Syllabus - PH 464 Scientific Computing II - Fall Term 2022

Course Content

This course gives an introduction into modern programming techniques using Python as well tools such as Python notebooks for presentation of results and git for version control.

Learning Outcomes

Upon completion of PH464, students are expected to be able to:

1. to write efficient and clear Python code,
2. to be familiar with different programming paradigms, such as procedural, object oriented and functional programming,
3. to document their code for others to use,
4. use scientific and other Python libraries to solve problems without reinventing the wheel,
5. use version control to manage complex projects.

Course Information

- Course Title PH 464 Scientific Computing II
- Website canvas and github classroom
- Credits 3
- Instructor Guenter Schneider (Guenter.Schneider@oregonstate.edu)
- Office Weniger 401A
- Office hours Wednesdays 11-noon, Fridays noon-1pm

Schedule and Location

- Location Weniger 412
- Hours MF 2pm-3:50pm, 1st class 9/26, no class 11/26 (Thanksgiving).
- Midterm None
- Final exam None (Final project)

Prerequisites

PH365x (not enforced), however a certain skill level in programming in Python is required. This course is not intended as a first introduction to scientific programming

Evaluation of Student Performance

- Weekly exercises (starting week 2) 30%
- Projects (4, about biweekly) 40%
- Final project 30%

Learning resources

Lecture notes will be published on the course canvas site.
Project solutions will be published on the course canvas site.

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 located online at http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/final_code_of_student_conduct_updated_1_8_18.pdf

Additional Ground Rules

For this course it is allowed and encouraged to work together on homework. To facilitate cooperation, weekly discussion boards will be setup on canvas. Working together does not mean copying. Homework solutions from previous years are strictly off-limits. You are on your honor not to use them, and never to share your homework solutions with other students, now or in the future. Likewise, the solutions are for your personal use only. You may keep one copy in your personal files. Each student must write and submit his/her own homework solutions.

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.