Course Syllabus

INFOTC 4401 Python 1

An introduction to the **Python 3** ⤷ **(https://www.python.org)** programming language.

The following topics are covered:

- Types of programming languages and where Python fits.
- Analyzing problems and designing solutions.
- Program architecture and code organization.
- Installing and configuring Python and Python IDLE.
- Installing and configuring Microsoft VS Code for Python development.
- Working with Python package and version management tools.
- Variables and data types.
- Decision structures and Boolean logic.
- Repetition structures.
- Writing and using functions.
- Working with strings.
- Using Lists and tuples.
- Using dictionaries and sets.
- Mathematical expressions and precision.
- File input and output.
- User input and output.
- Parsing data.
- Exception handling.
- Fundamental object-oriented concepts.
- Debugging.

You must own, or have access to, a computer to take this course on which you can install software.

Note: Python 2 is a different programming language than Python 3. **Python 2 is no longer supported.** ⤷ **(https://www.python.org/doc/sunset-python-2/)** You must use Python 3 for this course.

Format: online

Credit hours: 3

Prerequisites: none

Class schedule:

The work is completed on Canvas. One module is completed each week.

Academic calendar: **https://registrar.missouri.edu/academic-calendar/** ⤷ **(https://registrar.missouri.edu/academic-calendar/)**

Assignment, quiz and exam solutions are posted the week following their assignment. This means there can be no extensions on assignments. Assignments are to be submitted by 11:59 pm on the Friday due date each week to receive full credit. A grade is reduced by 15% for each day it is late for up to two days and is assigned a 0 by the graders after that. **To handle the situation where a student is unable to complete an assignment or receives a low grade on an assignment, retrospective, or quiz due to unforeseen circumstances, the lowest four (4) scores in Assignments, the lowest six (6) scores in Retrospectives, and the lowest two (2) scores in Quizzes are dropped and the remaining scores are used to determine the grade for that category. If a submission is a copy of the solution, a copy of a post on Chegg, or of another person's work, a grade of 0 is assigned and the incident will be reported. Do not request exceptions, the above is designed to deal with situations that keep you from completing your work in a timely manner.**

The following is the schedule of the modules:

Module 1: Saturday, January 14 - Friday, January 20
Module 2: Saturday, January 21 - Friday, January 27
Module 3: Saturday, January 28 - Friday, February 3
Module 4: Saturday, February 4 - Friday, February 10
Module 5: Saturday, February 11 - Friday, February 17
Module 6: Saturday, February 18 - Friday, February 24
Module 7: Saturday, February 25 - Friday, March 3
Module 8: Saturday, March 4 - Friday, March 10
Module 9: Saturday, March 11 - Friday, March 17 - midterm exam taken
Module 10: Saturday, March 18 - Friday, March 24 - midterm project due
Spring Break: Saturday, March 25 - Sunday, April 2
Module 11: Saturday, April 1 - Friday, April 7
Module 12: Saturday, April 8 - Friday, April 14
Module 13: Saturday, April 15 - Friday, April 21
Module 14: Saturday, April 22 - Friday, April 28
Module 15: Saturday, April 29 - Friday, May 5 - final exam taken and final project due

Assignments:

All assignments (quizzes, exams, activities, challenges, and projects) must be completed by the due date/time to receive full credit. A grade is automatically reduced by 15% for each day a submission is late for a maximum of two days. Submissions that are received more than two days after the due date receive a 0.

You must fulfill the requirements of an assignment submission to receive credit for that assignment. Any information you are asked to provide and files you are asked to supply must be present to receive credit

for the assignment. If you are asked to follow a specific procedure or utilize a convention you must do so to receive credit. For example, if you are asked to name a project in a specific way and you do not follow the rules provided you may receive a zero on the assignment. If you are unsure of what you are to do you must ask and receive clarification before submitting your work.

Textbooks:

There is no required textbook for this course. The materials required for the course are provided online.

Websites:

The following are some of the sites that will be used during the course. Other sites are provided during the course.

This course utilizes Canvas for course materials, communications, and assignments:
https://courses.missouri.edu ⤷ **(https://courses.missouri.edu)**

The Python web site is the source for downloading Python and accessing online documentation. Python 3 is used in this course.
https://www.python.org ⤷ **(https://www.python.org)**

Visual Studio Code
https://code.visualstudio.com/ ⤷ **(https://code.visualstudio.com/)**

Hardware and Software:

You must own, or have access to, a macOS or Windows computer to take this course on which you can install software. You need to be able to watch online videos because some of the course content is video-based. If you can watch YouTube videos at HD resolution you have the needed ability. All of the required software is available at no cost.

Instructor(s):

Dale Musser, Ph.D.
Instructor
Associate Teaching Professor, IT
Office: 602 3rd Street, San Francisco, CA 94107
415.279.4040 cell (voice/text/Apple Messages)
musserda@missouri.edu (mailto:musserda@missouri.edu)
https://dalemusser.com ⤷ **(https://dalemusser.com)**
https://www.linkedin.com/in/dalemusser/ ⤷ **(https://www.linkedin.com/in/dalemusser/)**

Learning Support:

The course on Canvas has a module, at the top of the list of modules, called **Support - How to Get Help** that provides information on how to get support for this course. The instructors and learning support staff monitor the support servers on Discord as well as the email address for the course

An email account dedicated to this course has been established where you are to email the learning support staff and the instructor for any technical questions regarding challenges, quizzes, the final project, and receiving help for anything you might need. This email account is monitored by all the learning support staff and the instructors allowing any of us to respond. Please use this email account:

infotc4401@missouri.edu (mailto:infotc4401@missouri.edu)

(mailto:infotc4401@missouri.edu) If you have any course requests, disability accommodation requests, complaints, concerns, or grade disputes, email the instructor, Dale Musser, directly at:

musserda@missouri.edu (mailto:musserda@missouri.edu)

(mailto:musserda@missouri.edu) You should expect emails to be responded to within 24 hours during weekdays and by Tuesday if emailed over the weekend. If you don't get a reply in that time you should follow-up. If needed, text the instructor at the phone number indicated above in this syllabus.

Personal Learning Assistants (PLAs) and Graduate Teaching Assistants (GTAs) are undergraduate and graduate students who are employed to support courses. They are part of the learning support staff for the course.

The learning support staff hold online office hours on Discord. Information about online office hours and how to setup and use Discord is provided on Canvas in the **Support - How to Get Help** module.

Grading:

The course grade is calculated as a weighted average of grades in seven categories. In each category, a grade is earned as a percentage from 0% to 100% that is based on an equal averaging of items in that category. The percentage grade for each category is multiplied by the weighting percentage to determine the category's contribution to the total grade. The sum of contributions from the seven categories yields the final grade.

Categories and Weights

Assignments: 15%
Retrospectives: 10%
Quizzes: 15%
Midterm Exam: 15%
Midterm Project: 15%
Final Exam: 15%
Final Project: 15%

Grading Scale

A+ = 98–100%, A = 93–97%, A- = 90–92%
B+ = 87–89%, B = 83–86%, B- = 80–82%
C+ = 77–79%, C = 73–76%, C- = 70–72%

D+ = 67–69%, D = 63–66%, D- = 60–62%
F = 59% and below

Late Work

All assignments (quizzes, exams, activities, challenges, and projects) must be completed by the due date/time to receive full credit. A grade is automatically reduced by 15% for each day a submission is late for a maximum of two days. Submissions that are received more than two days after the due date receive a 0.

Challenge Grading

The grade for a challenge is based on whether or not a valid attempt was made and does not reflect correctness. A grade of 100% is assigned if it is determined that a valid attempt at the challenge was made. You should compare your solutions to those provided in the retrospective to see how you did. Look for what you did right! Look for things you were missing or mistakes that have been made. Look to see a different way to achieve something. The grade does not reflect correctness of your submission. That is up to you to assess for yourself by reviewing the solution in the retrospective and comparing it to your own. If the work submitted is not a valid attempt, a 0 is assigned by the graders.

Midterm Project and Final Project Grading

The midterm project and the final Project are graded on correctness and the quality of the work. Grades for challenges, activities, and retrospectives will be posted one week after the due date. Quizzes and exams are auto-graded in Canvas and grades will be posted immediately once the quiz or exam is submitted.

Grades Used in Final Grade Calculation

To handle the situation where a student is unable to complete an assignment or receives a low grade on an assignment, retrospective, or quiz due to unforeseen circumstances, the lowest four (4) scores in Assignments, the lowest six (6) scores in Retrospectives, and the lowest two (2) scores in Quizzes are dropped and the remaining scores are used to determine the grade for that category.

Course Policies:

- All challenges, activities, quizzes and exams have to be submitted by their due dates to receive full credit.
- You are responsible for keeping up-to-date on the work you are to be doing for this course. It is up to you to complete the work in a timely manner.
- You must fulfill the requirements of a challenge submission to receive credit for that challenge. Any information you are asked to provide, or files you are asked to supply, must be present to receive credit for the challenge.
- Submitting a copy of another person's work, a posted solution, or a solution from Chegg will result in a 0 being assigned and the incident will be reported.

Netiquette & Community Policies: The University of Missouri-Columbia is committed to providing courses that meet the highest standards of excellence with the mission of preparing students to become productive members of society and good citizens of the world (**University Standard of Conduct** ⤷ **(https://www.umsystem.edu/ums/rules/collected_rules/programs/ch200/200.010_standard_of_conduct)**), University of Missouri-Columbia. As such, students are expected to maintain a standard of conduct. A challenge in the online classroom is understanding the meaning of communications without the visual and auditory clues from the speaker. Netiquette provides some basic guidelines about how to behave in an online format, such as not using all capital letters online because that represents the vocal equivalent of shouting. In addition to these basics, please remember that this is an academic course where much of the work is taking place online. It is not the same as communicating with friends via social media, nor is it equivalent to sending text messages to friends or colleagues. These guidelines below will help you reduce online miscommunications in this course.

General Netiquette Rules:

- **Make the Connection**. Electronic communication (email, discussion forums, Discord, etc.) is how you share ideas with other participants in this course. Online environments can separate the person from the ideas received in this course. Remember, like you, someone is on the other side of an email or discussion posting. Communicate with fellow participants as you would in a face-to-face course.
- **Be Professional**. Your coursework is more than learning facts; you are preparing for a career. You are learning to interact with your fellow course participants as you would in your future professional life. Your conduct in this course should reflect this. Your communication should follow standard rules for grammar and spelling (unless in an online chat) and be clear, concise and intelligent.
- **Have Opinions**. Everyone is entitled to have an opinion. In discussion forums, everyone is encouraged to share them.
- **Respect Disagreement**. People have the right to disagree with you. However, disagreement should never be personal. Online discussions are a means to share ideas and practice the skill of persuasion. Persuasive speech cannot be achieved with hurtful, hateful or inappropriate language. Review your posts before you publish and reread them for unintended meanings.
- **Ask Questions**. Cultural influences can influence communication in terms of phrasing and word choice. The lack of visual and auditory clues may affect meaning, as well. Before jumping to conclusions, ask for clarification.
- **Be Forgiving**. For the majority of participants, online communication is straightforward. Sometimes unintended meanings are conveyed.

If Conflicts Arise: Online behavior is not always perfect. In fact it can venture into disrespectful and hurtful areas and needs to be addressed. If you experience any questionable or outright inappropriate behavior from your fellow course participants, please contact the instructor.

This Netiquette policy was adapted from Howard Community College's [**http://www.howardcc.edu** ⤷ **(http://www.howardcc.edu)**] and Virgina Shea's **http://www.albion.com** ⤷ **(http://www.albion.com)**).

Expectations for Students:

- Be responsible for yourself, your work, and your actions.
- Attend to the work you have to do. Do not put it off. Make it part of your schedule.
- Do not try to do all of the work just before a deadline.
- Ask questions if you do not understand something.
- Engage in discussions with other students and faculty.
- Ask for help if you get lost. Use the learning support staff.
- Communicate!
- Do not wait until late in the semester to address problems.
- Do not ask the instructor to break class policies.
- Plan.
- Be creative, curious, inventive, resourceful, and proactive.
- Be playful in your approach to learning and the work you do.
- Play nice with others.
- Have fun.

Inclusive Environment, Respect, and Reporting:

It is of principle importance that the faculty and supporting staff of this course foster an inclusive educational environment for all students to thrive. This means an *active* process of inclusion. Disrespect and discrimination of any kind are not tolerated. The instructor of this course pledges to provide to the best of their ability an inclusive course with appropriate materials that meets the needs of all students, while also engaging and representing voices, perspectives, and experiences of diverse and underrepresented backgrounds. As is the case with the faculty and student support team, all students are expected to be facilitators of this practice and principle. In the event that students utilize a collaborative tool outside the scope of this course, it is expected that faculty, staff, and students alike follow these policies regardless of platform. It is important that any breach of this behavior by a student be reported to the course instructor, and the director of the IT Program as soon as possible.

Statement About Academic Dishonesty from the Director and Director of Undergraduate Studies of the IT Program:

According to the Faculty Handbook, it is mandatory for every faculty member of the University of Missouri to report academic dishonesty to the Office of Academic Integrity within the Provost's office. This includes any cheating, plagiarism or sabotage as defined by the Student Standard of Conduct for Academic Integrity. **https://oai.missouri.edu/students/** **(https://oai.missouri.edu/students/)** Your instructor may go into greater detail on what constitutes academic dishonesty for this course.

According to the Office of Academic Integrity's website, "Once an instructor suspects that a student has violated academic integrity standards, the instructor must notify the student within 10 calendar days that the suspected misconduct will be reported to the Office of Academic Integrity." **https://oai.missouri.edu/reporting/** **(https://oai.missouri.edu/reporting/)**

You can find out more about this topic as well as what to do if you are accused of academic dishonesty at MU's Office of Academic Integrity's website. **https://oai.missouri.edu/** ⤷ **(https://oai.missouri.edu/)** .

What Constitutes Cheating

If you do not do your own work in this class, it is considered cheating. There is metadata that we check to see if you did your own work or not. Below are ways that student have been caught cheating.

- Turning in an older assignment.
- Turning in a classmate's assignment.
- Having someone else do your work for you.

At a minimum if you are caught cheating you will get a zero on the assignment and get turned into the provost office. However, depending on the severity, you may get expelled. Bottom line, don't cheat.

Intellectual Property

All course materials including but not limited to the syllabus, course assignments, study guides, learning guides, online lectures, videos, lecture content, and lab book (i.e. course pack) are property of the instructor OR University and may not be shared online or distributed in any manner to others. Students are prohibited from posting course materials, syllabi, assignments, or notes online and from selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the professor teaching this course. Doing so will constitute both an academic integrity violation and a copyright violation. Violations of copyright laws could subject you to civil penalties and criminal liability. Violations of academic integrity may subject you to disciplinary action under University policies.

Decreasing the Risk of COVID-19 in Classrooms and Labs

If you have tested positive for COVID-19 or have been identified as someone who needs to quarantine, do not attend class in person until the mandated period for isolation or quarantine has passed. Your instructor will work with you on arrangements to access class material while you are in isolation or quarantine.

Additionally, if you are experiencing any COVID-related symptoms, or are otherwise feeling unwell, do not attend in-person classes and contact your health care provider and/or student health immediately. COVID symptoms include: fever greater than 100.4 or chills; cough, shortness of breath or difficulty breathing; fatigue; unexplained muscle or body aches; headache; new loss of taste or smell; sore throat; congestion or runny nose; nausea or vomiting; diarrhea.

Instructors or students with concerns about how a student is following any University-mandated COVID-19 policies and protocols should report those concerns to the Office of the Dean of Students. Concerns can be documented on a COVID Safety Measures Reporting Form.

Please consult Show Me Renewal for further guidelines. This statement will be updated as information changes.

Academic Integrity

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor or the **Office of Academic Integrity** ⤷ **(https://oai.missouri.edu/)** .

Students are expected to adhere to this honor pledge on all graded work whether or not they are explicitly asked in advance to do so: "I strive to uphold the University values of respect, responsibility, discovery, and excellence. On my honor, I pledge that I have neither given nor received unauthorized assistance on this work."

Academic Inquiry, Course Discussion and Privacy

When students record something that happens in a course (a lecture, class discussions, meetings, etc.) it has an impact on the rights of the people captured in that recording. For example, the instructor and the University may have rights to the intellectual property contained in that recording. At the same time, another student who may have been recorded has the right to privacy. In order to protect these rights, MU employs a policy (called **"Executive Order No. 38"** ⤷ **(https://www.umsystem.edu/ums/rules/collected_rules/programs/ch200/200.015_academic_inquiry_course_**) to govern both situations you may encounter while taking a course – when an instructor allows recordings and when they do not.

Instructors should inform students which applies to their course:

- In this class, students may not make audio or video recordings of course activity, except students permitted to record as an accommodation under **section 240.040** ⤷ **(http://www.umsystem.edu/ums/rules/collected_rules/programs/ch240/240.040_policy_related_to_studen** of the Collected Rules.
- In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded.

If the instructor doesn't specifically prohibit recording course activity, then the students are allowed to record and the same prohibitions regarding distribution apply.

Students who violate this policy are subject to discipline in accordance with provisions of **section 200.020** ⬁ (http://www.umsystem.edu/ums/rules/collected_rules/programs/ch200/200.020_rules_of_procedures_in_stud of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

FERPA

The **Family Educational Rights and Privacy Act** ⬁ (https://registrar.missouri.edu/policies-procedures/ferpa/) (FERPA) of 1974 is a federal law designed to protect the privacy of educational records; to establish the rights of students to inspect and review their education records; and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. The law applies to any individual who is or has been in attendance at an institution *and* regarding whom the institution maintains educational records. Once students have matriculated to the University of Missouri, i.e. enrolled in course work, FERPA rights transfer to the student, regardless of the student's age.

Students can enable certain individuals to have access to their education records by signing a **FERPA waiver** ⬁ (https://registrar.missouri.edu/policies-procedures/ferpa/) . The consent must specify records to be disclosed, state the purpose of the disclosure and identify the party or class of parties to whom the disclosure must be made.

Intellectual Pluralism

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the departmental chair or divisional director, the **Office of Academic Integrity** ⬁ (https://oai.missouri.edu/about/intellectual-pluralism/) , or the **MU Equity Office** ⬁ (https://civilrights.missouri.edu/) .

Mental Health

The University of Missouri is committed to supporting student well-being through an integrated network of care, with a wide range of services to help students succeed. The MU Counseling Center offers professional mental health care, and can help you find the best approach to treatment based on your needs. Call to make an appointment at 573-882-6601. Any student in crisis may call or go to the MU Counseling Center between 8:00-5:00 M-F. After hours phone support is available at 573-882-6601.

Visit our website at **https://wellbeing.missouri.edu/** ⬁ (https://wellbeing.missouri.edu/) to take an online mental health screening, find out about workshops and resources that can help you thrive, or learn how to support a friend. Download Sanvello, a phone app that teaches skills and strategies to help you maintain good mental health. Log in with your Mizzou e-mail to unlock all the tools available through Sanvello at no additional cost to you.

Netiquette

Your instructor and fellow students wish to foster a safe online learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Our differences, some of which are outlined in the University's nondiscrimination statement, will add richness to this learning experience. Please consider that sarcasm and humor can be misconstrued in online interactions and generate unintended disruptions. Working as a community of learners, we can build a polite and respectful course ambiance.

Religious Holidays & Accommodations

Many religious faiths are represented in the student body. The University of Missouri does not restrict student free exercise of religion, unless 1) the restriction is in the form of a rule of general applicability, and does not discriminate against religion or among religions; and 2) it can be demonstrated that the application of the restriction is essential to furthering a compelling university interest, and is not unduly restrictive considering the relevant circumstance. The policy of the University attempts to strike a reasonable balance between accommodating the religious practice of students and meeting academic needs and standards.

Consult IDE's **Guide to Religions** ⧉ **(https://diversity.missouri.edu/guide-to-religions/)** for the form that can be used to notify an instructor of an absence associated with religious practice. Students are expected to notify their instructor(s) by completing and submitting this form in a manner that is consistent with the procedure outlined in the university's policy on student religious accommodation. Providing false information regarding sincerely held religious practice is a violation of the university's Standard of Conduct and will not be tolerated.

Nondiscrimination Policy (Prohibited Discrimination)

The University of Missouri does not discriminate on the basis of race, color, national origin, ancestry, religion, sex* (including gender), pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, and any other status protected by applicable state or federal law. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. *Sex discrimination includes rape, sexual assault, sexual harassment, unwanted touching, stalking, dating/domestic violence, stalking, and sexual exploitation. Retaliation for making or supporting a report of discrimination or harassment is also prohibited.

If you experience discrimination or sexual violence, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at **civilrights.missouri.edu** ⧉ **(https://civilrights.missouri.edu/)** or call 573-882-3880. You also may make an anonymous report online.

If you are a survivor, or someone concerned about a survivor, and need immediate information on what to do, see **RSVP Resources page.** ⧉ **(https://rsvp.missouri.edu/students/resources/)** Both the **Office for Civil Rights & Title IX** ⧉ **(https://civilrights.missouri.edu/)** and the **RSVP Center** ⧉

(https://rsvp.missouri.edu/) can provide assistance to students who need help with academics, housing, or other issues.

In the event that you choose to write or speak about having experienced any of these forms of prohibited discrimination or harassment, Mizzou policies require that, as your instructor, I share this information with the MU Office for Civil Rights & Title IX. They will contact you to offer information about resources, as well as your rights and options as a member of our campus community.

Students with Disabilities

The goal of the University of Missouri is to ensure an inclusive learning environment for all students. **The University of Missouri Disability Center** ⏵ **(https://disabilitycenter.missouri.edu/)** provides services and accommodations for students to participate fully in the learning experience and to experience equitable evaluation of their performance. Students (including online students) with a documented disability can contact the Disability Center to establish an **Accommodation Plan** ⏵ **(https://disabilitycenter.missouri.edu/accommodations-and-supports/)**. Documented disabilities include *hearing, vision, mobility, learning and attention, psychological health, and physical health*. Students' accommodations are implemented with the input of students to maximize the learning experiences. The MU Disability Center keeps information about a student's disability confidential.

Please notify me of your eligibility for accommodations as soon as possible. Additionally, if there are aspects of the course that present as barriers, such as inaccessible course content (e.g., learning assessments, PowerPoints, non-captioned videos, images, tables, PDFs) or if you need an immediate accommodation due to an injury, please contact me or the Disability Center as soon as possible.