

Computational Physics

Course Description: Physics 2200 *Computational Physics* provides a basic introduction to the following topics:

- numerical and mathematical methods required for the solution of physics problems
- elements of programming
- operating systems used in research

Optional topics (time and students' interest permitting) include Quantum Computing and Parallel Programming.

Course Goals

- Learn methods to solve physics problems numerically
- Understand the advantages and limitations of common numerical techniques
- Practice writing flexible, efficient, and practical code

Lectures: MoWeFr 12:00 — 12:50 PM in M407, Math Building

Computer Lab: Physics Computer Lab P122, time TBA

Course Webpage: <http://www.phys.uconn.edu/phys2200/>

Instructor: Michael Rozman

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office hours: TBA as well as by arrangement

Course Assistant: Di Shu

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computer lab hours: TBA

Textbook:

- No required textbook (course notes will be provided)

Communications: Email to rozman@phys.uconn.edu is the preferred method to contact the instructor. *Please include the tag “[phys2200]” (without quotes, no spaces) in the subject of your email, e.g. “[phys2200] midterm II project”.*

Homework: Weekly homework assignments

Honors conversion: Students interested in honors conversion should contact the instructor during *the first week of classes*.

Exams: Two lecture-hour midterm exams and a take-home final project

Grades: Final grades will be determined using the following weights.

Homework	40%
Midterms	30%
Final project	30%

Physics 2200 draws quite the spectrum of students with different background in physics, mathematics, and programming. What ultimately matters in this course is not so much where you end up relative to your classmates but where you, in Week 13, end up relative to yourself in Week 1. Each student's final grade is individually determined at the semester's end after input from the teaching assistant. Efforts and upward trending do not go unnoticed.