

Physics 205
Modern Physics

- Class: MWF 3:00 - 3:50 pm, D209
- Professor: Dr. Jerry Gilfoyle; Office: Gottwald Science Center, D110; Phone:289-8255; electronic mail: ggilfoyl@richmond.edu; Office hours: MF 10:20-11:20 am, T 10:00-11:00 am, T 3:30-4:30 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 - Units R and Q ONLY!**, by T.A.Moore (required) and **Physics for Scientists and Engineers** (the 131-132 text), 4/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	20%
Homework	25%(includes labs)
Final exam	25%

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, a calculator, and a laptop are required for each meeting.

Physics 205 Schedule

Fall 2023

Date	Event	Date	Event
Aug 28	First class	Nov 13	Test 2
Sep 4	Class Day	22	Thanksgiving
	18	24	Thanksgiving
Oct 13	MidTerm	Dec 15	Final, 2-5 pm
	16		Fall Break

Physics 205 Homework Assignments

Fall 2023

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.

SYLLABUS INSERT REGARDING ACADEMIC AND PERSONAL SUPPORT SERVICES

Hope N. Walton, Director Academic Skills

Below is a boxed statement that describes the services available from the Weinstein Learning Center and other resources. We recommend that you consider including this boxed statement in your course syllabus, on Blackboard, or perhaps on a separate handout. Of course, other support services that relate specifically to your course can also be added.

Staff members from the resources below are available for consultations about concerns related to students as well as issues related to services.

Weinstein Learning Center

Academic Skills Center (asc.richmond.edu): Academic coaches assist students in assessing and developing their academic and life-skills (e.g., critical reading and thinking, information conceptualization, concentration, test preparation, time management, stress management, etc.). Peer tutors offer assistance in specific subject areas (e.g., calculus, chemistry, accounting, etc.) and will be available for appointments in-person and virtually. Peer tutors are listed on the ASC website. Email [Roger Mancastroppa \(rmancast@richmond.edu\)](mailto:Rmancast@richmond.edu) and [Hope Walton \(hwalton@richmond.edu\)](mailto:Hwalton@richmond.edu) for coaching appointments in academic and life skills.

English Language Learning assists multi-lingual and international students in honing their language, academic, and/or intercultural skills. Among other available services for students are one-on-one tutoring, group workshops, and semester-long classes on writing and U.S. culture. Please contact **Dr. Bohon, Director of English Language Learning**, at Leslie.Bohon@Richmond.edu for more information and appointments.

Quantitative Resource Center: (qrc.richmond.edu): Provides services related to quantitative and computational learning across the curriculum through tutoring, consultation and training.

Speech Center: (speech.richmond.edu): Assists with preparation and practice in the pursuit of excellence in public expression. Recording, playback, coaching and critique sessions are offered by teams of trained student consultants. During scheduled [appointments](#), consultants assist in developing ideas, arranging key points for more effective organization, improving style and delivery, and handling multimedia aids for individual and group presentations. We look forward to meeting your public speaking needs.

Technology Learning Center: (tlc.richmond.edu): The TLC is a staffed public lab dedicated to supporting digital media projects. Services include camera checkout, video/audio recording assistance, virtual reality, poster printing, 3D printing and modeling. The TLC is located on the second floor of Boatwright Library.

Writing Center (writing.richmond.edu): Assists writers at all levels of experience, across all majors. Students can attend [walk-in hours](#) at Boatwright Library (room 171A) with trained writing consultants who offer friendly critiques of written work.

Other Campus Services

Boatwright Library Research Librarians: (library.richmond.edu/help/ask/ or 289-8876): Research librarians help students with all steps of their research, from identifying or narrowing a topic, to locating, accessing, evaluating, and citing information resources. Librarians support students in their classes across the curriculum and provide individual appointments, class library instruction, tutorials, and [research guides](#) (libguides.richmond.edu). Students can [contact an individual librarian](#) (library.richmond.edu/help/liaison-librarians.html) or ASK a librarian for help via email (library@richmond.edu), text (804-277-9ASK), or [chat](#) (library.richmond.edu/chat.html).

Career Services: (careerservices.richmond.edu or 289-8547): Can assist you in exploring your interests and abilities, choosing a major or course of study, connecting with internships and jobs, and investigating graduate and professional school options. We encourage you to update your profile in [Handshake](#) and schedule an appointment with a career advisor early in your time at UR.

Counseling and Psychological Services: (caps.richmond.edu or 289-8119): Assists currently enrolled, full-time, degree-seeking students in improving their mental health and well-being, and in handling challenges that may impede their growth and development. Services include brief consultations, short-term counseling, skills-building classes, therapy groups, crisis intervention, psychiatric consultation, and related services.