# GENERAL PHYSICS I

**MEETING TIME & PLACE:** 11:00-11:50 MTW, 334 Miller Science Building  
**INSTRUCTOR:** Dr. W.L. Trikosko, Department of Physics and Astronomy, Stephen F. Austin State University  
**CONTACT:** wtrnkosko@sfasu.edu (936)468-3001  
**OFFICE:** 322A Miller Science Building  
**OFFICE HOURS:** 9:00-10:00 a.m. and 2:00-3:00 p.m. Monday-Friday or by appointment.  
**TEXT:** Conceptual Physics (12th edition). Paul G. Hewitt  
**COREQUISITES:** PHY 101L

**COURSE DESCRIPTION:** This course will present a broad survey of the principles of wave motion, sound, light, and mechanics and will illustrate the logic and reasoning upon which these principles are based. A great deal of emphasis will be placed on the understanding of these concepts. We hope that this course will make you aware of the fantastic natural phenomena that are occurring around you everyday. We will rediscover things that you have taken for granted and have not really paid much attention to since you were an inquisitive child.

You are expected to be prepared for each lecture period by reading the material to be covered in lecture prior to attending class. This will help you to better comprehend the material given during the lecture. You are encouraged to ask questions. If you are confused about the material, you can be sure that there are others with the same question. Do not be afraid to ask, I am always happy to clarify anything that is unclear and your classmates will thank you.

**COURSE CONTENT:** The numbers at the bottom of the calendar cells refer to the chapters in the text. They are:

1. **About Science**
2. **MECHANICS**
   - Newton’s First Law of Motion: Inertia
   - Newton’s Second Law of Motion: Force and Acceleration
   - Newton’s Third Law of Motion: Action and Reaction
   - Momentum
   - Energy
   - Rotational Motion
   - Gravity
   - Projectile and Satellite Motion
3. **SOUND**
4. **LIGHT**
   - Properties of Light
   - Color
   - Reflection and Refraction
   - Light Waves
   - Light Emission
   - Light Quanta
5. **CONCEPTS IN PHYSICS**
   - Waves
   - Sound Waves
   - Light Waves
   - Electromagnetic Radiation
6. **PHYSICS OF WAVES**
   - Elastic Waves
   - Sound Waves
   - Light Waves
   - Electromagnetic Radiation

**EXAMS (450):** There will be three major exams this semester in addition to the final exam. Each of these exams will count a maximum of 150 points each toward the point total. All of the exams will be taken on SCANTRON® FORM NO. 882-E. These forms are available at the bookstore, and you are expected to bring your own to the exam. You will also need a #2 or softer pencil and a very good eraser. These exams will be given on the dates indicated on the calendar and will emphasize the material covered since the last test. Students will have three days after an exam is to discuss any possible errors made in the grading, thereafter no changes will be made in the grade. The student is expected to be present for all exams.

**POP QUIZZES (5 points each):** From time to time, at the discretion of your instructor, pop quizzes will be given. These quizzes will count up...
to 5 points each as a bonus in calculating your final point total. To make use of them you must be present.

**FINAL EXAM (150):** The final exam will be comprehensive with a large part of the exam over the material covered since the third exam and will count a maximum of 150 points toward the final grade. This exam will be given Monday December 11, 2017, from 10:30 a.m. – 12:30 p.m.

**LAB GRADE (200):** The laboratory grade will count a maximum of 200 points toward the final grade (25% of the final grade). 100 points will come from the experiments and 100 points from the laboratory final exam given at the time of the lecture final exam, Tuesday, May 10, 2016, from 10:15 a.m. – 12:15 p.m. The lecture and lab grades will be combined into a single grade and the same grade will be recorded for the lecture and the lab.

**FINAL GRADE (800):** The maximum total points possible will be 800 and a final grade will be assigned according to the following

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>720-800</td>
<td>A</td>
</tr>
<tr>
<td>640-719</td>
<td>B</td>
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<tr>
<td>560-639</td>
<td>C</td>
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<tr>
<td>480-559</td>
<td>D</td>
</tr>
<tr>
<td>000-479</td>
<td>F</td>
</tr>
</tbody>
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**ATTENDANCE:** You are expected to be present each class day. If you miss three or more class days your grade will be reduced by one letter grade. If you come in late, please take the first available seat quietly. When you arrive late, it is very distracting to me and the other students. If you are habitually late, you will miss a large block of material. This will negatively affect you at test time and when I consider your class participation grade.

If you become ill or have a restroom emergency during the lecture, please excuse yourself quietly. If you need to study for another class, the library is available. If you need to nap, that is best done at home – not in the classroom. rather than mathematically.

**TAKE RESPONSIBILITY FOR YOUR SELF AND YOUR EDUCATION**

- Show up to class on time (awake and substance-free) ready to listen, participate, and learn.
- Buy the book and other required materials and bring them to class.
- Perform all readings and assignments and homework on time.
- Do the homework yourself.
- Ask questions in class.
- Don’t text, browse on your computer or perform other activities which might distract other students.
- Read the syllabus and ensure that you understand what is expected of you.
- Set aside sufficient time to study, include extra time for exams. You can expect to spend three hours outside of class preparing for every hour in class.
- Inform your professor immediately if an emergency prevents the completion of an exam, paper, or other assignment as scheduled.
- Be honest and ethical in the completion of class work, do not plagiarize or participate in other forms of academic dishonesty.

**PROGRAM LEARNING OUTCOMES**

This is a general education core curriculum course and no specific program learning outcomes for the physics program are addressed in this course.

**STUDENT LEARNING OUTCOMES**

By the end of the course, successful students will be able to:

- Recognize that the world in which they exist can be described by a few natural laws.
- Demonstrate a basic familiarity with concepts of waves, sound, light, and mechanics.
- Describe natural phenomena in a conceptual manner

**ACADEMIC INTEGRITY:** Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**WITHHELD GRADES POLICY:** Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the required course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**STUDENTS WITH DISABILITIES:** To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu/disabilityservices/](http://www.sfasu/disabilityservices/)

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