

SYLLABUS

Physics for Scientists & Engineers I
PHY 2048, Section 4
Fall Semester, 2009
Tu-Th 9:00 to 10:15 pm, MAP 359

Instructor: Dr. Beatriz Roldán Cuenya
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PHY 2048 is the first of a two-semester general physics course. This is a three credit hour course.

Textbook: *University Physics*, Vol. 1 by Young & Freedman, 12th ed.
A web-assign homework access card must be purchased at the UCF bookstore.

Course Objectives and Expectations:

The primary objective of the course is to prepare students with fundamental knowledge of physics and obtain skills necessary for higher-level science and engineering courses.

The course is quite intense, and it will require you to invest considerable time in study and problem solving. To obtain maximum benefit from this course you should read the material before and after it is covered in class. It is very difficult to catch up if you fall behind. Class attendance is very important since some of the exam questions will be drawn from the class lectures, demonstrations and discussions.

Pre-requisites:

An adequate preparation in basic mathematics is essential for a proper understanding of the course material. Basic concepts from algebra, trigonometry, differential and integral calculus will be used.

Course Structure:

- **Lectures:** Tuesday/Thursday.
- **Homework assignments:** Thursdays. Homework assignments will be given every week (WEB-ASIGN). It is very important to solve these problems, since they constitute the primary means for learning the material for the exams.
- **Quizzes:** Twice per month. They will be short, one to four questions (10 minutes). There will be no make-up quizzes.
- **Mid-term Exams:** There will be three written “in-class” exams (about 1h 15 min minutes each). They will contain 4-5 problems similar in difficulty to those given as homework or the ones solved by me in class.
- **Final Exam:** approx. 6 problems. All examinations are without books.

Grades:

The final grade will be calculated according to the following scheme.

Homework (WebAssign) → 15%

Quizzes → 10%

Tests (three) → 45%

Final → 30%

Grading Scale:

A	85-100
B	75-84
C	60-74
D	50-59
F	0-49

Grades are not given out in response to e-mail messages or telephone calls.

+, - grades will be given.

Policies:

1. Questions regarding returned quizzes and tests must be brought to the instructor's attention within two days.
2. Make-up tests are given only to students who have to be out of town on university-sponsored activities. Prior permission and proper documentation will be required. Exceptions are to be made for medical and family emergencies, at the discretion of the instructor.
3. Scientific calculators with trigonometric capabilities are allowed in quizzes and tests. However, calculators with preprogrammed physics information are not allowed. Violation of this rule might result in automatic failure in the course and disciplinary proceedings might be initiated.
4. Picture ID is required in all tests, quizzes and final exam.

Important Dates:

- Classes begin → August 24
- Withdrawal Deadline → October 16
- Classes end → December 7
- Holidays → Labor Day: September 7
Veteran's Day: November 11
Thanksgiving: November 26-28

Course Tentative Schedule:

Book Chapter	Topic	Date
Chapter 1	Vectors	August 25, 28
Chapter 2	1-D Motion	September 1, 3
Chapter 3	2-D Motion	September 8, 10
Chapter 4	Force and Motion I	September 15, 17
Chapter 5	Force and Motion II	September 22
Exam #1		September 24
Chapter 5	Force and Motion II	September 29, October 1
Chapter 6	Work & Kinetic Energy	October 6, 8
Chapter 7	Potential Energy/ Energy Conservation	October 13,15
Exam #2		October 20
Chapter 8	Linear momentum/Collisions	October 22
Chapter 8	Collisions / Center of Mass	October 27, 29
Chapter 9	Rotation	Nov. 3, 5
Chapter 10	Torque / Angular Momentum	November 10, 12
Chapter 11	Equilibrium / Elasticity	November 17
Exam #3		November 19
Chapter 11	Equilibrium / Elasticity	November 24
Chapter 15	Oscillations	Dec. 1, 3
Final Exam		To be scheduled