

Syllabus

SES494 Exploring Data with Python, SES598 Python for Graduate Research

Lecture time and place

Tuesday, Thursday 10:30-11:45 am, Room PSH 461

Attending lecture is mandatory. The only exception is if you provide advanced notice that you cannot attend due to research-related reasons (e.g., a scientific meeting, field work), religious practices (in accord with ACD304-04), or university sanctioned events (in accord with ACD 304-02)

Instructor

Mingming Li

Email: mingming.li@asu.edu

Office: ISTB4-579

TA: Alexandra Pye, aepye@asu.edu

Office hours

Either immediately after class, by appointment, and Tuesday 9:30-10:15 in ISTB4- 579.

Please feel comfortable contacting me to set up an appointment, but please do not wait until just before the homework is due.

Course Description

Python has become one of the most widely used analytical platforms in data science. This course introduces python coding skills and numerical methods for processing, analyzing, and visualizing big datasets in Earth science, based on command-line interface, vi text editor and shell scripts. Students will develop codes for a wide range of datasets, including topography, earthquakes, volcanic activities, mineral and rock compositions, and spectroscopy of minerals.

No prior programming experience is assumed. Pre-requisites: SES 100 or GLG 101; MAT 266, 272 or 275 with a grade of C or better.

Grading

- Assignments (50%) + Final Exam (30%) + Attendance (20%)
- Graduate students and undergraduate students will be graded separately.
- Assignments: There will be a total of 7-10 coding assignments throughout the semester.
- Final exam:
 - In-class exam for 1.5 hrs
 - The exam consists of a few coding questions.
- Attendance:
 - We will check attendance for each class.

Course Materials

Course materials can be found at: li.asu.edu/python.html

Google search is a great tool to learn coding.

Schedule

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Late Assignments

The most effective way to learn coding and data analysis is to practice using it, so this course will involve a significant portion of homework. Unless otherwise noted, homework is due each Thursday at the beginning of class. Penalties will be given for late homework:

If I receive it	Penalty
Thursday	-5 points
Friday	-10 points
Monday	-20 points
Tuesday	-30 points
Wednesday	-40 points
Thursday (before 10:45 am)	-50 points
Thursday (after 10:45 am)	No credit

For GLG 494 students, out of all of the homework assignment, the lowest scored one will be dropped from grading. Please use this “freebie” wisely. For GLG 598 students, no homework assignment will be dropped.

Almost always, we will have already covered the material before you get your homework assignment. Therefore, you can get started on it immediately. Because of this, and because you are able to drop a homework, there will be no exceptions to the late penalty.

Email communications

All email communication for this class will be done through your ASU email account. You should be in the habit of checking your ASU email regularly as you will not only receive important information about your classes, but other important university updates and information. You are solely responsible for reading and responding if necessary to any information communicated via email.

Syllabus Disclaimer

The course syllabus is an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. You will be notified in a timely manner of any syllabus changes via email.

Standard ASU Syllabus

A Disability Policy:

Disability Accommodations: Qualified students with disabilities who will require disability accommodations in this class are encouraged to make their requests to me at the beginning of the semester either during office hours or by appointment. Note: PRIOR TO RECEIVING DISABILITY ACCOMMODATIONS, VERIFICATION OF THE ELIGIBILITY FROM THE DISABILITY RESOURCE CENTER (DRC) IS REQUIRED. DISABILITY INFORMATION IS CONFIDENTIAL.

Establishing Eligibility for Disability Accommodations: Students who feel they will need disability accommodations in this class but have not registered with the Disability Resource Center (DRC) should contact DRC immediately. Their office is located on the first floor of the Matthews Center Building. DRC staff can also be reached at: 480-965-1234 (V), 480-965-9000 (TTY). For additional information, visit: www.asu.edu/studentaffairs/ed/drc. Their hours are 8:00 AM to 5:00 PM, Monday through Friday.

Academic Integrity Policy

Academic honesty is expected of all students. The possible sanctions for academic dishonesty include, but are not limited to, appropriate grade penalties, course failure, loss of registration privileges, disqualification and dismissal. Please refer to <https://provost.asu.edu/academic-integrity> for more information.

Title IX

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.