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Course web page: https://sites.google.com/site/lamatbootcamp2016/

Topics

This mini-course provides an introduction to techniques for solving scientific problems using computers and the Python programming language. We will cover the basics of UNIX operating systems, and then learn the basics of Python, a programming language widely used in astrophysics. We will cover major Python packages, such as numpy, SciPy and matplotlib.

Course Logistics

Morning 9:30am – 12:30pm Thimann Labs 397
Practical tutorials covering some aspects of the Python language, with mini-exercises.

Lunch 12:30pm – 2pm Terra Fresca
Lunch at a restaurant on-campus. Includes the opportunity to talk to faculty and hear about potential projects.

Afternoon 2pm – 5pm Thimann Labs 397
Extended activities that will flex your newly-acquired skills.

(schedule on 2nd page)

Schedule

Day	Topic
Monday	Introduction of UNIX and Python Ways to use Python: interactive, scripted, notebook Python / SciPy variables and simple data types
Tuesday	Programs and functions Control flow Advanced data types: lists, dictionaries, tuples, etc.
Wednesday	Plotting Image display and manipulation
Thursday	Input, output, file handling Introduction to statistical analysis of data Curve fitting
Friday	Numerics: finding roots of equations Evaluating integrals Ordinary differential equations