

**Physics 003, 2009 Spring
INTRODUCTION TO PHYSICS II**

Instructor Mari-Anne M. Rosario
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Office hours tentatively W 2-3:30, Th 11-12:30, and by appointment
 I am also usually around MWTh afternoons
Meetings MWF 9:10-10:10am, Th 9:40-10:40
Text Physics for Scientists and Engineers 2nd ed, Knight (Pearson 2008)
Website physics.stmarys-ca.edu has updated course information

Course description and goals

Physics 3 is an introduction to physics for students majoring in physics, engineering, chemistry or mathematics. We will cover electricity, magnetism, basic circuits and optics. Concurrent enrollment in Physics 4 laboratory is required. Prerequisites: Physics 1 and Math 38 (may be taken concurrently).

This course is an opportunity to (1) gain an understanding of fundamental physical principles, (2) use these principles to describe the world around us, and (3) develop problem solving and mathematical skills.

Evaluation

The final grade will be based on

Short exercises	7%
Problem sets	23%
In-class exams	45%
Final exam	25%

Lectures will require a basic familiarity with the concepts. I expect everyone to have read the material before coming to class. To encourage this, one short exercise on the material to be covered that day will be due at the start of each class. Late submissions will not be accepted for any reason. The lowest 1/3 of your scores will not be considered.

Problems will be assigned each class meeting and a subset of these problems will be due weekly. These problems are an opportunity for you to evaluate your understanding of the material and to develop problem solving and math skills. The 2 lowest problem set scores will not be considered in your final grade. Late submissions will be accepted up to a week after the due date, but points will be deducted.

Three in-class exams will be given. Exams will focus on recently covered material, but will assume an understanding of previously covered material.

A final exam will be given during finals week. The exam will be comprehensive, but will emphasize material from the latter part of the course. If your final exam score is greater than your lowest in-class exam score, your lowest in-class exam score will be replaced by your final exam score.

Attendance and schedule

Attendance is not required, but it is highly recommended. Participation is welcome, so ask questions, provide responses, and add comments!

Each student is responsible for all information given during lecture and for submitting assignments on time, regardless of whether or not they are present in class. This applies even if an absence is due to some acceptable reason. Conflict or make-up exams will be given only if the student (1) provides an acceptable and documented excuse and (2) contacts the instructor before the exam.

The tentative schedule for this class is as follows:

week	chapters	topics	of note
2.09	26	Electric charges and forces	
2.16	27	Electric field	
2.23	28, 29	Gauss's law, Electric potential	
3.02	29, 30	Electric potential, Potential and field	Exam 1 Th 9:40-11:10
3.09	31, 32	Current and resistance, Circuits	
3.16	32, 33	Circuits, Magnetic field	
3.23	33	Magnetic field	
3.30	34	Electromagnetic induction	Exam 2 F 9:10-10:10
4.06			Spring Break
4.13	35	Electromagnetic fields and waves	
4.20	14, 20	Oscillations & waves	
4.27	21	Superposition	
5.04	22	Wave optics	Exam 3 Th 9:40-10:10
5.11	23	Ray optics	
Finals		Final Exam: Wednesday 9-11	

Grading

Present clear and complete solutions. In addition to calculations, include text or sketches to explain and justify the calculations. 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. The original, unaltered work must be resubmitted within one week, accompanied by a written explanation of why you believe it was misgraded and what I should consider when regrading.

Academic honor code

This course operates under the premises of the SMC academic honor code. It is expected that everyone will work to uphold high standards of integrity. You are encouraged to work on and discuss the assignments with others. Although your methods may be similar to your coworker's, **there is no acceptable reason for your work to look exactly like someone else's**. See the *Student Handbook* for further information on the honor code.

Student disability services

Reasonable and appropriate accommodations, that take into account the context of the course and its essential elements, for individuals with qualifying disabilities, are extended through the office of Student Disability Services. Students with disabilities are encouraged to contact the Student Disability Services Coordinator at (925) 631-4164 to set up a confidential appointment to discuss accommodation guidelines and available services. Additional information regarding the services available may be found at the following address on the Saint Marys website:
www.stmarys-ca.edu/academics/academic-advising-and-achievement/student-disability-services.html