

Modern Physics, the syllabus

Course	Physics 60, Modern Physics. Fall 2017
Required texts	<i>Modern Physics, 2nd ed</i> , Harris (Pearson Addison Wesley 2008) any introductory physics textbook
website	physics.stmarys-ca.edu has updated course information and a schedule
Instructor	Mari-Anne M. Rosario Galileo 108A 925.631.4837 mrosario@stmarys-ca.edu

what are we doing in this class? course description

This course is an introduction to physics beyond the classical framework, covering special relativity and quantum mechanics. Applications in molecular, condensed matter, statistical mechanics and nuclear physics will also be covered. Prerequisites: Physics 1–4.

This course is an opportunity to gain

- an introductory understanding of special relativity and quantum mechanics,
- further experience with mathematics used in physics and engineering, and
- confidence in using previously learned material towards understanding new topics.

how do i determine what you understand? assessment

The final grade will be based on

Daily problems, weekly problem sets	20%
Exams 1 & 2	45%
Final exam	35%

Problem sets will be due daily and weekly. The daily problems will be on material you already know (geometry, trigonometry, calculus, first-year physics) or on material to be covered in class that day. You may have to read the book in advance of the class meeting to do them. The weekly problem sets will be more involved and based on material we've already discussed in class.

Ninety percent (90%) of the total possible problem sets points will count towards your grade. For example, if the total possible points by the end of the semester is 190 points, 171 points will be needed to get the full 20%.

Two exams will be given during the semester. Each exam will focus on material covered since the last exam. They will assume an understanding of previously covered material. A **final exam** will be given during finals week. The final will be comprehensive, but will emphasize material from the latter part of the course.

Extra credit will be offered to attend specific School of Science events.

go to class or not? attendance, late assignments and make-up exams

Attendance is expected. It's not required.¹ You're responsible for all information given during class and for submitting work on time, even if you're absent for a perfectly good reason.

Weekly problem sets will be accepted until I, or the grader, starts grading. Assignments won't be accepted once grading has started. Daily problems won't be accepted late for any reason.

Conflict or make-up exams will be given if you (1) provide an acceptable and documented excuse and (2) contact me beforehand. If before isn't possible, then as soon as is reasonable.

Talk to me and your academic advisor if there are severe or extended circumstances that affect your performance in class.

hmmm, this grade doesn't look right... grading policies

Solutions will be graded on correctness and clarity. Include text or diagrams to briefly explain assumptions and steps. Begin solutions with definitions of physical quantities (*e.g.* $\vec{v} \equiv \frac{d\vec{x}}{dt}$), physical principles (*e.g.* Newton's laws), or commonly used equations (*e.g.* kinematics equations). A correct answer with no justification will earn no credit; an incorrect answer with correct justification will earn partial credit.

If you believe that there has been an error in grading, request a regrade. Resubmit the original, unaltered work within one week, along with a written explanation of what I should consider when regrading.

we take this seriously... the academic honor code

This course operates under the premises of the SMC academic honor code. It's expected that everyone will work to uphold high standards of integrity. More information can be found at: www.stmarys-ca.edu/academics/academic-honor-code

It's great to work with others, and it's okay if your work is *similar* to someone else's. However, give credit where credit is due and include a note giving credit to the person(s). In the end, even if you give proper credit, **there is no acceptable reason for your work to look exactly like someone else's.**

resources you might find useful

STEM Center: Assumption Hall 2nd floor, Sun - Th x6282 athompson@stmarys-ca.edu

Student Disability Services: Fillipi Academic Hall FAH190 x4358 sds@stmarys-ca.edu

Student Engagement and Academic Success: Augustine Hall ground floor x4349 seas@stmarys-ca.edu

¹To borrow from Prof Sauerberg: attendance tells me how seriously you take this class. Poor attendance will mean I won't give your final grade special consideration if it's on the border between two grades. It will be the lower grade.