SYLLABUS

Physics for Scientists & Engineers I
PHY 2048H
Spring Semester, 2012
M/W/F 10:30 am to 11:20 am, MAP 306

Instructor: Dr. Beatriz Roldán Cuenya
Office Hours: M/W/F: 11:30 am-12:30 pm   **Office:** PS308
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PHY 2048 is the first of a two-semester general physics course. This is a four credit hour course.

Textbook: *Physics for scientists and Engineers*, Vol. 1 by Serway and Jewett, 8th 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 studying and solving problems. To obtain maximum benefit from this course you should read the material before and after it is covered in class. It is 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 lecture problems and related 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**: Monday/Wednesday/Friday.
- **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 two written "in-class" exams (about 50 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% (drop the worst assignment)
Quizzes → 5%
Midterms (two) → 30%
Final → 30%
Lab → 20%

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 → January 9
- Withdrawal Deadline → March 20
- Classes end → April 23
- Final exams → April 24-30
- Holidays → Martin Luther King Jr.: January 16
        Spring Break: March 5-10

Course Tentative Schedule:

Book Chapter	Topic	Date
Chapter 2	1-D Motion	Jan 9, 11, 13
Chapter 3	Vectors	Jan 18, 20, 23 (2 classes)
Chapter 4	2-D Motion	Jan 25, 30, Feb 1
Chapter 5	Laws of Motion	Feb 3, 6 (2 classes)
Chapter 6	Circular Motion	Feb 8, 10
Chapter 7	Energy and Work	Feb 13 (2 classes), 15
Chapter 8	Potential Energy/Energy Conservation	Feb 17, 20, 22, 24
Exam #1		**Feb 27**
Chapter 9	Linear momentum/Collisions	March 2, 12, 14, 16
Chapter 10	Rotation	March 19 (2 classes), 21, 23
Chapter 11	Angular Momentum	March 26 (2 classes), 28
Exam #2		**April 9**
Chapter 11	Angular Momentum	April 11
Chapter 12	Static Equilibrium	April 13 (2 classes), 16, 18
Chapter 15	Oscillations	April 20, 23
Final Exam		**April 30, 10 am- 12:50 pm**