

# College Physics-I

PHY 2053C-0201 Fall 2020: August 24 - December 04, 2020  
MWF 11:30 AM - 12:20 PM,

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Instructor: Dr. Lee Chow

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**Due to COVID-19, this course will be delivered through Zoom during regular class schedule.**

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## Course Description:

PHY 2053 is the first of a two-semester sequence in introductory physics offered primarily for students majoring in the biological sciences and pre-health professions, and information technology. Emphasis is placed on understanding major principles, and **mathematics is used to clarify concepts. Students must have a good working knowledge of algebra and trigonometry.** The course is quite intense and will require you to invest considerable time in study and problem solving.

## Learning Objectives:

The major objectives of this course are for students to learn the fundamental principles of mechanics, to develop solid and systematic problem solving skills, and to lay the foundations for further studies in science, pre-health professions, and engineering. After completion of this course, the students will be able to:

- Solve kinematic problems in multi-dimensional space,
- Apply Newton's laws of motion to dynamic problems, including uniform circular motion,
- Apply the laws of conservation of energy and linear-momentum,
- Distinguish between rotational and translational quantities,
- Solve rotational kinematic and dynamic problems,
- Solve simple harmonic motion problems.

## Prerequisites:

Prerequisites are MAC 1105 and MAC 1114. This includes, but it is not limited to, algebraic expressions, higher order polynomials, exponential and logarithmic functions, circle arc length, circular functions, identities, inverse functions, function of angles, triangle solving.

## Course Text & related materials:

Text: PHYSICS, Eleventh Edition (11e)  
(Volume One) (eBook with WileyPlus)  
Authors: John D. Cutnell & Kenneth W. Johnson  
Publisher: John Wiley & Sons, Inc.

## **Course Organization & expectation:**

The course is quite intense and it will require you to invest considerable amount of time in studying and problem solving. The course will consist of a set of class lectures with demonstrations, un-announced quizzes. Ideally, class time will be used to clarify the concepts that you have read in the text and to work out examples to show and help avoid common pitfalls. To obtain maximum benefit from this course you should read the materials *before* and *after* they are covered in class. It is very difficult but not impossible to catch up if you fall behind. Experience has shown that problem solving done in class is helpful for everybody only if the majority of the students are familiar with the topic.

**UCF Webcourses:** Our primary vehicle of exchanging information will be through Canvas for [PHY2053C-20Fall 0201](#) accessed through UCF Webcourses ([Webcourses.ucf.edu](http://Webcourses.ucf.edu)). Once you log in, items on the left panel of the home screen will take you to various sections, such as, Assignments, Grades, Modules *etc.* In particular, you will be able to access all the lecture notes and handouts by clicking “Files”. You need to visit this page regularly for any new item posted. “Announcements” will keep you updated on a regular basis. Since this is a large size class with approximately 300 students, it is only practical to use Canvas for all communications.

**Due to COVID-19, this class will be delivered through Zoom during the class period.** Class attendance is important since some of the quizzes, test questions will be drawn from the class lectures, demonstrations, and discussions. In addition, reading the material prior to class will be helpful the understanding of the materials.

## **Homework:**

One homework from each chapter will be assigned in the UCF Webcourse. It is your responsibility to mark the due dates on your calendar and submit it on time. You will be able to keep track of your cumulative homework grade in Webcourses.

## **Quizzes:**

**Quizzes will be given approximately one per week during class period or given on Webcourse.**

Quizzes will be based on previously covered material up to the previous lecture. Usually, they will consist of 1 problem with several parts or several multiple choice problems to be answered in 5 minutes. It is anticipated that about 10-12 quizzes will be given during the semester. **The lowest 2 quiz scores will be dropped.** As two quizzes will be dropped, make-up quizzes will be given only for special situations beyond your control, such as, medical emergencies, active military duties, UCF sponsored games and contests in which you will participate, etc. You need to show proper documents for a makeup quiz.

## **Exams:**

**Due to COVID-19, the exams will be administrated remotely through Honorlock.**

We will have two mid-terms during the lecture period and one comprehensive final. All exams will be closed book and closed notes. A formula sheet will be provided. All exams will be multiple choice problems. The weights of each item in determining the final grade are listed below. ~~You MUST know your student PID number (a 7 digit number can be found on your UCF ID card) and record it accurately in the proper location on the test form (SCANTRON), so that the computer can keep track of your scores as the term progresses. You must carry your UCF photo ID card, as a proctor might ask to show it while turning in you quizzes, tests, and the final. Only A nonprogrammable calculator (such as, TI-30Xa) with trigonometric capabilities may be used during exams. Cell phones must be turned off during the tests and the final.~~

## Grades:

The grades of exams, homework, quizzes, and labs will be added together to determine your final grade. Grades for your tests will be posted in UCF Webcourses. NO GRADE INFORMATION WILL BE GIVEN OVER THE TELEPHONE or by email.

Your grade in this course is based on the following weights:

2 In-class exams (each 18%)	36 %
Comprehensive Final exam	24 %
Quizzes (on Webcourse)	12 %
Homework	10 %
Laboratory	18 %
Total	100 %

Final grades will be given according to the following scale:

A	$\geq 85$ % and above
B	(75 - 85) %
C	(65 - 75) %
D	(50 - 65) %
F	< 50 %

For borderline cases +/- grades will be considered.

## Examination schedules and coverage:

Mid-term 1	9/25
Mid-term 2	10/23
Final	During Exam week. To be announced.

## Missed Work Policy:

It is Physics Department policy that making up missed work will only be permitted for University-sanctioned activities and bona fide medical or family reasons. Authentic justifying documentation must be provided in every case (in advance for University-sanctioned activities). At the discretion of the instructor, the make-up may take any reasonable and appropriate form including, but not limited to the following: allowing a 'dropped' exam, a replacement exam, replacing the missed work with the same score as a later exam. All assignment and exam grades are final 72 hours after they have been returned. Please contact me before this 72-hour period is over if you have a grading dispute.

## Other Policies:

During exams and quizzes only a formula sheet (provided) can be used. No books, lecture notes or anything else is allowed to be used. You should show your work in quizzes and tests, i.e., a step by step solution of the problem should be presented. No attempt of cheating will be tolerated. If a student tries to cheat at a quiz or a test, the student will earn an F for that quiz or test. All electronic devices such as cell phones, laptop computers, blackberries, i-phones etc. should be turned off during class hours, exams and quizzes. Any attempt to use such devices, or use books or lecture

notes, or communications and exchange of notes between students during tests or quizzes will be considered an attempt of cheating.

### **Syllabus quiz:**

All instructors/faculty are required to document student's academic activity at the beginning of each course. In order to document that you began this course, please complete the syllabus quiz by the end of the first week of classes or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

### **Important Dates:**

Classes begin: Monday, August 24, 2020

Late Registration on myUCF: Monday August 24 - Friday August 28, 2020

Drop/swap deadline on myUCF: Friday, August 28, 2019

Grade forgiveness deadline: December 4, 2019

Final exam: TBA.

## **University Core Policy Statements**

### **Academic Integrity**

Students should familiarize themselves with UCF's Rules of Conduct [Links to an external site.](#). According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.

Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.

Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.

Falsifying or misrepresenting the student's own academic work.

Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.

Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.

Helping another violate academic behavior standards.

For more information about Academic Integrity, students may consult The Center for Academic Integrity ([Links to an external site.](#)).

For more information about plagiarism and misuse of sources, see "Defining and Avoiding Plagiarism: The WPA Statement on Best Practices ([Links to an external site.](#))".

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, The Golden Rule. Links to an external site. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>Links to an external site.

## **Course Accessibility Statement**

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need specific access in this course, such as accommodations, should contact the professor as soon as possible to discuss various access options. Students should also connect with Student Accessibility ServicesLinks to an external site. (Ferrell Commons, 7F, Room 185, [sas@ucf.edu](mailto:sas@ucf.edu), phone (407) 823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable.

## **Campus Safety Statements**

### **Fully online course sections (W, V)**

Though most emergency situations are primarily relevant to courses that meet in person, such incidents can also impact online students, either when they are on or near campus to participate in other courses or activities or when their course work is affected by off-campus emergencies. The following policies apply to courses in online modalities.

To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu>Links to an external site.> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."

Students with special needs related to emergency situations should speak with their instructors outside of class.

### **Sections with face-to-face components (M, RA, RV)**

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

In case of an emergency, dial 911 for assistance.

Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at [http://emergency.ucf.edu/emergency\\_guide.html](http://emergency.ucf.edu/emergency_guide.html)Links to an external site.>.

Students should know the evacuation routes from each of their classrooms and have a plan for

finding safety in case of an emergency.

If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see <http://www.ehs.ucf.edu/AEDlocations-UCFLinks> to an external site.> (click on link from menu on left).

To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu>Links to an external site.> and logging in. Click on “Student Self Service” located on the left side of the screen in the toolbar, scroll down to the blue “Personal Information” heading on the Student Center screen, click on “UCF Alert”, fill out the information, including e-mail address, cell phone number, and cell phone provider, click “Apply” to save the changes, and then click “OK.”

Students with special needs related to emergency situations should speak with their instructors outside of class. You CAN Survive an Active Shooter.

## **Deployed Active Duty Military Students**

Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.