553) Quiz 10	Quiz 10	**Read: Ch16, 4-7** Sound (p.553-572) Discussion Section GP 12:	

			Waves and Interference	
8/4 **HW 11**	Exam Review	**Exam 3 Chapters 10,13-16; Cumulative** (DATE TBD)	No lectures No discussions	No discussions