

Syllabus: PHY 2048 - Physics 1 with Calculus - Spring 2018

This syllabus contains the basic outline of the course organization. For complete details on the course policies, please visit the course Canvas page.

Instructors

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Office hours

Office hours for the instructors and discussion section leaders are detailed on the course Canvas page.

Course objectives and goals

PHY2048 is a calculus-based introduction to general physics, Part I. Topics covered include basic equations of motion, concepts of force and torque, linear and angular momenta, work, kinetic and potential energy. We will consider point-like and finite-size objects, as well as fluids. We will discuss such periodic phenomena as oscillations and waves. Gravitation, one of the four fundamental forces of nature, is also covered in this course.

Our goal at all times is to help you understand the basic physical principles so that you can apply them to real situations. In addition to providing the basic theoretical underpinnings to the subject, we use many examples, “concept problems,” physical demonstrations and virtual demonstrations. We also show many examples of everyday tools and advanced instruments that utilize these principles.

Prerequisites

The course will rely heavily on the following level of math (see textbook Appendix E for details). If you are not competent at this level you should take the appropriate refresher course(s) before taking this class; otherwise, you are bound to fail.

- Algebra
- Trigonometry
- Analytic Geometry
- Vectors
- Calculus 1 and
- Calculus 2 (corequisite)

Here is the official catalog description of the course from the registrar’s page: Credits: 3; Prereq: high-school physics, PHY 2020 or the equivalent, and MAC 2311; Coreq: MAC 2312. The first of a two-semester sequence of physics for scientists and engineers. The course covers Newtonian mechanics and includes motion, vectors, Newton’s laws, work and conservation of energy, systems of particles, collisions, equilibrium, oscillations and waves.

Note the above says that High School physics is a pre-requisite. Although we start at the beginning of physics, the speed with which we cover the material is often too fast for those who have not seen any of it before. Be warned!

Course schedule

The complete course schedule is available [here](#).

Exams will be administered in assigned classrooms across campus. The exams take place at the following times:

Exam 1	8:20-10:10 pm	2/15/18
Exam 2	8:20-10:10 pm	3/29/18
Final Exam	12:30-2:30 pm	5/1/18

Grading

Please visit the course Canvas page for a complete description of the grading policy for exams, homework, quizzes, and HITT questions. Homeworks and HITT questions will not have makeups - a forgiveness factor will be supplied instead. Your final score (100 points max) is the sum of the following:

- three exams: up to 25 points each, 75 points total
- 13 weekly HW assignments (HW0 does not count): up to 5 points
- 10 weekly discussion session quizzes: up to 20 points combined
- HITT/Participation points: up to 5.5 BONUS points

Total minimal scores (out of 100 points) ensuring a particular letter-grade are shown below. In other words, if everyone gets 85 or more, everyone gets an “A.” *Do not expect scores to be rounded.*

A	≥ 85
A-	≥ 80
B+	≥ 75
B	≥ 70
B-	≥ 65
C+	≥ 60
C	≥ 55
C-	≥ 50
D+	≥ 45
D	≥ 40
D-	≥ 35

Required material

The following material must be acquired no later than by the end of the first week of class:

- WileyPlus textbook and homework passcode
- HITT remote control

The textbook for the course is Fundamentals of Physics, 10th Edition, by: Halliday, Resnick, Walker, Wiley (2013). Do NOT run out to buy it until you have read more below (or you will end up paying more than necessary!) The homework in this course is done online using the WileyPLUS system. Access to the online homework system requires a WileyPLUS access code. The online homework is part of the grade.

We have negotiated a deal whereby you get the online version of the textbook, together with the WileyPLUS access code, for a total of \$50 for the semester. Moreover, the payment is billed directly to your UF account.

For the first option, combined access to the textbook on-line and the homework system is available through the UF All Access Textbook Program. There is a long version of the directions available on the

course Canvas page, or here. Simply put, you will go to this web page:
<https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?TASK=INCLUDED>

After logging in with your GatorLink username and password, select Opt-In for this course. The book will be billed to your UF account at a cost of \$50.

Once you have a WileyPLUS code, you must access Wiley through the course canvas site - not Wiley directly. Full instructions are on the canvas website.

Class attendance, make-up exams, etc...

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Further details of the conditions for make-ups are described here.

Accommodations for students with disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://drc.dso.ufl.edu/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

UF grading policies

Information on current UF grading policies for assigning grade points can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Online course evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

The Honor Pledge

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.”

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <https://counseling.ufl.edu>, 352-392-1575; and the University Police Department: 352-392-1111 or 911 for emergencies.