

PHY 161: General Physics I- Mechanics and Thermodynamics, Fall 2008

The seeds of great discoveries constantly float around us, but only take root in minds prepared to receive them- Joseph Henry

Text: *Physics For Scientists and Engineers* 3rd. Edition, Fishbane, Gasiorowicz, Thornton

Instructor: Dr. Matt Marone Room 243 Science and Engineering Building
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Office Hours: T 2:00-3:00 SEB 219 or by appointment. You may also email me your questions.

Lecture: MWF 2:00-2:50 Room 144 SEB

Prerequisite: Co-requisite MAT 191

General:

This is a calculus-based class. Mathematics is the language of Physics and your ability to function in that language will affect your grade in this class. By the end of the class you will be able to solve problems and understand the concepts governing Newton's laws of motion, uniformly accelerated motion, work, energy, momentum, and thermodynamics. Lectures will be in an interactive format. I expect you to ask questions and I will ask questions as I am lecturing. You are not required to come to lectures, but your lack of attendance will most likely cause you to do poorly in the class.

Grades:

A (90 and above), B+ (85-89), B (80-84), C+ (75-79), C (70-74), D (60-69) F (below 60)

Your Final class grade will be derived from the following percentages

Average of 4 Tests (65%)

In-class Quiz (15%)

Final Exam (20%)

You will **not** be graded on a “**curve**”.

Extra Credit will only be available on in class exams, **if** available at all.

Learning Style Audit: Each student is required to submit an Index of Learning Styles Questionnaire **before the first test**. The purpose of this test is to help students learn how to study better for this class. The learning style score will **not be factored** in to your grade, however failure to submit a score report will result in a grade of incomplete. You must submit the results before the first exam. You can find the learning styles questionnaire at the link shown below. Once you have filled out the form, you will see a results page. You are required to e-mail me the results. Your e-mail **must contain “Phy 161 Learning Style” as the subject**. You can send me a copy of the results page or

simply the numerical information. You should indicate the category and then the numerical value. Numbers to the left of the center of the scale are considered to be negative. The learning style survey form can be found at <http://www.engr.ncsu.edu/learningstyles/ilsweb.html>

Electronic Submission of Assignments: *No e-mail with attachments will be accepted.* 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 e-mail 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

Tests: Make-up exams will only be given to students with valid excuses as defined by the university handbook (illness, emergency, class trips with prior notification). The make-up exam may be harder or easier than the regular in-class exam. Any disputes concerning a test grade must be resolved within one week from the time the tests are returned or from the time the grades are made known to the class. Any grade disputes after this time limit **will not** be considered under any circumstances. Partial credit will be awarded depending how many steps were done correctly in a multi-step problem. The amount of credit will be at the discretion of the instructor. *No equation sheets are permitted.* A list of useful equations and constant will be provided with the test. This list will be drawn from important equations listed in each chapter.

Quizzes: There will be a 5-10 minute quiz every week. This quiz will cover any material discussed in class up to that point of time. Make-up quizzes are subject to the same conditions as make-up tests. The Quiz will usually be on Friday. It may be necessary to change the day and the change will be announced.

Final Exam: The final exam may include **any** material discussed in class. Make-up exams will be subject to the same conditions as make-up tests.

Homework: Homework problems will be posted on a class web page. These problems will not be graded, but it is suggested that students work all the homework problems.

Honor code: You are bound by the Mercer honor code. The College's academic misconduct policy will be followed. All work, for which a grade is received, must be the **original** work of the **student** without aid or assistance of another party, or any printed and or electronic data/information. Academic misconduct cases will be referred to the honor council and the student will automatically receive a grade of incomplete (IC) pending a ruling by the honor council.

Cell Phone and Pager Usage: 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

Classroom etiquette: You are expected to conduct yourself as a mature student, respectful of your classmates and instructor. You may be asked to leave the room if your behavior is disturbing the instructor or your fellow students.

Documented Disability Statement:

Students with a documented disability should inform the instructor at the close of the first class meeting. The instructor will refer you to the office of Student Support Services (SSS) for consultation regarding evaluation, documentation of your disability, and recommendations for accommodation, if needed. Students will receive from SSS the *Faculty Accommodation Form*. On this form SSS will identify reasonable accommodations for this class. The form must be given to the course instructor for signature and then returned to SSS.

To take full advantage of disability services, it is recommended that students contact the Office of Student Support Services, immediately. The office is located on the third floor of the Connell Student Center.

Material To Be Covered (Tentative)

Ch. 1 Tooling Up

Ch. 2 Straight-Line Motion

Ch. 3 Motion in Two and Three Dimensions

*****Test 1*****

Ch. 4 Newton's Laws

Ch. 5 Application of Newton's Laws

Ch. 6 Work and Kinetic Energy

***** Test 2*****

Ch. 7 Potential Energy and Conservation

Ch. 8 Linear Momentum Collisions and Center of Mass

***** Test 3 *****

Ch. 9 Rotations of Rigid Bodies

Ch. 10 More on Angular Momentum and Torque

Ch. 11 Statics

***** Test 4*****

Ch. 17 Temperature and Ideal Gasses

Ch. 18 Heat Flow and the First Law of Thermodynamics

Ch. 20 The second law of thermodynamics

Chapters 17,18 and 20 will be tested on the final exam. The final is cumulative.

Note: We will not cover every section of each chapter listed above. You will be informed of the relevant sections as we progress.

Late Registration Drop/Add August 19-22

**Last day for late registration, drop/add, and to apply for the Georgia tuition grant
August 22**

Holiday - Labor Day September 1

Fall Break October 9-10

Last Day for Course Withdrawal October 24

Thanksgiving Break November 26-28

Last class day December 5

Final Exam December 8, 2-5 PM