**College Physics I ONLINE (PHY2053E)**
**Fall 2022**
**Lecture:** Online
**Instructor:** Dr. Patricia Stampe -119 Jones Hall, 599-8463
**Email:** Patricia.Stampe@famu.edu
**Office Hours:** TBA
**Virtual Office Hours Zoom ID:** TBA

**Students must be available for in-person examinations: Midterm Exam: (Ch 1-8) Wednesday,October 19, 2022 8:00-8:50am and Final Exam (cumulative): Tuesday, December 6h, 2022, 10:00 am – noon, no exceptions.** Those wishing to use an off-campus facility must make arrangements at least three weeks in advance to allow for transmission of the test material and verification of the site. Be aware that there may be a fee associated with the off-campus testing location. A list of suitable testing sites can be found at http://www.ncta-testing.org/find-a-cctc-participant

**This course is completely asynchronous, and there will be no virtual class meetings. Students will be marked as 'attending' in IRattler when they have completed the "Course Overview" Module and the Syllabus Quiz on Canvas.**

**Course Description and Expectations:**

The course will cover kinematics, dynamics and thermodynamics. We will cover Chapters 1-17 of the Openstax textbook. The pace will be approximately one chapter per week, with a homework assignment on that chapter due the Tuesday of the following week. Students will find it greatly to their benefit to read the book in addition to watching the lecture material for the course. Interactive online lectures are available on the course Cavas site. In addition, extensive additional help such as solved long answer problems with video explanations are available for each chapter.

Students should put in at least 3 hours studying per credit hour of the course. We all know that great athletes did not become great overnight: they spend a lot of time practicing. The same thing is true for physics. LEARNING PHYSICS REQUIRES WORKING LOTS OF PROBLEMS.

**Required Textbook;**

- **Free online textbook**: http://openstaxcollege.org/textbooks/college-physics
  This book comes with a free student solutions manual. **Get it, it's all FREE!!**

**Course Web site:** http://famu.instructure.com Syllabus, lectures, Review Material, links

**Online Homework:** Pearson My-Lab and Mastering: **Register via Canvas or code available for purchase in the FAMU BOOKSTORE**

**Technology Requirements:** To view the online lectures, you will need a browser capable of accessing Adobe Flash. You will need access to Lockdown browser and a computer with a working webcam in order to take the exams (Chromebooks will not work!)

## No extra credit will be given in this course.

**Academic Learning Compact:** www.famu.edu/DepartmentofPhysics/UserFiles/File/physics.pdf

**Academic Honor Policy**
The University 's Academic Honor Policy is located in the FANG Student Handbook, under the Student Code of Conduct-Regulation 2.012 section, beginning on page 55-56.

**Students who are found to have cheated by copying, plagiarizing, or utilizing unauthorized sources or external help in any manner in completing any assignments or examinations for this course will receive a grade of zero on that assignment or exam. A second offense will result in a grade of "F" for the entire course.**

**ADA Compliance**
To comply with the provisions of the Americans with Disabilities Act(ADA), please advise instructor of accommodations required to ensure participation in this course. Documentation of disability is required and should be submitted to the Center for Disability Access and Resources (CEDAR). For additional information please contact CEDAR at: cedar@famu.edu.

**LEARNING OUTCOMES: After completion of this course…**

| Student Learning Outcome | Bloom's Taxonomy |
|---|---|
| 1. Students will be able to discover relationships between the fundamental concepts of kinematics, dynamics, rotational motion, waves and thermodynamics and use these relationships to predict the behavior of a physical system. | create/evaluate |
| 2. Students will apply trigonometry and algebra to solve physics problems involving mechanics, waves, and thermodynamics. | analyze |
| 3. By the end of the course students will develop competency in problem solving techniques for application to a variety of fundamental physics problems. | create/evaluate |
| 4. Students will deduce which tools available to them provide a framework for understanding a problem involving fundamental processes in dynamics, rotational motion, wave phenomena, and thermodynamics. | analyze/evaluate |

**Course Evaluation and Policies:**

**Students who are found to have cheated by copying, plagiarizing, or utilizing unauthorized sources or external help in any manner in completing any assignments or examinations for this course will receive a grade of zero on that assignment or exam. A second offense will result in a grade of "F" for the entire course.**

**Lectures: (20%)** Students will be expected to complete online lectures for each module by the dates shown on the attached schedule. These lectures are posted on the course Canvas site, and consist of a mix of lectures and demonstrations, online interactive animations and quizzes. Students will receive a grade for each module based on their performance on the embedded quizzes. After the due date, the lectures will still be accessible for review purposes, with answers to the quiz questions.
**I strongly suggest using the free Firefox browser to watch the lectures. Google Chrome and Safari often lose contact with the Canvas server, and your grade may not be recorded properly. Take a screenshot of your score on the final slide as backup, just in case.**

To access the course materials, go to the main menu in Canvas and click on "Learning Modules". The material for the course is divided into Modules, roughly one for each chapter. Click on the appropriate Module, and you will see a list of material for that chapter, including required reading, the link to the homework assignment and additional solved problems. The additional problems are posted in three forms: 1) the problems alone for you to try by yourself, 2) worked solutions to each problem in written form and 3) a video of me solving the problems, which goes through step by step explaining the process. In addition, a group of suggested end of chapter textbook problems and their solutions are available. After the lecture due date, a review version of the lecture will appear with free navigation and solutions to the problems, so that you can review anything you need.

**Testing: (60%)**

1 Midterm Exam (Modules 1 – 8) (30%) Wednesday, October 20, 2021 8:00 – 8:50 am
1 Comprehensive Final Exam (30%) Tuesday, December 7, 2021 10:00 am - noon

If you are late for the test you will not be given any additional time.

**Any indication of cheating will result in a score of zero for that test, and will be reported to Judicial Affairs. Second offenses will result in a grade of "F" for the course.**

**Online Homework: (20%)**
Homework will be assigned for each chapter (approximately weekly) and due the following week, on the Tuesday evening. Homework will be submitted via a web-based system. Homework is due at midnight Eastern Time on the due date shown below. See below for the details on how to access the system for homework submission. Working problems in an orderly fashion is the only way to learn physics.

This course makes use of the Mastering Physics homework service. It will require a $35 charge per student for its use. Mastering Physics can be accessed directly from the Canvas site for this course by clicking on "My Lab and Mastering" in the left hand menu, or simply by clicking on the first homework link. There is a free two week sign up period of which I strongly encourage you to take advantage.

You will see two optional assignments posted at the beginning of the term. These do not count for credit, but are for your own personal benefit. “Introduction to Mastering Physics” is a tutorial guide to how to answer questions in the correct format. “Mathematics Review” is a selection of tutorial problems to review some of the common math techniques we will need for the course.

After you complete the homework, an "Adaptive Follow-up" Assignment will pop up. This assignment is especially prepared for you by Mastering, based on topics it thinks you need extra help with. If you scored 95% or higher on the homework, you will "exempt out" of the Adaptive Follow-up assignments. No points are taken off if you don't do these extra assignments, but they count for one point extra credit toward your homework score, which can always come in handy. If you exempted out of the Adaptive Follow-up, the system will automatically give you the one point.

Be sure to start working on your homework as early as possible, not just in the last two hours before it is due. This will give you time to contact me for help, and will avoid last minute internet problems. Since the homework is available for over a week, **last minute internet problems will not suffice for an excuse.** If you have problems with the homework either email me or come to my Zoom office hours. I am only too happy to help you. There are also free Physics tutors available in The Science

Center in Jones Hall Room 214 and online. Free online tutoring via Tutor.com is also available in the Canvas course menu.

**Tentative Schedule: Dates may change due to unforeseen circumstances.**

All deadlines are Midnight Eastern Time. After the due date, you will still be able to watch the lectures and complete the interactive for review purposes, however the quiz grades will not appear in your blackboard gradebook. The homework assignments are due weekly, at midnight on each Tuesday of the term, except for the final assignment. Due dates will appear in the Canvas calendar, and can be synced with the calendar on your phone, if you like. See the instructions posted in the Announcements section on Canvas.

**Tentative Schedule: Dates may change due to unforeseen circumstances.**

All deadlines are Midnight Eastern Time. The HW assignments are due weekly on Tuesdays.

| Dates | Chapter |
|---|---|
| Week 1 | 1: Introduction |
| Week 2 | 2: Describing Motion: Kinematics in 1 Dimension |
| Week 3 | 3: Kinematics in Two Dimensions, Vectors |
| Week 4 | 4: Motion and Force; Dynamics |
| Week 5 | 5: Circular Motion; Gravitation |
| Week 6 | 6: Work and Energy |
| Week 7 | 7: Linear Momentum |
| Week 8 | 8: Rotational Motion |
| Week 9 | 9: Bodies in Equilibrium |
| Week 10 | 10: Fluids |
| Week 11 | 11: Vibrations and Waves |
| Week 12 | 12: Sound |
| Week 13 | 13: Temperature and Kinetic Theory |
| Week 13/14 | 14: Heat |
| Week 14 | 15: Thermodynamics |

**Tentative Test Schedule:**

Midterm (Chapters 1-8) Wednesday, Oct. 19, 2022 8-8:50 am
Final Exam (cumulative): Tuesday December 6, 2022, 10am-noon