

PHYS 105: Introductory Physics

Summer

Lecture location: anywhere

Phone: 434-947- 8566

Lecture time: any time

Cell Phone: 434-242-0298

Instructor: Dr. Sarah Sojka

Office: Main 106D

Email: ssojka@randolphcollege.edu

Office hours:

Monday 10-11 a.m.

Tuesday 2-3 p.m.

Wednesday 6-7 p.m.

Thursday 10-11 a.m.

Friday 2-3 p.m.

Additional office hours are available by appointment. Office hours will be conducted through Zoom. Use the link on the course Moodle page to log-in. You are welcome to call, text or e-mail at any time, but office hours are the only time I promise to be available.

Required text

OpenStax College Physics <https://openstax.org/details/books/college-physics>

You will also need to sign up for ExpertTA.

I. Course goals

This course is the first half of an algebra-based physics class. It covers mechanics, forces, energy conservation, and rotational motion. This class is appropriate for beginning science majors, students with a physics concentration, pre-medical students and general education students. Each class will be focused on describing how a specific phenomenon works. We will use a lot of demos and available online simulations (<http://phet.colorado.edu/en/simulations/category/physics>). Understanding physics can take some time and you will need to put in a lot of time outside of class to understand the material.

II. Policies

The Honor Code: All students are expected to conduct themselves with integrity. You are encouraged to study and work on the homework together, but all final written assignments (homework and exams) must be your own work! Please note that all tests and written assignments in this class are pledged work under the Randolph College Honor Code. Please note that it is a violation of the honor code in this course to look at exams and homework assignments from other offerings of this course, whether concurrent or past, regardless of the instructor of the course. If you are not familiar with the Randolph College Honor Code, you can obtain more information at <https://www.randolphcollege.edu/academics/honor-code/>. If you still have questions, I will be happy to discuss this with you.

Plagiarism: When writing, if you use someone else's words, unique thoughts, or general sentence structure without crediting the source, you are committing plagiarism, which can best be described as a form of academic theft. Plagiarism is an honor violation and can be avoided by properly acknowledging the sources you consult using APA style. **Internet sources are not exempt. I expect you to be familiar with the College's policies on plagiarism.** An excerpt of the Student Handbook, at

<http://www.randolphcollege.edu/studenthandbook>, defines plagiarism and provides examples of ways to avoid it. You can also find resources on plagiarism at <http://owl.english.purdue.edu/owl/resource/563/01/>.

Attendance: Your attendance in this class will be watching the online videos and working through the sample problems. You can do this at any time that you like but assignments for Monday, Tuesday and Wednesday must be completed by 11:59 pm on Wednesday and assignments for Thursday and Friday must be completed by 11:59 pm on Saturday. All course times are based on the time zone in Lynchburg, VA (Eastern time). Assignments include homework on ExpertTA, watching lecture videos and working sample problems and demonstrations on Moodle. A list of tasks will be provided each week.

Randolph College is committed to providing learning experiences that are accessible for all students and will make reasonable accommodations for individuals with documented disabilities. If you have a disability and require accommodations, please contact Diane Roy, Coordinator of Access Services, at 434-947-8132 or droy@randolphcollege.edu.

If you have a Letter of Accommodations from Access Services, I encourage you to discuss your accommodations and needs with me as early in the semester as possible.

III. Grading

Homework will be assigned daily, except on the days of the exams. You are encouraged to work together on the homework, but the final product must be your own work! All homework is to be submitted on-line by the due date (Wednesdays and Saturdays). Your homework grade will be reduced by 10% for each day late. Homework problems will not be solved in class. You are welcome to contact me if you have questions. I also encourage you to use the Moodle news forums to ask questions of me and your peers.

There will be three tests and the material will build throughout the semester. For each test, you are expected to submit a video describing your solution to one problem or meet with me via Zoom and describe your solution. Each of these videos or meetings is worth 5% of your overall course grade.

20% Homework

15% Participation

15% Exam 1

15% Exam 2

20% Exam 3

10% Video problems from exams

5% Forum posts (2 per week)

Participation is defined as completing all of the tasks presented in Moodle. You should mark your progress using the Moodle progress bar to document your work in the class. You will need to submit a video or schedule a meeting with me to show you explaining one problem from each of the tests. Submitting these videos is 10% of your course grade. In addition, you will make 2 posts to the Moodle discussion forum each week. You can use this to ask a question of me or your classmates or to answer a question.

IV. Policies and procedures for course enrollment and payment

Important Information for Summer Courses

Payment and Refunds

Payment **MUST** be received *before* the first class meeting of each summer term or your course(s) will be removed from your records. Tuition for summer courses is \$450 per semester hour. Lecture courses are typically 3 semester hours and lab courses are typically one semester hour. Additional, non-refundable lab fees may apply.

Refunds are based on the following schedule:

- 100% if dropped prior to the first day of class
- 90% if dropped during the first week of class
- 50% if dropped during the second week of class
- There is no refund for courses dropped after the second week of class

Dropping or Withdrawing from a Course

Courses dropped within the first 3 days of classes will not appear on your Randolph College transcript; withdrawals between the fourth and seventh days will be noted on the transcript with a grade of "W." After the seventh day, you may no longer withdraw from the course except for documented medical or extenuating circumstances.

To drop/withdraw from a course:

- Email the instructor directly, requesting to be removed from the course.
- The instructor will forward your email to the Registrar's Office.
- The date of your email will be used to determine the drop/withdrawal and refund status.

V. Course schedule

Week 1 Intro, motion in 1 dimension

Week 2 Vectors, 2D motion, Newton's First law

Week 3 Finish Newton's laws, Forces and Intro to Work

Week 4 Work and Potential Energy, Momentum

Week 5 Rotation