

**COURSE SYLLABUS**  
**PHY 141 – SECTION 1**  
**INTRODUCTION TO PHYSICS**  
**4 CREDIT HOURS**  
**FALL 2007**

**Location of Class:** Room 209, Farrington Bldg.

**Location of Lab:** Room 205, Farrington Bldg.

**Class Meeting Times:** MWF, 10:00am – 10:50am

**Lab Meeting Times:** Monday, 4:00pm – 5:50pm

**Class Instructor:** Dr. Brian Oetiker

Rm. 316 Farrington Bldg.

Phone: 294-1600

Email: phy\_bgo@shsu.edu

**Lab Instructor:** Lee Gervais

Email: stdljg19@shsu.edu

**Office Hours:** Office hours for this class are scheduled from 11:00 am – 12:00 pm on Monday, Wednesday, & Friday. I may not be in my office outside scheduled office hours. You make an appointment by email.

**Course Description:** Physics is the most fundamental of the sciences. The ideas encountered in this class can be used to explain many of the underlying principles of other sciences such as chemistry, biology, and geology. The main emphasis of this class is to relate physics to our everyday experiences. This is a survey course designed to cover most aspects of physics. Being a science that relies heavily on mathematics, some basic math (mainly algebra) will be used throughout this course to further your understanding of important principles. Some basic calculus will be used to further our understanding of relationships between various physical quantities.

**Course Objectives:** The following topics will be covered in this course:

- Measurements and fundamental quantities.
- Linear Motion.
- Vectors.
- Two and Three Dimensional Motion
- Newton's Laws of Motion.
- Work.
- Energy.
- Center of Mass.
- Momentum.
- Conservations Principles.
- Rotational Motion.
- Torque and Angular Momentum.
- Equilibrium.
- Gravitation.

**Required Textbook:** "Fundamentals of Physics" 8<sup>th</sup> Edition by Halliday, Resnick, & Walker. ISBN 978-0470044728.

**Required Supplies:** Scientific calculator.

**Attendance:** Attending class is important for two reasons. 1. It provides you an opportunity to learn from your peers and your instructor. 2. 10% of your grade is based on class participation (see below for details).

**Homework & Quizzes:** Each week, homework will be assigned from the textbook. Homework is due at the **BEGINNING OF CLASS EVERY WEDNESDAY. LATE ASSIGNMENTS WILL NOT BE ACCEPTED.** At the end of the semester the homework grade will be calculated using the following formula: 50% based on completion. 50% based on graded assignment\*. \*Each week, two or three students' assignments will be randomly chosen for grading. The grade each student receives on this assignment will be used to calculate the final homework grade using the above formula.

**Midterm & Final Exams:** Physics is a subject that is "problem-solving" oriented. Oftentimes, I am more interested in the method you used to solve the problem rather than the final result. Therefore, the exams in this class will not be multiple choice (you will need to show your work). The exam questions will be similar to the homework questions and in-class exercises. **MAKE-UP EXAMS WILL NOT BE GIVEN WITHOUT A NOTE FROM A PHYSICIAN.**

Exam 1: Monday, September 17<sup>th</sup> (during the lab period).

Exam 2: Friday, October 5<sup>th</sup> (during class).

Exam 3: Monday, November 5<sup>th</sup> (during the lab period).

Final Exam: TBA

**Extra Credit:** Extra credit may be earned through class participation. Each class, two or three names will be chosen at random. These students will be given the opportunity to earn extra credit by presenting (at the board) a solution to the problem to the class. Extra credit points will be awarded as follows:

Absent when name is called: 0 points.

Present when name is called, but not willing to show work: 1%.

Present when name is called, willing to show incomplete/incorrect work: 3%.

Present when name is called, willing to show complete work: 5%.

**Grading:**

Lab Grade: 25%

Homework: 20%

Exam 1: 15%

Exam 2: 10%

Exam 3: 15%

Final Exam: 15%

Extra Credit: up to 10%

Your final grade will be determined based on the following distribution:

A: 90%-100%

B: 80% - 89%

C: 65% - 79%

D: 50% - 64%

F: 0% - 49%

## How to succeed in this class:

1. Come to class prepared.
  - a. Complete the assigned readings.
  - b. Attempt the assigned in-class problems.
2. Do the homework.
  - a. Make sure you *understand* how you arrived at your answer.
3. Ask questions if you do not understand.
  - a. Ask your instructor in class.
  - b. Ask a friend.
  - c. Ask your lab instructor.
4. Work hard at the beginning of the semester.
  - a. Learn how to solve problems early on – the class will be easy after that.
  - b. Don't procrastinate. If you fall behind, it is nearly impossible to catch up.
5. Work on "practice problems" (in addition to the problems assigned for homework and in class).  
*The answers to the odd problems are in the back of the book.*
6. Don't give up when things get difficult.
  - a. It takes time to learn physics. At first it can be painful, but once you begin to catch on, it can actually be quite "fun".

## SHSU Policies:

You may find online a more detailed description of the following policies. These guidelines will also provide you with a link to the specific university policy or procedure: <http://www.shsu.edu/syllabus/>

**Academic Dishonesty:** Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. *See Student Syllabus Guidelines.*

**Classroom Rules of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. *Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination.* Students may tape record lectures provided they do not disturb other students in the process.

**Student Absences on Religious Holy Days:** Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work. *See Student Syllabus Guidelines.*

**Students with Disabilities Policy:** It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should visit with the Office of Services for Students with Disabilities located in the Counseling Center. *See Student Syllabus Guidelines.*

**Visitors in the Classroom:** Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.