

**Physics 205**  
**Modern Physics**

- Class: MWF 10:30 - 11:20 pm, D209
- Professor: Dr. Jerry Gilfoyle; Office: Gottwald Science Center, D110; Phone:289-8255; electronic mail: ggilfoyl@richmond.edu; Office hours: MWF 2-3 pm, Tr 10-11 am, Tr 3-4 pm. Other times by appointment or availability.
- Objective: To gain an understanding of the new ideas beyond classical physics and to develop problem solving skills.
- Textbooks: **Six Ideas That Shaped Physics (5th ed.) - Units R and Q ONLY!**, by T.A.Moore (required) and **Physics for Scientists and Engineers** (the 131-132 text), 5/e by Knight (recommended).
- Prerequisites: Physics 132.
- Course work: The course will consist of lecture, lab, demonstration, and problem solving. Attendance at class for the entire period is required. Excessive unexcused absences will have a negative effect on your grades.
- Grading: Grades will be computed on the following basis:

|            |                              |
|------------|------------------------------|
| Tests      | 30%(15% for each of 2 tests) |
| Midterm    | 15%                          |
| Homework   | 25%(includes labs)           |
| Final exam | 30%                          |

Make-up tests, and homeworks will not be administered. If an activity is missed due to an excused absence the next activity will count extra to make up the loss. Unexcused absences will receive a grade of zero. An excused absence is given by the instructor for sufficient reason provided there is adequate warning in a timely fashion. The student is responsible for all missed work. Disability accommodations must be arranged with the instructor at least one week in advance.

- Tests: Tests consist of short-answer questions and problems based on readings, homework, lectures, and in-class work. Each test is 50 minutes. The final exam is three hours.
- Homework: Homework will be assigned regularly, but only a fraction will be collected. Exams are based on these assignments. Unexcused, late submissions will be reduced by one point if not handed in during the appropriate class period. An additional point will be subtracted for each subsequent day late. Once solutions are posted no homeworks will be accepted. Late submissions will be excused only at the discretion of the instructor. Lab notebooks will be periodically collected and graded. Each lab counts as a homework.  
Homework assignments will be listed on the course webpage (see below).  
You are encouraged to discuss the homework with others, but any work handed in must be entirely your own to receive full credit.
- Supplies: Pencils, paper, a calculator, and a laptop are required for each meeting.

## Physics 205 Schedule

### Fall 2026

| Date   | Event       | Date       | Event        |                    |
|--------|-------------|------------|--------------|--------------------|
| Aug 24 | First class | Nov 9      | Test 2       |                    |
| Sep 7  | Class Day   | 23         | Thanksgiving |                    |
|        | 14          | Test 1     | 25           | Thanksgiving       |
| Oct 9  | MidTerm     | 27         | Thanksgiving |                    |
|        | 12          | Fall Break | Dec 10       | Final, 9 am - noon |

## Physics 205 Homework Assignments

### Fall 2026

A VERY effective way to study physics is to do the homework as the material is covered in class and then do additional problems when you study for an exam. See the course website below for the latest updates on assigned homework problems.

<https://facultystaff.richmond.edu/~ggilfoyl/modern.html>

Electronic copies of the problems are linked to the homework assignment page. Others are in the texts. Solutions for those assigned problems can also be found on the course website at the appropriate time usually the week after they are assigned. The problems and solutions are password-protected and are solely for the use of students in Physics 205 and are not be shared with people outside this class. The solutions, in particular, are not be downloaded, printed, or archived in any way. Sharing, saving, or archiving these solutions are Honor code violations.

## Help With Physics Homework

If you have trouble with homework help is available from me during my office hours (see page 1 of this syllabus) and at other times when I'm available. The Physics Department is also arranging tutoring sessions. More on that as the schedule develops. The Academic Skills Center (<http://asc.richmond.edu>, 289-8626 or 289-8956) provides several services including tutoring. A list of their services is at the following address along with other information.

<https://facultystaff.richmond.edu/~ggilfoyl/modern/links.html>

A summary of the services at the Academic Skills Center is on the last page of this syllabus.

## Physics 205

### Attendance Policy

Students should attend all classes for the full period. Those who are sick should not attend class and should inform the instructor in a timely fashion. Excessive, unexcused absences will be penalized. An excused absence is given by the instructor for sufficient reason provided there is adequate warning in a timely fashion.

- Make-up tests, quizzes, and labs will not be administered. If an activity is missed due to an excused absence the next activity will count extra to make up the loss. Unexcused absences will result in a grade of zero. The student is responsible for all missed work.
- Students must:
  - Notify instructors in advance of the absence if possible.
  - Contact the Student Health Center if sick.
  - Keep up with classwork if they are able to do so.
  - Submit assignments on time whenever possible.
  - Work with their instructors to try to reschedule any missed assignments.
  - Stay in close communication with their instructors.
- This attendance policy puts everyone on their honor. Falsely reporting a reason for an absence is an honor code violation.