

# CLA PHY 161.002/003 Syllabus

## 1 Class Info

Course Name: Intro Physics I Class meeting (SEB 110): MWF 2:00-2:50 PM

Text: *Physics for Scientists and Engineers, 9th Edition*, Halliday, Resnick, & Walker

Instructor: Will Sams

Office Hours (SEB 208): TUE/THU 10:00-11:30 AM, or by appointment (which you are *very* welcome to make by email or in person

Email: sams.wr@mercer.edu

Phone: 478-301-2747 (email preferred)

Final Exam (SEB 110): SAT, May 6, 2:00-5:00 PM

Lab (SEB 219): TUE 3:05-5:45 PM (002), THU 3:05-5:45 PM (003)

SI sessions (TBA): TBA

SI leader: Zainil Charania

ARC Tutoring (1st floor Connell): MON 6:00-9:00 PM, THU 6:00-9:00 PM

## 2 Grading Scales

This course's final grade will be determined out of 1000 total points. The table below on the left shows how many points will be available in the various assignments involved in the course. In some cases (like homework) a category might involve multiple individual assignments; in those cases, the number of points shown is the total point value of all assignments of that category (e.g. all homework assignments combined will total to 100 points).

The table below on the right shows the minimum number of points necessary to guarantee a particular letter grade. Both of these points allocation charts are subject to revision during the semester, but it will never require more points to achieve a letter grade than what is listed below (e.g. achieving 865 points in the semester is guaranteed to produce a letter grade of B+).

Homework	100
In-Class Activities	50
Laboratory Grade	100
Quizzes	50
First Test	150
Second Test	150
Third Test	150
Final Exam	250

Points Total	Grade
895-1000	A
865-894	B+
795-864	B
765-794	C+
695-764	C
595-694	D
594 or below	F

### 3 Introduction

Welcome to PHY 161, an introductory physics course intended to introduce students to the concepts of Newtonian mechanics in a mathematically rigorous manner using a calculus-based approach. This course is concerned primarily with exploring how objects move and why they behave the way they do when they move. This is a very generalized course, so the “objects” in question could be anything from a football flying through the air to a planet orbiting a star to blood coursing through blood vessels.

The focus of the course is having you, the student, be an active participant in the educational process, rather than a passive observer. Therefore, the course will keep traditional “lecturing” to a minimum, while focusing on demonstrations, hands-on learning, active inquiries, small-group discussions, and activities. In addition, there is a laboratory section where you’ll work in groups performing hands-on projects and gain experience designing experiments, taking and analyzing data, and reporting findings. The schedule for the lab varies depending on which section you’re enrolled in, and the schedule can be found in Section 1 above.

### 4 Tests

There will be three tests during the semester and a final exam. All tests will be administered during regular class time. The final exam will be administered in the classroom on the date and time listed at the top of the syllabus. Bring a pencil to all tests, and bringing a calculator is *strongly* recommended. I do NOT have supplies of extra calculators I can provide. **No phones, tablets, or other wifi or cellular devices** will be allowed as calculators during tests or the final exam.

### 5 Group Work and Accountability

Working together with other students, often in small groups and occasionally in large groups or class-wide, will form a significant component of the course’s activities. This will allow each person to take a more active, engaged role in his or her education than with a traditional lecture-hall model. However, it’s vitally important that each person *is* engaged and active in the learning process, or else the whole group suffers.

To help ensure accountability by each group member, groups will prepare a **group contract** at the beginning of the course and each time new groups are assigned. The group contract will lay out the group’s expectations for the amount of work and level of engagement each group member is expected to contribute, as well as any other responsibilities or expectations the group requires. Failure to meet the expectations laid out in the group contract can result in the non-performing group member being removed from the group at the discretion of remaining group members. In this way, group members don’t need to worry about supporting group members that don’t contribute or pull their own weight. Any individuals removed from a group will be individually responsible for completion of all assignments until the next time group assignments are made.

In short, you will not be allowed to slack off on group assignments and be carried along by your teammates. Everyone has different strengths and abilities, so different divisions of labor may be appropriate. But what is not appropriate is not doing your fair share and expecting that your partners will pick up the slack to protect their own grade.

To that end, if you have a group member not holding up their end of the group contract, please let me know as soon as possible.

## 6 Attendance

Attendance will be taken daily. Any unexcused absence will result in a zero for all group activities, quizzes, or tests administered on that day for the individual student (the other group members' grades will be unaffected in the case of group work). Excused absences, as defined by University policies, will result in any missed work other than tests being exempted, replaced, or rescheduled, as appropriate. Tests that were missed **due to an excused absence** must be scheduled for make-up as soon as possible.

Excessive tardiness or absenteeism may result in removal from the group as per the group contract. It isn't fair to team members for one person to be consistently late or absent.

## 7 Homework

Homework will be assigned most class days through WebAssign. You will need to sign up for WebAssign access as soon as possible. Access for the course (including homework, announcements, and practice tests) costs \$90.70. **This includes a full electronic copy of the textbook**, so a paper copy of the book is *not* necessary. Note that you can purchase WebAssign access codes at the bookstore register, so scholarships or grants that cover textbook costs should cover WebAssign access.

Extra-credit is not offered for course assignments. Homework assignment due dates may be extended on an individual basis at the instructor's discretion. Generally speaking, I would prefer you to do the homework late than not at all, but please don't abuse this privilege. I'm sympathetic to difficult time constraints or unforeseen circumstances, and I'm even sympathetic to just occasionally dropping the ball on an assignment, but I'm much less sympathetic to habitual lateness.

## 8 Academic Misconduct

The University's academic misconduct policy and Honor Code will be followed. All suspected violations of the University Honor Code will be forwarded to the Honor Council.

## 9 Electronic Submission of Assignments

Students bear sole responsibility for ensuring that papers or assignments submitted electronically to a professor are received in a timely manner and in the electronic format(s) specified by the professor. Students are therefore obliged to have their email client issue a receipt verifying that the document has been received. Students are also strongly advised to retain a copy of the dated submission on a separate disk. Faculty members are encouraged, but not required, to acknowledge receipt of the assignment.

## 10 Cell Phones

Out of courtesy for all those participating in the learning experience, all cell phones and pagers must be turned off before entering any classroom, lab, or formal academic or performance event.

## 11 Accommodation for Students with Disabilities

In compliance with Section 504 of the Rehabilitation Act of 1973 (504) and the Americans with Disabilities Act Amendments Act of 2009 (ADAAA), “otherwise qualified” students with disabilities are protected from discrimination and may be entitled to “reasonable accommodations” intended to ensure equal access to all courses, programs and services without a change of curriculum. Examples of accommodations include: testing accommodations, providing alternative format textbooks and tests, notetaking support, and modifications of policies and procedures. Equal Access may require moving a class or event to a physically accessible room, making websites accessible to screen readers, providing sign language interpreters and captioning videos. All students requesting to be recognized as a student with a disability or requiring accommodations must first self-identify by registering with the designated ACCESS Coordinator for their campus or program by providing appropriate medical documentation that supports the need for the requested accommodations.

Students requiring accommodations or modifications for a disability should inform the instructor at the close of the first class meeting or as soon as possible. The instructor will refer you to the ACCESS and Accommodation Office to document your disability, determine eligibility for accommodations under the ADAAA/Section 504 and to request a Faculty Accommodation Form. Disability accommodations or status will not be indicated on academic transcripts. In order to receive accommodations in a class, students with sensory, learning, psychological, physical or medical disabilities must provide their instructor with a Faculty Accommodation Form to sign. Students must return the signed form to the ACCESS Coordinator. **A new form must be requested each semester.** Students with a history of disability, perceived as having a disability, or with a current disability who do not wish to use academic accommodations are also strongly encouraged to register with the ACCESS and Accommodation Office and request a Faculty Accommodation Form each semester. For further information, please contact Carole Burrowbridge, Director and ADA/504 Coordinator, at 301-2778, or visit the ACCESS and Accommodation Office website at <http://www.mercer.edu/disabilityservices>.

## 12 FERPA Disclaimer for Assessment

The College of Liberal Arts is keenly interested in assuring the quality and integrity of its General Education Program. Every semester, randomly-selected students from each General Education course will be required to submit samples of their work to an independent and objective assessment by faculty. No personally identifiable information about any student will be used for the purposes of this assessment, and assessment results will have no bearing whatsoever on student grades.

## 13 Starfish

This course will use Mercer’s web-based success platform, Starfish. Throughout the term, you may receive Starfish emails containing feedback. These communications are sent to support your success at Mercer. You can access Starfish through your MyMercer portal.

## 14 Student Learning Outcomes

Students will be able to analyze the natural world as exhibited by the ability to:

1. Collect and organize experimental data in a format appropriate to a scientific field;
2. Analyze data through the use of quantitative and/or qualitative scientific reasoning;
3. Interpret a hypothesis in light of experimental evidence;
4. Accurately communicate scientific knowledge, observations, analyses, and/or conclusions.

## 15 Laboratory

The meeting time and location for the lab portion of the course is listed at the top of this document. The lab will consist of a series of hands-on activities that allow us to explore the real-world applications of the concepts addressed by the course. The focus of the lab will be on learning to make measurements and take data, analyze and think critically about data and sources of error or uncertainty, and reporting on findings and conclusions through lab reports. The labs will be group activities, and most labs will involve working with your group to produce a lab report. The grades from lab will factor into your course grade as detailed in the tables on the first page of the syllabus. You will receive more detailed instructions in the lab meetings themselves.

At the end of the semester, a post-course conceptual assessment will be administered during the last lab period. The purpose of this assessment is to gauge how well I've done at conveying the basic concepts to you, but to encourage you to do your best, you will have the opportunity to earn extra credit in the course based on how well you do on the assessment. Any score above 50% will earn 0.25 points added to your overall final grade in the course (not the lab grade, but the course grade itself). Any score above 60% will increase the additional points to 0.5, above 70% will earn 0.75, and any assessment grades of 80% or above will earn 1 additional point on the final course grade.

## 16 Important Dates

- No class MON Jan 16th (MLK Day)
- 1st Test WED Feb 1st
- No class or labs MON Mar 6th - FRI Mar 10th (Spring Break)
- 2nd Test MON Mar 20th
- Last day to Withdraw THU Mar 23rd
- No class FRI Apr 7th (BEAR Day)
- 3rd Test WED Apr 12th
- No class FRI Apr 14th (Good Friday)
- Last day of class FRI Apr 28th
- Final exam SAT May 6th, 2:00 - 5:00 PM