

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

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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
Chapter 4	2-D Motion	Jan 25, 27, 30, Feb 1
Chapter 5	Laws of Motion	Feb 3, 6, 8, 10
Chapter 6	Circular Motion	Feb 13, 15, 17, 20
Chapter 7	Energy and Work	Feb 22,24
Exam #1		Feb 27
Chapter 7	Energy and Work	Feb 29, March 2
Chapter 8	Potential Energy/ Energy Conservation	Mach 5, 7, 9, 12
Chapter 9	Linear momentum/Collisions	March 14, 16, 19, 21
Chapter 10	Rotation	March 23, 26, 28, 30
Chapter 11	Angular Momentum	April 2, 4
Exam #2		April 6
Chapter 11	Angular Momentum	April 9, 11
Chapter 12	Static Equilibrium	April 13, 16, 18
Chapter 15	Oscillations	April 20, 23
Final Exam		April 30, 10 am- 12:50 pm

Using WebAssign

What is WebAssign?

WebAssign is web-based homework system that allows you to access your homework assignment, submit answers, and get feedback from any computer with a connection to the internet and a Web browser. You can access WebAssign from the log in page, <http://webassign.net/student.html>.

Logging in

Username => The 7 numbers from your UCF PID, the username you use to register for classes.

Institution => (lower case) ucf

Password => (lower case) physics [*Note that if you have used WebAssign at UCF before, your old password is still valid. If you have forgotten your password, click on the "forgot password" link on the WebAssign log-in page. For this to work, your UCF email listing will have to be correct. If it is not, make sure your instructor has your correct email address so it can be uploaded into WebAssign.*]

Then click **Submit***

* **Read through the directions carefully** (95% of problems are solved by following the directions). If you have followed instructions and still can't log in,

- If your email address listed with UCF is correct, you should be able to use the "forgot password" link on the WebAssign log-in page.
- contact your instructor by email. Instructors can reset your password and email it to you,

Note: WebAssign sometimes gives an error message that you are not listed in a class. This has nothing to do with UCF registration; it only means that WebAssign doesn't recognize your Username. WebAssign is not run on any UCF computer system. It only knows the information that is uploaded into it by your instructor or the Physics Department.

Once you are logged in, this will bring up your assignments' page.

- The first thing you should do is change your password by clicking on the weblink [Change Password](#) and follow the directions on screen. Make sure to choose a password that you will remember and that only you will know.
- Next, register your WebAssign access code by clicking on the link under announcements and then entering your access code in the box that comes up with the registration page. You must enter your access code by the end of the 2nd week of classes. If a WebAssign Access code is not included with your textbook, you can purchase a WebAssign access code at the campus bookstore. It comes on a scratch-off card. You can also purchase a WebAssign Access code from the WebAssign homepage at <http://webassign.net> and clicking on the *order now* link on the top right hand corner of the webpage. You will need a credit card to complete the online transaction.

Now you are ready to start your first assignment

- The first assignment is typically **Intro to WebAssign for Physics Students**.
- Clicking on Guide will bring up an online manual to using WebAssign.
- Read the Guide before starting the **Intro** assignment
- Complete the assignment by selecting the correct response or filling in the correct answer.
- When you have finished entering your responses, click on Submit and WebAssign will immediately grade your assignment. It will then tell you which problems you got right and which you got wrong. You can rework the problems and then resubmit to improve your score. The number of submissions is set by your instructor.

TIPS ON USING WEBASSIGN

Before you start working with WebAssign, please note the following tips:

- Most standard Web connections should work with WebAssign. We recommend that you use Netscape version 4.5 or later with a 28.8 Kbps modem or better. AOL 4.0 does not work with WebAssign, but AOL 5.0 and later does.
- Bookmark only <http://webassign.net/student.html>. If you skip the log-in page, WebAssign will not know who is taking the assignment!
- Turn on or enable "cookies." WebAssign must check who you are every time you make a request; it does this by passing a cookie to your computer.
- Before starting WebAssign, quit any browsers and open a new copy. If you simply close the browser window or open a new window, login information contained in the cookie may not be yours. Likewise, to prevent losing credit for the work you have done, close the browser when you are finished.
- When working on an assignment, use the navigational buttons provided by WebAssign. Pressing the browser's *Back* button or *Reload* button can cause you to submit an incomplete assignment inadvertently.
- Make sure that your browser has both JavaScript and Java enabled. Some versions of Internet Explorer do not work with the Java applets; for this reason, please use version 4 or later. Not all questions use Java applets, but if you get a question with an applet, make sure you wait until the applet is fully loaded before clicking **Start Animation**.
- **Unless otherwise specified, WebAssign is looking for an answer with 3 significant figures within 1% of the correct answer.** Your instructor has allowed 5 different submissions per question.
- The **best way to use WebAssign** is to first look up the assignment and print it out. Log out and work the problems out on paper. Then come back to WebAssign and enter your answers. Keep your written problems solutions in case of difficulties with the system.
- Sometimes you may feel that WebAssign is not accepting the correct answer. Our experience has been that at least 95% of the time, there is an error in the student solution or the student has not used the correct +/- sign. If this happens to you, check

through your solution (including round off, unit, and sign errors) and go back through the wording of the problem. If you still feel that WebAssign is not accepting a correct response, contact your instructor and supply them with details on exactly what you did and what you entered.