

# Course Syllabus

 Edit

## DATA 302


### Introduction to Python

#### Course Details

**Instructor:** Madhumitha Sivakumaran

**Office hours :** Every Monday (4:30 PM - 5:30 PM)

**Zoom link:**

Join from PC, Mac, Linux, iOS, or Android: <https://wsu.zoom.us/j/97375974452?pwd=DhsZASR0Ci8KmRTLfV1AQv3CGV91du.1>  (<https://wsu.zoom.us/j/97375974452?pwd=DhsZASR0Ci8KmRTLfV1AQv3CGV91du.1>)

Meeting ID: 973 7597 4452

Passcode: 111112






**IMPORTANT:** Visit the course "[More Information](#)"

([https://wsu.instructure.com/courses/1740340/external\\_tools/retrieve?](https://wsu.instructure.com/courses/1740340/external_tools/retrieve?display=borderless&url=https://apps.aoi.wsu.edu/coursemoreinfo/course_more_info.aspx)

[display=borderless&url=https://apps.aoi.wsu.edu/coursemoreinfo/course\\_more\\_info.aspx](https://apps.aoi.wsu.edu/coursemoreinfo/course_more_info.aspx)) page to review details about textbooks, course materials, media, proctor requirements, and any fees associated with this course.

There is no required textbook to be purchased for this course, as we will be making use of open source and online materials all semester. The following textbooks below are available as free .pdfs and will be referenced during lectures and assignments. You may find the texts on the remainder of the list to be useful additional supplementary resources but access to them will not be required. Data sets and programming scripts for the course will be uploaded to the course webspace.

**Open-source resources:**


- [Problem Solving with Python](https://problemsolvingwithpython.com/) 
- [Automate the boring stuff](https://automatetheboringstuff.com/) 
- [Python Data Science Handbook](https://jakevdp.github.io/PythonDataScienceHandbook/) 
- [Think Python](https://greenteapress.com/thinkpython2/html/) 
- [A Bite of Python](https://python.swaroopch.com/) 
- [Dive into Python 3](https://diveintopython3.net/) 

# Course Overview

This course provides an introduction to the programming in python with a goal of supporting you in later coursework in the Data Analytics major. A main goal of the course is that you will have plenty of opportunities to work with real data and the Python programming language. Thus, we will integrate standard introductory topics in programming with examples that incorporate a variety of datasets.

## Course Materials

This course provides training and examples using the Python programming language. Python is an open source language with a robust ecosystem of packages for data analytics that has become the predominant programming environment in data science<sup>[1]</sup> **No previous programming experience or knowledge of statistical software tools will be assumed. We will start with the basics of Python 3 and build up familiarity with standard data science libraries including numpy and pandas.**

[1] In 2018, Kaggle surveyed 23,859 data scientists and found that 83% of them used python on a regular basis and 54% of them used python most frequently among all languages: [link](https://businessoverbroadway.com/2019/01/13/programming-languages-most-used-and-recommended-by-data-scientists/).   
[\(https://businessoverbroadway.com/2019/01/13/programming-languages-most-used-and-recommended-by-data-scientists/\)](https://businessoverbroadway.com/2019/01/13/programming-languages-most-used-and-recommended-by-data-scientists/)

## Student Learning Outcomes (SLOs)

Students who successfully complete the course will be able to:

- Create and understand simple Python programs
- Create functions and use standard flow-control procedures in Python
- Demonstrate familiarity with Python's pre-built data types and packages
- Load and summarize data in Python
- Perform basic data cleaning operations in Python
- Merge, transform, and aggregate datasets in Python
- Create simple visualizations in Python
- Solve simple problems using program design in Python

---

## Course Work

This course is intended to be self-paced and you are expected to work through all of the provided examples and materials. Each week there will be several suggested readings that go along with the material. Several of the textbook sections conclude with review questions, and while you are not required to submit answers to these, they can serve as an invaluable source of feedback on your progress and learning.

## Collaboration Policy

For the assignments you are encouraged to work with other students in the class. However, the work that you submit should be your own and in particular should be written in your own words and communicate your own understanding of the solution. If you do collaborate, please list the names of the other students you worked with on your submission. Obtaining solutions from external sources like chegg or coursehero for course problems will be considered a violation of the academic integrity policy with consequences described below.

## Expectations for Student Effort

Students should expect to spend a minimum of 3 hours per week for each online 1-credit course, engaged in the following types of activities: reading, listening to/viewing media, discussion, or conversation in the LMS or other academic technology, conducting research, completing assignments and reviewing instructor feedback, studying for and completing assessments, etc.

## Grading

Grading is Pass/Fail. Students need to complete all the assignments to pass the course.

## Assignments

**Weekly Assignments:** Each course module includes a set of questions for you to answer, providing some additional practice with the material. These problem sets are due weekly, and should be submitted in the form of a Jupyter notebook, with text responses formatted in markdown cells. The questions will be a mixture of short answer questions designed to help you review the new concepts and programming questions that will require you to modify existing scripts or write your own code.

---

## Instructor Interaction

We will use the [Ask the Instructor discussion forum](https://wsu.instructure.com/courses/1740340/discussion_topics/8899526) ([https://wsu.instructure.com/courses/1740340/discussion\\_topics/8899526](https://wsu.instructure.com/courses/1740340/discussion_topics/8899526)) for course-related questions. This is a great place to ask questions from your peers, as well as to get feedback on your ideas. Announcements and other official communications will be posted on Canvas as well as sent to your official WSU email accounts. You should check these messages regularly to stay informed about upcoming due dates and updates to the syllabus.

Please reserve email for more personal inquiries (e.g., grades, etc.). Please include the name of the course in the subject line for any messages concerning the course. I will commit to responding within 48 hours but this does mean that queries sent immediately before a deadline may not receive substantive responses in time to be directly helpful, so please plan ahead.

---

## Academic Integrity Instructor Statement

The instructor has the latest information about interaction and feedback.

---

## Late Work Policy

The instructor has the latest information about a late work policy.

[Go to top of page](#)

---

## Incomplete Grade Policy (Academic Rule 90h)

Incompletes are granted only with permission of the instructor and are subject to the following guidelines:

1. Students must request an incomplete in writing or by e-mail from the instructor before the end of the semester.
2. The request must be signed and dated by the student (or identified by student's e-mail address) and must explain the reasons behind the request for the incomplete.
3. In order to be considered for an incomplete, there are two main conditions:
  1. A student must complete a minimum of 75 percent of the assigned course work.
  2. A student must have a mathematical possibility of scoring a 60 percent or above for the entire course.
4. If extraordinary circumstances (e.g., family emergency, serious illness) are involved and are documented to the instructor's satisfaction, the professor/ instructor retains the discretion to grant an incomplete even if the minimum conditions outlined in item 3 above are not met.

If an incomplete is granted, the standard WSU policy applies (i.e., ALL work must be completed within one full year from the end of the enrollment semester at issue, unless a shorter time is specified by the instructor. Otherwise, an automatic grade of "F," or failing, will be entered on the student's transcript).

---

## Credit Hour Equivalent

Academic credit is a measure of the total minimum time commitment required of a typical student in a specific course. For the WSU semester system, one semester credit is assigned for a minimum of 45 hours of student effort. See Academic regulation 27.

For a 15-week course, students should expect to spend a minimum of 9 hours per week for each online 3-credit course engaged in activities including, but not limited to: reading, listening to/viewing media, completing assignments and reviewing instructor feedback, contributing to discussions, conducting research, studying for and completing assessments, etc.

For a 7-week course, students should expect to spend a minimum of 19 hours per week for each online 3-credit course engaged in the activities as listed above.

## For Graduate Students

The Graduate Student Rights and Responsibilities describes procedures for channeling graduate student complaints, grievances, and concerns to faculty, staff and administrators for appropriate action. In conjunction with this document, graduate students must adhere to the Graduate School's Policies and Procedures. While these rights and responsibilities outline the complaint process, students are encouraged to use the Graduate School Deans for guidance and advice on conflicts that may arise at any point during their course of study at the University.

---

## Academic Integrity

You are responsible for reading WSU's [Academic Integrity Policy](https://communitystandards.wsu.edu/policies-and-reporting/academic-integrity-policy/), which is based on [Washington State law](https://apps.leg.wa.gov/wac/default.aspx?cite=504-26-202). If you cheat in your work in this class you will:

- Incur a penalty up to and including failing the assignment, exam, quiz, course requirement, or the course itself.
- Be reported to the [Center for Community Standards](https://communitystandards.wsu.edu/).
- Have the right to appeal my decision.
- Not be able to drop the course or withdraw from the course until the **appeals** process is finished.

If you have any questions about what you can and cannot do in this course, ask me.

If you want to ask for a change in my decision about academic integrity, use [the form](https://cm.maxient.com/reportingform.php?WashingtonStateUniv&layout_id=10) at the [Center for Community Standards](https://communitystandards.wsu.edu/) website. You must submit this request within 21 calendar days of the decision.


---

## Copyright

Any course-related materials, presentations, lectures, etc. are the instructor's intellectual property and may be protected by copyright. The use of University electronic resources for commercial purposes, including advertising to other students to buy notes, is a violation of WSU's computer abuses and theft policy (WAC 504-26-218). Selling class notes through commercial note taking services without written advance permission from the faculty, could be viewed as be as copyright infringement and/or academic integrity violation, WAC 504-26-010 (3)(a,b,c,i).

---


# Academic Regulations

Students enrolled in online courses are subject to the same University academic regulations as on-campus students. For the most accurate and up to date information go to [Academic Regulations](https://registrar.wsu.edu/academic-regulations/)  [\(https://registrar.wsu.edu/academic-regulations/\)](https://registrar.wsu.edu/academic-regulations/).

[Go to top of page](#)

---

## Online Collaboration


The essence of education is exposure to diverse viewpoints. You will engage with people with vastly different opinions and backgrounds. You are encouraged to disagree with the substance of others' ideas and opinions but do so with an active sense of respect for one another, and without losing focus on the topic at hand. Personal attacks, inflammatory statements, flaming, trolling, and disruption of the discussion do not have a place in academic discourse. Postings must comply with University policy on use of computing resources, including those regarding harassment and discrimination, as well as conform to the [WSU Community Standards](https://communitystandards.wsu.edu/home/) .


Your instructors will promote high-quality academic discussions by removing any posts they view as disruptive of the educational process and alerting students whose posts have been removed that they have violated course expectations. Students who continue to misuse the discussion boards after a warning may be subject to removal of access rights, course failure, and referral to the Office of Community Standards.

[Review the netiquette guidelines.](https://online.wsu.edu/currentstudent/netiquette-guidelines/)  [\(https://online.wsu.edu/currentstudent/netiquette-guidelines/\)](https://online.wsu.edu/currentstudent/netiquette-guidelines/)

---


## Cougar Community and Reimbursement Options

[Student Involvement](https://online.wsu.edu/currentstudent/student-involvement/)  [\(https://online.wsu.edu/currentstudent/student-involvement/\)](https://online.wsu.edu/currentstudent/student-involvement/): Explore all the ways to become involved at WSU Global Campus and get connected with the Cougar community.

[Reimbursements](https://online.wsu.edu/aswsug/reimbursements/)  [\(https://online.wsu.edu/aswsug/reimbursements/\)](https://online.wsu.edu/aswsug/reimbursements/): ASWSU Global offers a variety of reimbursements to current S&A fee paying Global Campus students, including internet, childcare, mental health and wellness, a grocery voucher program and more.

---

## Mental Health Resources and Support

[Mental Health](https://online.wsu.edu/currentstudent/mental-health/)  [\(https://online.wsu.edu/currentstudent/mental-health/\)](https://online.wsu.edu/currentstudent/mental-health/): Life as a student can be stressful. WSU Global Campus has mental health resources that may help.

**988 Suicide & Crisis Hotline** [↗\(https://988lifeline.org/\)](https://988lifeline.org/): 24/7 call for yourself or if you are concerned about a friend, acquaintance, or family member.

---

## Technical Support

The **WSU Global Campus Current Student** [↗\(https://online.wsu.edu/currentstudent/\)](https://online.wsu.edu/currentstudent/) site has all the non-content and administrative and contact related information you need to be a successful online learner as well as **study tips and skills for success** [↗\(https://online.wsu.edu/currentstudent/student-support/skills-for-success/\)](https://online.wsu.edu/currentstudent/student-support/skills-for-success/).

Before contacting Technical Support please visit our **Equipment Requirements web page** [↗\(http://online.wsu.edu/currentStudent/supportTeam/techRequirements.aspx\)](http://online.wsu.edu/currentStudent/supportTeam/techRequirements.aspx) to ensure your system meets our computer requirements and test your connection.

Technical support is available 24/7

A member of our technical support team will assist you or direct your request to the appropriate group. The technical support team is NOT able to answer questions about course content or procedures (e.g., assignments, grades).

Please visit our **Tech Support web page** [↗\(https://online.wsu.edu/techready/tech-support/\)](https://online.wsu.edu/techready/tech-support/) for up to date hours and contact information.

---

## Library Support

All students enrolled in Washington State University online courses can use the WSU Libraries online databases and receive reference and research assistance from their home campus. Students can also borrow books and other circulating material as well as access full-text journal articles.

General Library Links by Campus


- **Pullman Library Support** [↗\(http://libraries.wsu.edu/\)](http://libraries.wsu.edu/)
  - **Global Campus Library Support** [↗\(http://libguides.libraries.wsu.edu/global\)](http://libguides.libraries.wsu.edu/global)
  - **Vancouver Library Support** [↗\(https://library.vancouver.wsu.edu/\)](https://library.vancouver.wsu.edu/)
  - **Tri-Cities Library Support** [↗\(http://tricities.wsu.edu/library\)](http://tricities.wsu.edu/library)
  - **Library Support at Spokane – Riverpoint and Nursing at Yakima** [↗\(https://spokane.wsu.edu/library/\)](https://spokane.wsu.edu/library/)
  - **College of Nursing Library Support** [↗\(https://nursing.wsu.edu/library-services/\)](https://nursing.wsu.edu/library-services/)
- 

## Online Tutoring


As a WSU student enrolled in an undergraduate course, you have FREE unlimited access to Online Tutoring. This is not a course requirement, but a resource for you to utilize as needed.

With three ways to access a tutor you can choose the one that best fits your needs:

- **Submit a paper:** Writing Lab tutors will respond to papers in ANY academic subject. Just submit your paper, ask specific questions on the submission form, and a tutor will respond within 24-48 hours.
- **Live tutoring:** eChat rooms allow students to meet with tutors in one-on-one tutoring sessions via a fully interactive, virtual online environment.
- **Leave a question:** Students can leave specific questions for a tutor in any of our subjects by taking advantage of our eQuestions option. Our tutors will respond to your question within 24-48 hours.


More details and the list of available tutoring subjects can be found at [www.eTutoringOnline.org](https://www.etutoringonline.org)  (<https://www.etutoringonline.org/>).

As a WSU student enrolled in a graduate level course, you have FREE unlimited access to writing support through eTutoringOnline. This is not a course requirement, but a resource you may utilize as needed.

Writing Lab tutors will respond to papers in ANY academic subject. If you're working on a paper for ANY of your courses our tutors can help you. Just submit your paper, ask specific questions on the submission form, and a tutor will respond within 24-48 hours. For more information visit [www.eTutoringOnline.org](https://www.etutoringonline.org)  (<https://www.etutoringonline.org/>).

---

## Important Dates and Deadlines

Students are encouraged to refer to the [academic calendar](https://registrar.wsu.edu/academic-calendar/)  (<https://registrar.wsu.edu/academic-calendar/>) often to be aware of critical deadlines throughout the semester.

[Go to top of page](#)

---

Please see the Course Schedule for the most comprehensive list of due dates.

## University Syllabus

Students are responsible for reading and understanding all university-wide policies and resources pertaining to all courses (for instance: accommodations, crisis resources, policies on discrimination or harassment), which can be found in the university syllabus:



<https://syllabus.wsu.edu/university-syllabus>  (https://syllabus.wsu.edu/university-syllabus)