

Python for Scientific Computing

a weekly graduate seminar on techniques for scientific programming

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Python has seen wide adoption in the scientific community for data analysis, simulation, prototyping, and visualization. It provides a simple, yet powerful means to build applications. This seminar introduces python and its use in scientific computing.

- **Flipped course format:**

- We'll work through interactive notebooks *outside of class*
- Class time will be used for exercises that we discuss together
- Use **slack** for out-of-class communication (and learn how to integrate **github** + python + slack)
- Grading is based on participation

- Sharing examples and discussion

- Advanced undergrads welcomed

- **Topics include:**

- **Python**
- Version control with **git/github**
- **Jupyter** notebooks /workflow management
- The **NumPy** array package
- The **SciPy** tools and basics of numerical methods
- **Matplotlib** and **Plot.ly** for visualization
- **SymPy** for symbolic mathematics
- **Pandas** and the dataframe
- Building applications
- Interfacing with Fortran/C/C++

- **Details:**

- PHY 546, Spring 2017
- Mondays, 3:00-3:53pm

Flipped format this year—students need to bring laptops to class

