

Dr. Viv's PHYS 211: University Physics I (Spring 2022)

Basic Information:

Course website: <http://people.rit.edu/vxnsps/viv.html> Please bookmark immediately!

Instructor: Dr. Vivek Narayanan (aka DR. VIV)

Instructor's Email: vxnsps@rit.edu

Office: 14-2331 (Hugh-Carey) **Zoom address:** <https://rit.zoom.us/j/8382809020>

Office Hours: MWF (in person or zoom) at GOS (08)-3125 from 3:50 PM – 5:00PM

Teaching or Grading Assistants/Emails:

- **Section 10:** Grading Assistant--- Nathan Klein nmk7944@g.rit.edu
- **Section 11:** Teaching Assistant---Jitrapon Lertprasertpong jl4949@rit.edu

Class Times: **Section 10:** MWF 10:00 AM – 11:50 AM GOS (08)-3125;

Section 11: MWF 2:00 PM – 3:50 PM GOS(08)-3125

Exam Times: Two mid-term exams on Tuesdays 02/22 (week 7), 04/12 (week 14), from 6:30 PM-7:45 PM; Final exam on Friday 04/29, 4:15 PM -- 6:45 PM: All exams are online quizzes on MyCourses (ignore SIS if it tells you the final exam is in a classroom location!)

Lab make-up: Come to GOS (08)-3125 during my MWF 3:50 PM – 5:00 PM office hours.

Grading: [Note---midnight means 11:58:59 PM MyCourses time]

Weekly Quizzes (5%):

One quiz will be uploaded every **Friday** on MyCourses Assignment tab at 12 noon. Quizzes are due by **Saturday** midnight. Quizzes will be in a multiple choice format, and answers will be uploaded as text submission into the assignment tab by student in the form of an alphabet string e.g., ABCDEAB. Every quiz will have seven questions of which 5 will be scored. (So, it is possible to score a grade of 7 out of 5.) Quizzes are patterned after the practice quizzes on the course website, which shall be uploaded by noon on Friday of the previous week. The lowest TWO quiz scores out of 13 quizzes shall be dropped. *Grading will be done by the TA.* **Make-up policy:** At any point in the semester, student may request a make-up for any number of quizzes that they missed. Make-ups will be conducted via e-mail exchange with Instructor and be graded by the instructor.

Online (ExpertTA) Homework (15%):

Intro to ETA, modular assignments on ExpertTA, plus (an optional bonus) assignment. **Each HW will be due 11:59 PM Wednesday of weeks 2-15.** You lose 4% for being late each day past the deadline, for a maximum penalty of 20%. Seek help during my office hours. **NONE** of the assignment scores will be dropped. *Grading will be done by computer. Note that I shall not be linking weekly MyCourses to ETA. The grades will be linked only once, at the end of the semester!*

Paper Homework (5%):

Every Friday, a paper homework with ONE question will be placed on the course website. This paper HW will be due the following **Friday** midnight, in the appropriate assignment tab. You will work in the same groups as you would for labs (see below). Details of work done must be shown, and all steps justified. The paper HW will be graded on a four tier grading system, with possible 5, 4, 3, or zero points per submitted HW assignment. The lowest TWO paper HW scores out of 13 shall be dropped from grade considerations. *Grading will be done by the TA.* Make-up policy: If solutions have appeared on course website, then the group will have to come up with, state fully, and solve a problem of equivalent difficulty as the paper homework they have missed. Submit to instructor directly for grading.

Workshop Labs (15%):

Report write-ups are **due about one week after performance of the lab, on either Wednesday midnight or Saturday midnight.** Any lab submission that occurs afterward (with the exception of make-up labs) will be scored 10% down for each day late for a maximum penalty of 20%. Lab reports must follow the formats on the reverse of the lab instruction sheets. **FOUR** of the lab scores will be dropped. *Grading will be done by the TA for some labs and instructor for some labs.* Make-up policy: First off, notice that 4 labs are dropped, so it is OK to let one or two go. That said, if you wish to make up, it must be done on your own time, during the lab make-up hours indicated on the first page, and reports submitted into the assignment tabs for the labs (they have no closing date).

(Optional) Video notes (3% EC):

Write in your own words (about half a page each) what you learned from watching any two instructional videos for the week (there are usually about 2-4 fifteen minute videos per week on average). Videos shall be placed one day before you are due to watch them, and linked under the contents tab of MyCourses. *Grading will be done by the Instructor.*

Midterm exams (20% x 2):

There will be two midterm exams on **Tuesday evenings, from 6:30 PM - 7:45 PM of academic week 07 (02/22) and week 14 (04/12).** Note that there are no classes on Tuesdays and this time has been blocked off your schedule for just these two exams. Both exams are online exams, taken in the Quizzes environment on MyCourses.

Exam make-ups: It is possible to make up midterm exams. Just fill out the exam make-up form (available from Instructor by e-mail request) and submit *electronically* to Ms. Rebecca Day (Becky) following instructions on the form.

Final exam (20%):

Comprehensive final exam percentage score will replace, *if it is advantageous to you*, the lowest percentage score of a midterm exam. **Your final exam will be online, on Friday April 29th, from 4:15 PM - 6:45 PM.**

Letter Grades:

A-type (ranges from A to A-)	90-100
B-type (ranges from B+ to B-)	89-80
C-type (ranges from C+ to C-)	79-70
D	69-60
F	59-0

These cutoffs indicate what is needed to earn one of the letter grades within each type. Finer-grained divisions in the A, B, and C ranges will only be determined after a careful analysis at the end of the semester.

Use of MyCourses:

- Weekly agenda will be uploaded to announcements at one minute past midnight on Sunday. The student is expected to follow it daily and keep up with the work outlined in this agenda to be successful.
- Quizzes, Labs, Paper homework, and Video notes (optional) will all be submitted in the form of a scanned pdf or a .doc file, or some other compatible file uploaded to the appropriate tab. There will be no paper items exchanged in view of the pandemic, to keep disease from spreading. Grading shall be done using the comment boxes for notes. Full solution will be provided for quizzes and paper homework on the course website, for your reference.
- Videos will be uploaded to content tab on a weekly basis. 2-4 videos per week.
- Practice problems and study packet resources for exams will also be present in Contents tab.
- The Activities manual for this course will be found in the Contents tab. Many of the problems from it appear on your ETA homework assignments. I will be working problems that do not appear on the ETA assignments as illustrations of the theory you will learn in class.
- Items that are available on my course website will not be repeated on MyCourses. Items that are available on MyCourses will not be repeated on my course website. A link to my course website will be provided with each weekly agenda announcement. In this way, you only have to go to MyCourses for everything.

Required/ Recommended Materials:

1. Expert TA homework software. Access using the following link: <http://goeta.link/USU34NY-1B4DBD-2K7>

You have to visit ETA site to do the homework each week. About 2-3 weeks are provided per assignment.

2. University Physics I and 1A Activities Manual: PDF placed in MyCourses, Contents tab: mainly as reference and source for additional practice problems.

3. <https://openstax.org/details/books/university-physics-volume-1> is a free online physics book with most material needed for this course. Other texts, either hardcopies or online, may be used. Of course, RIT teaches advanced material not found in any books as well!

Approximate Course Topics Timeline:

Topics covered will be from chapters 1-16 of the 14th edition of Y&F, not necessarily in chronological order, nor all sections:

Week 1 (Preliminaries, chapter 1)

Week 1-2 (Kinematics, chapters 2, 3)

Week 3-4 (Forces, chapters 4, 5)

Week 5-6 (Work and Energy, chapters 1, 6, 7) ----- up to here for midterm exam 1

Week 7-8 (Impulse and Momentum, chapter 8)

Week 9-11 (Rotational Motion, chapters 1, 9, 10, 11)

Week 11 (Universal Gravity, chapter 13)

Week 12 (Oscillations, chapters 11, 14) ---- from cutoff for exam 1 up to here for midterm exam 2

Week 13 (Waves, chapter 15)

Week 14 (Sound, chapter 16) ---- all of the course for the final exam

Policies:

1. No food and drink in class. You may step outside and stand by the door as you consume (non-alcoholic) beverages. A water/restroom/texting break of about 5 minutes will be provided at the halfway point.
2. **COVID-19:** Masks covering nose and mouth must be worn at all times. Other guidance consistent with RIT and state of NY policy must be followed, and no exceptions to this will be made. Quarantined students may access zoom recordings made in class of my writing problem solutions (I'll turn recording off at all other times), attend class via zoom if desired, and consult pdf of notes on my course website. Please note that this is not a hybrid class, zoom attendees will not get much in way of interaction with other students or with the instructor, but you can see me write my notes in real time. If your instructor has to go into quarantine, the class will be taught via zoom until such a time as the quarantine is finished.
3. Cell phone use in class will not be permitted for texting, social media, etc. However, you are allowed to use your device as a level, stopwatch, or for other lab measurement purposes, such as recording data. RIT will not assume any responsibility for lab use of your cellphone that results in damage or destruction (such as dropping it from a great height to determine acceleration due to gravity or demonstrate Doppler Effect).
4. **Group work:** Lab reports are done in groups of not more than 3 and no fewer than 2. Each person will contribute to the overall report. Any exceptions are to be reported to me or the TA and scores shall be adjusted to reflect lack of work by a group member. Groups will be decided at the beginning of the semester based on student seating during the first week of class, and I will create the groups on MyCourses for your future submissions of group-related work (paper HW and labs). You may work on ETA homework in groups as well; however, each student will have randomized numbers and will have to input answers on ETA individually.
5. Prepare to spend significant amount of time outside of class (multiply class time by a factor of at least 1.5) to digest theory material from the class notes and textbook, attempt homework, watch videos, prepare lab reports, and study for quizzes and exams.
6. **Academic integrity:** Quizzes and exams must be performed without outside help of tutors or other students. ETA homework, paper HW, and labs are collaborative efforts, and group work is not only allowed, it is strongly encouraged.

Enjoy the course! We will follow a novel blend of theory, guided and mentored practice problems with frequent discussion, and labs closely integrated to the lesson plan. Such a "studio workshop" approach has been demonstrated to be more effective at delivering instruction than the traditionally separated large lecture, smaller discussion sessions, and independent laboratory components of the larger universities.

Disclaimer:

The academic demands in this course and your other classes can be understandably difficult. It is normal to feel anxious about your academic ability, especially when unexpected life events emerge. I want to invite you to connect with me about any difficulties you have in this course as soon as possible. Your success is important. I want you to get the additional assistance needed before the challenges become too much.