

Syllabus - PH 464 Scientific Computing II – Fall Term 2018

Course Content

This course focuses on data analysis and machine learning using Python. In addition it will provide an introduction into project management using git as well project documentation and software testing and validation.

Learning Outcomes

Students shall be able to:

- Use python and python libraries to import and visualize diverse sets of data.
- Use a variety of models to analyze data.
- Use the git content management system.
- Write clean python code that is well documented.
- Test and validate their code.
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Course Information

- Course Title PH 464 Scientific Computing II
- Website <http://physics.oregonstate.edu/~schneidg/COURSES/ph464>
- Credits 3
- Instructor Guenter Schneider
- Office Weniger 401A
- Office hours MF -11am-noon and by appointment.

Schedule and Location

- Location Weniger 412
- Hours MF 2pm-3:50pm, 1st class 9/21,
no class on 11/12 (Veterans day) and 11/23 (Day after
Thanksgiving).
- Final exam Wednesday 12/5/2018, noon-2pm, Weniger 412.

Prerequisites

A working knowledge of the Python programming language.

Required Text

Textbooks on programing and computational techniques become outdated quickly, hence this course does not require a textbook. There are however several highly recommended books, some of which are available online for free.

Python Data Science Handbook, Jake VanderPlas, available online:

<https://jakevdp.github.io/PythonDataScienceHandbook/>

Homework

Homework will be given every week and is due one week later. Homework submission is electronically only as detailed in class.

Evaluation of Student Performance

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| • Attendance and in class participation | 10% |
| • Homework | 50% |
| • Final project/exam | 40% |

Statement of Expectations of Student Performance

Students will be expected to abide by all university rules regarding student conduct and academic honesty, in particular, see the [University Rules](http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/final_code_of_student_conduct_updated_1_8_18.pdf) located online at [http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/final code of student conduct updated 1 8 18.pdf](http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/final_code_of_student_conduct_updated_1_8_18.pdf)

Statement Regarding Students With Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.