

Physics 2200
Computational Physics
Fall semester 2013
Syllabus

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

- numerical and mathematical methods for physics
- programming and programming languages
- analysis of algorithms and computer science
- operating systems used for research

Optional topics (time and students' interest permitting) include Quantum Computing, parallel programming, and GPU programming.

Course Goals:

- To learn methods of solving physics problems numerically
- To understand the advantages and limitations of common numerical techniques
- Practice writing flexible, efficient, and practical code
- Get acquainted with software development tools and systems

Lectures: MoWeFr 12:20 — 13:10 PM in M407, Math Building

Computer Lab: Physics Computer Lab P122, time TBA

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

Instructor: Michael Rozman

email: rozman@phys.uconn.edu
phone: 860 486 5827
office: P327, Physics Building
office hours: TBA and by arrangement

Textbook: No required textbook (handouts will be provided)

Emails: 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 midterm exams and midterm projects and a take-home final project

Grades: Physics 2200 draws students with very different background in physics, mathematics, and programming. For the purpose of grading what matters in this course is where you, in Week 13, end up relative to yourself in Week 1. Efforts, motivation, and upward trending do not go unnoticed; so does a lack of any efforts and progress.

Final grades will be determined with the help of the following weights.

Homework	40%
Midterms	30%
Final project	30%