

Math 480B: Programming for the Working Mathematician

Spring 2010

Craig Citro and William Stein

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Office Hours: William: F 11-12, Craig: W 10-11

Course webpage: <http://wiki.wstein.org/10/480b>

Meeting time/place: Mueller Hall (MUE) 153, 1:30P - 2:20P, MWF

Course Textbook: No textbook is required, though we'd recommend the following as an excellent Python reference:

- *Python in a Nutshell* by Alex Martelli

There are a number of good resources online, and we'll continue to provide a (seemingly endless) number of references throughout the quarter.

If you're looking for a good introduction to Python, our two favorites are currently:

- *Dive Into Python* by Mark Pilgrim, <http://www.diveintopython.org/>
- "The Python Tutorial" by Guido van Rossum, <http://docs.python.org/tut/>

Course Description: We're going to try to give you a view of the parts of the computer science world that we think are the most important for mathematics. We'll be using the programming language Python, and the math software system Sage. Our goal is for you to all leave this course with the feeling that you now know much more about how to use a computer to help you attack mathematical problems, and enough "programming culture" to know what tools and techniques are available to make that easier.

Of course, this is a Herculean task. Computer science is its own discipline for a good reason – there's a whole world of amazing and interesting things to learn, and there's no way we could cover it all in a quarter. This means that we won't be able to give you all the details of anything we're doing; instead, we'll have to settle for giving you the highlights, providing references if you want to know more, and trying to give you the chance to "get your feet wet" and learn about it all firsthand.

Grading: Your grade will be calculated as follows:

- 50% Homework
- 50% Project

There will be 5 full homework assignments (along with a "0th" assignment, which is really just a questionnaire). The due dates are not yet set in stone, but there will always be a week between when we hand out an assignment and when it's due. Homework should be submitted electronically, via email to uwsage@gmail.com, by the beginning of class on the day it's due.

Late homework will **not** be accepted.

Project details will follow soon.