Course Syllabus

College Physics 1 Lab

PHY 2053L / 81168 / Fall 2026

1 credit hours / 2 contact hours

Pre-requisites: MAC 1114 and MAC 1140 / Co-requisite: PHY 2053

Contact Information

Instructor

Name: Jessica Edwards, Ph.D.
Title: Professor
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Phone Number: 850.769.1551 ext. 6020

Office Location: NS 305
Office Hours: TBD
Response Time: 1 business day
Canvas message is the best way to contact me.

Division Chair

Name: Dana Hutchinson, DPT
Title: Division Chair
Email: dhutchin1@gulfcoast.edu
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Division Administrative Assistant

Name: Kathy Bleday
Title: Sr. Administrative Assistant
Email: kbleday@gulfcoast.edu
Phone Number: 850.872.3851

Course Information

Catalog Description:

Corequisite: PHY2053 or consent of instructor. Laboratory work involves investigation of lecture-related materials and alternative approaches to problem solving.

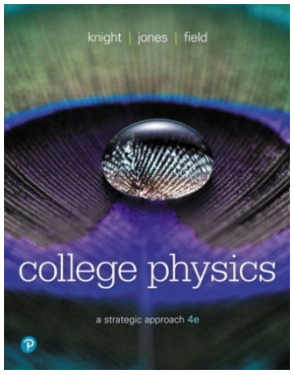
Student Learning Outcomes:

Emphasis will be on:
1. learning to *apply* course material (to improve thinking, problem solving, and decisions)
2. Gaining a broader understanding and appreciation of intellectual / cultural activity (music, science, literature, etc.)
3. Acquiring skills in working with others as a member of a team

Course Materials & Resources:

Book:
Title: College Physics: A Strategic Approach, 4th edition, Authors: Knight and Field, published 2018, © 2019, Publisher: Pearson,
Some book options:

- ISBN: 9780134609034 (hardback text available in bookstore)
- ISBN: 9780134700502 (loose leaf)
- ISBN: 9780134703930 (eText ***with*** Mastering Access included for 24 months)



Delivery Method:

This course meets face to face in a laboratory setting. Lab sessions are hands-on and designed to reinforce the concepts introduced in lecture through experimentation, data collection, analysis, and problem solving. Activities may include laboratory experiments, demonstrations, group work, discussions, writing workshops, and practical assessments. Students will be expected to actively participate in laboratory exercises, record observations, analyze data, and complete laboratory reports or other assigned work. Please make sure that you have access to a computer with a webcam and internet service in the event a change in course delivery is needed. (You don't necessarily need to own one, but you do need to have a plan for accessing one.)

Student Expectations

In this course, communication and feedback will occur through various channels, including Canvas Inbox, Canvas Announcements, Canvas Discussions, Zoom, assignment feedback, GCSC email, and instructor office hours. Review the statements below so that you understand the expectations for communication.

As a student at Gulf Coast State College, you are expected to:

- **Adhere to Course Guidelines:** Follow the guidelines detailed in the course syllabus, along with any additional instructions provided by the instructor. This includes understanding and complying with the course objectives, grading criteria, and academic policies.
- **Maintain Regular Contact:** Keep in touch with your instructor and classmates via the Canvas course or other designated communication channels. Regular contact helps clarify doubts, share ideas, and foster a collaborative learning environment.
- **Active Participation:** Engage actively in class discussions and submit assignments on time. Your active participation is crucial for your academic success and contributes to a vibrant learning community.

As your instructor, my commitment to you is to:

- **Provide Timely Feedback:** I will review and provide feedback on your assignments and submissions promptly. Course exams are usually graded within a week. My goal is to help you understand your strengths and areas for improvement, which is crucial for your academic growth.
- **Respond Via Canvas Inbox:** I will respond to your messages within 24-48 hours (excluding weekends), unless otherwise noted. I understand the importance of clear and timely communication in addressing your questions and concerns.
- **Post Regular Announcements:** To keep you updated, I will post reminders or course adjustments via Canvas announcements. The overall course schedule will be posted on the Canvas home page.
- **Maintain Weekly Office Hours:** I will maintain regular weekly office hours, but I can also be available by appointment. This is to ensure I'm available for any questions or concerns that may come up during the week.

Classroom Etiquette

- Cell phones must be on SILENT.
- No food please! We don't want ants! Chewing gum or mints are ok, as long as they are not disruptive. If any trace of these is left, they will no longer be allowed.
- Sealable bottles or thermoses of water are fine. No open top containers.
- Leaving class is a disruption to me and to other students so unless it is an emergency or you are ill, expect to remain in class for the entire duration of the class.
- You are responsible for your education. What you get out of it will be reflected by the work and effort you put in.

Course Schedule

Week 1. Intro, Using MS Word, Writing a GOOD Lab Report, Sig Figs

Week 2. Measurement and uncertainty – length, volume, mass, and density

Week 3. Kinematics and the Air Track

Week 4. Vector addition and the Force Table

Week 5. Timing and Projectile Motion

Week 6. Procedure Exam

Week 7. Friction and the Inclined Plane

Week 8. Rotational motion - centripetal force

Week 9. Torque and how to measure the weight of a stick

Week 10. Stress and Strain and the Rubber Band

Week 11. Conservation of Momentum - collisions

Week 12. Conservative vs. Non-conservative Forces: Work

Week 13. Conservation of Energy and the Loop-the-Loop

Week 14. Density of an object by weighing it twice - Buoyancy

Week 15. NO LAB (Thanksgiving Holiday)

Week 16. Lab Final Exam!!!

***Schedule may be adjusted to maintain consistency and reinforcement with lecture material.**

Grading

GCSC Grading Scale

All grades will be posted in the student grade book in Canvas and will be assigned according to the following scale:

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

Calculation of Grades

Grades will be based on lab work + procedure exam (40%), lab reports (20%) and a Final Exam (40%). The final will be given on Wednesday, December 2nd, during the normal lab time. You must keep an instructor-approved bound or spiral-bound lab notebook. This notebook will be your only guide during the final exam.

Course Policies

Accessibility Statement

Gulf Coast State College supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with Student Accessibility Resources. Appropriate academic accommodations will be determined based on the documented needs of the student. Please visit GCSC's Student Accessibility Resource (SAR) webpage to learn more. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

Attendance Policy

- Regular class attendance and participation are **essential** to your success in this course. Students are expected to attend all class meetings of all courses for which they are registered. Attendance will be taken at the beginning of each class.
- ***Daily*** monitoring of the Course shell in Canvas, and your GCSC email account, is essential for obtaining course-related information. Course supplements, and important announcements for this course **will be posted to Canvas**. Failure to check Canvas is ***NOT*** a valid excuse for not receiving information communicated via this pathway.
- Missing class is the fastest way to feeling overwhelmed with Physics.
- If you are absent from class, you are responsible for collecting missed lecture notes from fellow students and then bring specific questions to your instructor during office hours.
- *You* are responsible for ALL missed material.
- Punctuality is important. Showing up late can be a disruption. If this happens regularly, you will be required to talk to the Division Chair of Natural Sciences.
- Make-up work is offered solely at the discretion of your professor. Appropriate documentation may be required to justify assignment extensions.
- If absences in a class become excessive (more than three unexcused absences), your professor may contact you, indicating that further absence may result in your withdrawal from the course. Your professor can withdraw you from a course for excessive absences without your permission.
- Instructors will monitor attendance at the beginning of each semester. If you are not in attendance during this period, you may be withdrawn from the course. You will be financially responsible for the course and a "W or NS" will appear on your transcript. Withdrawal from a course may also have implications for financial aid.

Miscellaneous

- **Searching/using the internet or AI for homework solutions <u>IS CHEATING</u>** and will be treated as such. Using online sources or solution manuals only hurts you in the long run. You will not learn the material correctly if you are looking at someone else's result instead of chewing on the problem yourself. This struggle will follow you into your future courses because you haven't developed the base you need.
- **To succeed in a 3-credit hour University-level course, you should expect to spend roughly 9 hours a week (outside of your regular class time) studying, taking notes, and doing the assignments.**

Withdrawal Policy

Students may withdraw themselves only BEFORE the scheduled deadline as Published on the college academic calendar. Students that wish to withdraw must complete a withdrawal form and submit it to the Office of Enrollment Services.

Two withdrawals are permitted per credit course. After that, a grade will be assigned. Please be concerned about withdrawals. When admitting students into certain programs, universities may calculate withdrawals as grades. It is your responsibility to verify the effects of enrollment and/or withdrawal upon your financial assistance (financial aid, scholarships, grants, etc.). There are two kinds of withdrawals---student and administrative.

- *Student Withdrawal (W1)* - Students wishing to withdraw must complete the online Student Withdrawal Form before the scheduled withdrawal deadline as published in the College catalog. Student withdrawals initiated prior to the scheduled withdrawal deadline will be recorded as a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.
- *Administrative Withdrawal (W2)* – A faculty member may withdraw a student up to the published withdrawal deadline for violation of the class attendance policy in which case the student will receive a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.

Students cannot withdraw from developmental studies courses (college-preparatory classes) after the drop/add period without written permission from their instructor and/or their academic advisor.

Academic Integrity

There is a ZERO TOLORENCE policy for cheating/plagiarizing in this course. Cheating or copying on homework problems, quizzes, exams, or lab reports can result in a zero on the given assignment and even a failing grade in the course.

You may be required to sign an academic integrity policy to participate in this course.

Honest participation in academic endeavors fosters an environment in which optimal learning can take place and is consistent with the college's mission. Academic misconduct, including cheating or plagiarism, is destructive to the spirit of an educational environment. GCSC professors report every instance of student academic misconduct to the college for inclusion on the student's records.

Most course syllabi include an academic honesty policy and the consequences for violating this policy. Familiarize yourself with course policies regarding authorized or unauthorized use of AI to avoid the pitfalls of academic dishonesty.

The following definitions will apply:

"Cheating"
includes but is not limited to use of any unauthorized assistance in taking quizzes, tests, or examinations; dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; the acquisition without permission of tests or other academic materials belonging to a member of the College's faculty.

"Plagiarism"
includes, but is not limited to, the use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment as well as the purchase of papers or projects. It can also include overuse of an editing program like Grammarly or submitting work written by an Artificial Intelligence (AI) generator like ChatGPT. Make certain to consult your course syllabi for your instructor's guidelines of AI material.

"Self-plagiarism"
occurs when a student submits the same or considerably similar document to fulfill requirements in different classes. For example, if a student submits a term paper in Religion they originally wrote for an English class, this is self-plagiarism. Once a paper receives a grade in one class, it cannot be submitted again for another class.

"Generative Artificial Intelligence (AI)"
is technology that uses machine learning to create new content, such as text, images or code, based on user input. These systems are trained on vast amounts of data, including large language models and image or code generators. Common examples include ChatGPT, GitHub, Copilot, Google Gemini, Perplexity, and the Grammarly AI function.

Sanctions for incidences of academic misconduct, depending on the severity of the incidence and/or its repetition, may range from receiving an F grade (or 0) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the college.

Classroom Recording

In accordance with federal and state privacy laws, students may record class lectures for their own personal educational use, in connection with a complaint to the college, or as evidence in internal or external legal proceedings. Students may not publish or upload the recordings or any components thereof without the knowledge and written permission of the faculty member. Failure to obtain permission to publish could lead to the students' having to pay damages, attorney fees, and court costs. For more information about what can be recorded, please see the guidelines in the GCSC Student Handbook.

Generative Artificial Intelligence (AI) Policy

The use of generative AI tools in academic work requires clear guidelines to maintain academic integrity. Please review the policy selected for this course regarding the use of AI tools such as ChatGPT, Copilot, Grammarly's AI features, and similar platforms for assignments, research, and other coursework.

See the student handbook for further information. Students with questions about acceptable use should consult their instructor.

Prohibited Use of AI

*The use of AI-generated content is **strictly prohibited** in all assignments, coursework, and throughout all stages of the work process, such as brainstorming, outlining, or drafting. This includes but is not limited to, tools such as ChatGPT, Copilot, and Grammarly's AI function. Use of AI tools will be treated as a violation of academic integrity and may result in penalties, including a zero on the assignment and additional disciplinary actions as outlined in the college's academic integrity policy.*

Anti-Discrimination Policy

Gulf Coast State College does not discriminate against any person in its programs, activities, policies or procedures on the basis of race, ethnicity, color, national origin, marital status, religion, age, gender, sex, pregnancy, sexual orientation, gender identity, genetic information, disability, or veteran status. All questions or inquiries regarding compliance with laws relating to non-discrimination and all complaints regarding sexual misconduct or discrimination may be directed to Amanda Reed, Executive Director of Human Resources/Title II/504/Title IX Coordinator and Employment Equity Officer, Gulf Coast State College, 5230 W. US Highway 98, Panama City, FL 32401; 850-769-1551, ext. 3516. Rules, policies, fees, and courses described in this catalog are subject to change without notice.

Syllabus Policy

For any syllabus posted prior to the beginning of the term, the instructor reserves the right to make minor changes prior to or during the term. The instructor will notify students via e-mail or Canvas announcement when changes are made in the requirements and/or grading of the course.

Student Support Resources

Gulf Coast State College is committed to providing you with the resources you need for success as a student and beyond. View all the academic and student support resources provided at GCSC on the Student Services web page.

Course Technology & Support

To successfully participate in this online course, students must have basic computer and digital information literacy skills and meet the following technology requirements:

- **Computer:** Up-to-date web browser that supports the Canvas learning management system; please refer to the system requirements for compatibility and information on using the Canvas app on mobile devices.
- **Internet Speed**: Minimum bandwidth of 8 Mbps upload/download speed to effectively engage in online activities and access multimedia.
- **Office 365 software:** Available for free download through GCSC Information Technology Services (ITS).

If you need technical support, contact the ITS Help Desk, available 24/7 at (850) 913-3303.

Physics Lab Reports

Lab reports are formal presentations of the experiment. In the real world, the target audience for such a report could be a single person (i.e. your boss), or as varied as the readers of a professional journal. In this class, your instructor is your audience, *but in writing the report, you should not assume that the audience was present for the experiment.* Give the audience the detailed information they need to understand what was done, why it was done, and with what results.

Lab reports should be neatly presented and easily legible, with the abstract, body, and discussion typed. Use Times 12 point font or a near equivalent. Equations should be written NEATLY in pencil or pen; do not type equations unless you use an equation editor. The data set for a particular experiment needs to be seen and initialed by your instructor before you leave the lab. Formal lab reports for a given experiment are due at the beginning of class the following lab period. Late reports will receive a significant reduction in score.

Format of Lab Reports

A lab report should consist of a heading and six sections as described below. Clearly label each section (i.e.; when beginning the Body section, write out the word Body and underline it).

Heading

Title
Include your name and your lab partner's name (in this order)
Date of experiment

Abstract

This should be a brief statement that tells:

1. what you did - an introduction that gives a quick (~1 sentence) overview of the experiment
2. why you did it (the purpose) - usually we are testing or demonstrating some principle given in lecture; you should state what this principle is. (~1-2 sentences)
3. your results - the values of what was measured/determined. If there are two or more measurements of the same quantity, how do they compare? If there is an accepted value, how does it compare it with your results? (i.e. percent differences, does the experimental result agree with theory?)

However, personal pronouns should be avoided when typing formal lab reports. Write laboratory reports in third person using formal scientific language. Use past tense to describe experimental observations, and present tense when discussing scientific principles or accepted laws. Avoid first-person pronouns (I, we, our).

Body

This is an essay - you must exhibit writing skills. This section should relate the physics concepts (theory) to the data you are asked to take (experiment). More specifically, it should take the reader from "book equations" as found in the text to the "working equations" as used in the Computations section. Use the discrete steps of a derivation. There is more to this process than a sequence of mathematical expressions; tell the reader the story that links the basic expressions to our working equations. All variables used should be identified and described. One or two titled and labeled diagrams of the experiment should be included to help make sense of the setup and the variables used. A discussion of the procedure should be included to make it clear how the data was obtained. Do ***not*** include data or results in the body. Those go in the data and results section. The body is general.

Data

Data should be presented in a table, with the associated uncertainties, with the entries clearly labeled (including the units of measure)

Computations

Give the symbolic form of each formula used before inserting numerical values. An example of each computation type (including uncertainty calculations) should be presented so that the method of calculation is clear. The end product of a computation is the result (intermediate or final). Make sure results are clearly presented with the proper units of measure, and final results have the proper number of significant figures. Graphs are included in this section. All graphs should be clearly titled and the axes labeled. Scale each graph to make good use of a full sheet of graph paper while keeping the divisions easy to work with. If you must use Excel or some similar graphing utility, be very careful to make sure titles, labels, and scales are working to make the graph useable. Poor scaling is a hallmark of the quickly-done Excel graph; your grade will suffer if these are not easily legible. Graphs should be informative, not confusing.

Results

Just the final results are presented in this section. These values are gathered here from the final results with the associated uncertainties found in the Computations section. No error analysis or discussion should appear in this section.

Discussion

Discussion topics may include (but are not limited to) the significance of the experimental results as related to the theory, sources of error (uncertainty), possible blunders, and improvements that might be made in future experiments of this type. This is where you demonstrate an understanding of the meaning of your results. This is the meat of the lab report!

Important Note:** Do not **ever** plagiarize. Plagiarism is a serious breach of academic integrity and may result in failing grades on assignments, failing grades in the course and marks on your academic record. Often times it is beneficial to use the internet, text books, articles, etc. to gather more information and better understand the principles behind the lab performed. This is fine, but ***do not ever include information (pictures, words, diagrams etc.) in your lab report from other sources ***without*** citing the source properly. If you drew or photographed your own picture or diagram, cite yourself as the source and put the date the figure was made. Use of any kind of AI for writing lab reports is prohibited. You will need to submit both an electronic copy and paper copy of the lab report. The electronic copy will be checked with various detection software. I have zero tolerance for cheating.