

Conceptual Physics (PH 100)

Lecture Hours: MWF 10:20 am – 11:15 am, MSC 112

Textbook:

Conceptual Physics by Hewitt (9th Edition)
See calendar for approximate schedule of chapters to be covered.
The calendar will be updated when required.

Instructor Info:

Prof. Richard S. Miller
Optics Bldg., Room 210
Phone: UAH-2454
Email: MillerR@UAH.edu

Office Hours: MW 11:15 am – 12:15 am, and by appointment

This course will introduce you to concepts that form the foundations of physics, thereby improving your understanding of physical laws and their applications. We will take a conceptual approach to learning with examples, supplemented by laboratory exercises, as well as discussion of philosophical implications. By the end of this course you will have the tools to understand a variety of phenomena experienced in your daily lives and in the news. General topics to be covered include (see posted calendar for more details):

- Physics of Everyday Phenomena
- The Development of Experimental Investigations
- Classical Physics:
 - Motion
 - Force
 - Energy
 - Gravitation
 - Electricity & Magnetism
 - Light
- Modern Physics
 - The Quantum Revolution
 - Introduction to Relativity

Grading: Final grades will be determined on the basis of homework, quizzes, exams, and laboratory work. **Note that homework is a major component of your grade.** Working together on homework is ok (collaboration is an important part of physics), but make sure you understand your work or it will show on the exams/quizzes!

Homework:	20%	<u>Final Grade</u>
Midterm Exam 1:	20%	A: $\geq 90\%$
Midterm Exam 2:	20%	B: ≥ 80 and $< 90\%$
Labs (must do ALL labs!):	20%	C: ≥ 70 and $< 80\%$
Final Exam (Comprehensive):	<u>20%</u>	D: ≥ 60 and $< 70\%$
Total:	100%	NC: $< 60\%$

WebCT: We will utilize the WebCT web-based course management system, when possible, to distribute course materials, etc. WebCT also provides a bulletin board and email system for this course, allowing you to discuss problem sets with your classmates, email the instructor, etc. To get started with WebCT go to <http://classweb.uah.edu> and follow the “Getting Started” link. Please see the instructor if you need additional assistance. The Physics Department’s computer lab is available to all students.

Homework: All homework will be graded and consist of problem sets from the end of each chapter and/or customized problems to be posted. The assigned problem sets are the *minimum* required to give you experience and you are strongly encouraged to work additional problems. While you are encouraged to work in groups, you must hand in your own solutions (in your hand writing). *Solutions to homework assignments will be posted online.*

Exams: There will be two midterm exams and one final exam. The final exam will be comprehensive, spanning all material covered in class. Approximate dates for the midterms can be found on the posted calendar, however these dates may be changed depending on class progress. Any changes will be announced at least 1 week prior to the exam. There will be **no** make-up exams except in the case of dire family, medical, or equivalent emergency. *Solutions to exams will be posted online.*

Labs: The Instructor and TA will set the policies for the labs. The last week of labs will be set aside for makeups; however, without a valid family, medical, or equivalent emergency you cannot make up more than one lab. You must complete every lab, otherwise the highest grade you will obtain is a “D” regardless of your other scores.

Tutoring & Help: The Physics Department runs the *Success Center*. This center is open daily to assist your physics education. It is located in the Optics Building Rm. 200. In addition, there is the “Physics Common Area”, a popular spot where students work on homework, discuss physics, and generally hang out. Tea & snack are offered daily in the Common Area at 3pm (except Tuesday).

Students with Disabilities: Students with disabilities are encouraged to register immediately with Student Development Services in the University Center, UC 113. SDS will provide necessary academic accommodations privately to all instructors upon receipt of proper documentation. Regardless of disability, I would like to hear from anyone that may require a modification of seating, testing or other class procedure in order to make your learning as productive as possible. Please see me after class or during my office hours to discuss appropriate modifications.

Complaint Procedure: If you have difficulties or complaints related to this course, your first action is to discuss them with the instructor of the class. If such a discussion would be uncomfortable for you or if that discussion fails to resolve your difficulties, you should then contact Professor Lloyd Hillman, Chair of the Department of Physics, office OB201, phone number 824-2481. If you are still unsatisfied, you should then discuss the matter with Dr. Debra Moriarty, Associate Dean of the College of Science, office MSC 207, phone number 824-6605.