

Math 480:

Free Open Source Mathematical Software

When	Spring 2011; MWF 2:30–3:20 in SMI 105
Professor	William Stein, wstein@gmail.com , http://wstein.org
Course Webpage	http://wiki.wstein.org/11/480a
Office Hours	MW 3:30–4:30 in Padelford C423
Software	http://flask.sagemb.org or http://sagemath.org
Mailing list	Subscribe to http://groups.google.com/group/480uw11

Your Grade:

- 50% *weekly homework* assignments, assigned and due each Wednesday. Your lowest homework grade will be dropped.
- 20% *take-home midterm*
- 30% *final project*
 - Each student will do a final project.
 - Part of the grade will be based on a presentation during the last week of class.
 - Students are encouraged to work in groups on projects.
 - *You get to choose the topic; start thinking about possibilities now!*
- There is no final exam, and classroom participation does not count directly toward your grade (though participating is a good idea!).

Topics:

- Programming with Python and Cython.
- Debugging, profiling, and optimizing Sage programs.
- Contributing to Sage.
- Pure mathematics: number theory, calculus, linear algebra, combinatorics, graph theory, and abstract algebra.
- Applied mathematics: root finding, arrays, numerical integration, differential equations, and statistics.