

PHYS 152: Fundamentals of Physics II. Spring 2023



Learning Objectives: Upon completion of this course, the student will be able to: 1) Apply physical principles and reasoning to draw conclusions based on given information. 2) To experimentally gather information (data) to draw conclusions when necessary information is not given. 3) To use written and oral expression to support the conclusions using a combination of verbal, mathematical, and graphical communication as needed. 4) Identify gaps in knowledge and understand how to secure the needed information or concepts. These goals will be accomplished within the context of the physics concepts covered in this course.

Required Course Materials: e-Text version of *Physics for Scientists and Engineers: A Strategic Approach*, 5th Edition, by Randall D. Knight. Includes access to Mastering Physics and Learning Catalytics. ISBN: 0137319495.

This course requires access to the e-textbook *Physics for Scientists and Engineers: A Strategic Approach*, and access to the Pearson online services Mastering Physics and Learning Catalytics, which are all under one ISBN. The first time you log into Mastering Physics and enter your registration information, you should join our course: **TBD** and follow the directions for joining this section, you will need to provide your UVM netID and enter your name (first and last) **exactly as they appear in our course Blackboard roster**. The required material may be purchased directly in Mastering Physics once you have created an account and joined our course, or through the UVM bookstore. Detailed instructions as to how to register and purchase access may be found on our course Blackboard site under Course Materials, "Mastering Physics Student Registration Instructions".

Computer Required:

This course requires a laptop, or tablet with internet connectivity with wifi and bluetooth capability and preferably a USB port. You will be required to log into Mastering Physics and Learning Catalytics during class times. You will also need to access the wifi, bluetooth, and/or USB enabled laboratory equipment.

Attendance & Class Expectations:

Students are expected to attend the class meetings at the scheduled times and to actively participate in the daily activities. Discussion of the information and concepts is a key element of the course. You are expected to ask questions, express reasoning, and request clarification within your group discussions and through interactions with the course instructors.

Online Communication Resources:

All students must have reliable access to the University of Vermont Blackboard course website. (bb.uvm.edu) This access requires internet connection, which is free of charge for all UVM students while on campus. You will need your UVM net ID and password to log into the Blackboard system. All supplementary course materials, course updates and announcements will be made via the Blackboard system. **It is the student's responsibility to check UVM email and Blackboard course website for updates regularly!**

Homework:

Homework will be due each Sunday by 11:59 PM (or 24 hours later in case of a Monday holiday), to be completed on Mastering Physics. The logical development of the theory and the problem solving depend heavily on what has come before. For this reason, it is imperative that you keep current; don't fall behind. Late homework may be completed in the days following the due date, with maximum credit reduced by 20% each day following the due date with the reduced credit only for the questions answered late. A follow-up assignment will be granted to allow opportunities to make up missed points, due a few days after the original assignment and only available if the original score was below 90% of the total. Homework assignments will be completed on Mastering Physics, but it is strongly advised that each student keep organized detailed solutions. Preparing these solutions will help in studying for the exam and for working in groups on the homework.

Exams:

There will be three mid-term exams and one final exam. The exams will have two equally-weighted components, a group component where each group submits one answer sheet, and an individual component. One sheet of hand-written notes and a calculator are allowed as resources. Calculators are allowed for the final exam. The final exam will be held on the last day of class. The final exam will be held on the last day of class. The final exam will be held on the last day of class.

