

Syllabus

Instructor: **Sheng-Chiang (John) Lee**

WSC 114, 478-301-2599

Office Hours: MWF 3PM ~ 4PM; TR 10AM ~ 11AM

Co-requisite: PHY 121L; Pre-requisite: MAT 191 or equivalent

Textbook: **Fundamentals of Physics, 7th edition, by Halliday, Resnick, and Walker**

Course Description:

This course is the first of a 2-semester calculus-based general physics sequence. It serves as an introduction to the field of physics, which is a foundation of disciplines in science and engineering. Although physical principles can/will be demonstrated in the class conceptually, they are all formulated through mathematical expressions. Therefore, students' performance in this aspect will influence the grades significantly. Students who take this course should have basic knowledge of calculus, including the concepts of derivatives and integrations, and ability to perform basic manipulations in calculus. The topics covered in this class include:

Newton's laws of motion, momentum, work, and energy; gravity; fluid dynamics and thermal physics. Students are also required to take PHY121L, which is the laboratory counterpart of this course.

Objectives:

After taking this course, you are expected to

- Be familiar with the common scientific terminologies.
- Develop reasonable physical intuitions and be able to qualitatively understand simple physical systems and predict their behaviors.
- Be able to apply scientific logic to solve physical problems analytically and quantitatively.
- Be able to apply acquired knowledge of physics in your understanding of the physical world.

Grading Methods:

Grading Scale:

Score:	90+	85~89	80~84	75~79	70~74	60~69	59-
Grade:	A	B+	B	C+	C	D	F

Grading Components:

	Homework assignments	Quizzes	Exams (3 mid-terms + 1 final)
Weight:	30%	5%	(15+15+15+20=65)%

Weekly homework assignments will be given normally once a week and due in 7 days at the beginning of the class, unless announced otherwise. The assignments should be neatly written (or typed if you want). Many of the questions involve problem solving (denoted by PS); you should state your scientific reasoning (in brief words) to explain why you apply the specific formula/equation. PS questions are graded in the following way.

1. Correct reasoning + correct formulae/equations + correct answer = 100%
2. Correct reasoning + correct formulae/equations + wrong answer (calculation error) = 80%
3. Correct reasoning + incorrect formulae/equations = 50%
4. Incorrect reasoning (but you try hard) = 20%
5. No or very minimum efforts shown in solving the problem = 0%

You are encouraged to discuss these assignments among yourselves, and even more welcome to discuss with the instructor. However, the turned-in assignments must be original, in compliance with the **University Honor Code**. Any types of copying other's work are considered cheating. Late assignments will receive 0 point unless legitimately excused.

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Quizzes are mostly conceptual questions and will be given randomly through WebCT. The purpose of these quizzes is to let you show your concepts about the materials, so that the instructor might teach more efficiently. The quizzes will be posted on WebCT **three days** before a class, and you will be notified about it. The quizzes are due at the midnight (**12am**) before the corresponding classes. All quizzes are graded on 0-1 point scale. If you finish a quiz in time, you will get one point for the quiz. If you miss it, you will receive 0 point unless you are legitimately excused. There will be **NO** make-up quiz available.

Exams are inevitably **accumulative**, since physics is an accumulative knowledge. You can not master more advanced topics without being fluent with the basics. However, exams will concentrate on the content covered in the corresponding periods, with the exception of the final exam, which will cover all. All exams will be close-book. However, you can prepare a half-letter size, single-sided formula sheet for the exam. There should only be equations/formulae on the sheet. So you should only bring your pen/pencil, calculator (no graphical functions), the formula sheet, and your knowledge of physics to the exams. **No** make-up exams are available unless you are legitimately excused.

Important Dates:

Last Day for Course Withdrawal: 10/31!!!!

Class Policies:

Attendance Policy: Attendance is not mandatory. However, students are solely responsible for learning the materials covered in the missed classes.

Class Etiquette: You are expected to conduct yourself in a respectful manner to your fellow classmates and the instructor. The instructor may ask you to leave the classroom/lab if your behavior is disturbing to the instructor or other students.

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.

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.

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Tentative Course Schedule: may vary according to class progress

Week	Topic	Required Reading
08/22 – 08/25	Ch1 ~ Ch2	Ch1 ~ Ch2
08/28 – 09/01	Ch2 ~ Ch3	Ch2 ~ Ch3
09/04 – 09/08	Ch3 ~ Ch4	Ch3 ~ Ch4
09/11 – 09/15	Ch5/1 st midterm	Ch5
09/18 – 09/22	Ch6 ~ Ch7	Ch6 ~ Ch7
09/25 – 09/29	Ch7 ~ Ch8	Ch7 ~ Ch8
10/02 – 10/06	Ch9	Ch9
10/09 – 10/13	Fall Break/ 2 nd midterm	
10/16 – 10/20	Ch10 ~ Ch11	Ch10 ~ Ch11
10/23 – 10/27	Ch12 ~ Ch13	Ch12 ~ Ch13
10/30 – 11/03	Ch13/Ch15	Ch13/Ch15
11/06 – 11/10	Ch14/Ch16	Ch14/Ch16
11/13 – 11/17	Ch16 ~ Ch17	Ch16 ~ Ch17
11/20 – 11/24	3 rd midterm/Thanksgiving Break	
11/27 – 12/01	Ch18 ~ Ch19	Ch18 ~ Ch19
12/04 – 12/08	Ch19 ~ Ch20	Ch19 ~ Ch20
12/11 – 12/16	Final Exam	