MA 591-004: Scientific Programming with Python

Fall 2019 and Spring 2020*

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Time: F 1:55-2:45 PM, **Location**: 316 Leazar Hall
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Course Description Python is a high-level, interpreted language that has emerged as a powerful tool for scientific computing. This 1 credit course will cover software tools required for research in scientific computing. While much of the course will focus on programming in Python, additional topics such as version control, shell scripting, and parallel computing will also be covered. Topics include

- Basics (Variables/Loops/Conditionals/Data Structures).
- Object oriented programming.
- Plotting (matplotlib).
- Scientific Computing packages (NumPy/SciPy).

Target audience The target audience of this course includes graduate and undergraduate students with an interest in scientific computing.

Prerequisites Graduate standing or consent of instructor. Some higher level programming background (e.g., C++/MATLAB) is desirable.

Required Work Grade will be determined based on attendance and two in-class lab sessions.

Textbook No textbook required. Online material will be provided.

*This course will be offered twice: first run in Fall 2019, and a repeat run in Spring 2020.