CSE 231

Introduction to Programming I
Spring Semester, 2022

Description

Introduction to programming using Python. Design, implementation and testing of programs to solve problems primarily in engineering, mathematics and science. Programming fundamentals, functions, classes, lists, and dictionaries.

Objectives

In this course, students will study general programming concepts, as well as a modern programming language which illustrates those concepts. Students will design, implement and test Python programs.

At the end of this course when presented with a problem we expect that a student will respond: "Hey, I can write a program to do that!"

Highlights

You are responsible for all the details in the syllabus below, but here are highlights.

- Grade Points: 1000 points from weekly programming projects, exercises, and three exams.
- Labs including pre-labs are required: your final grade will be reduced if you miss more than two.
- If you collaborate on programming projects, you will get a zero in the project and will result in an Academic Dishonesty Report (ADR).
- If you use or copy code from any of the pay-to-do-my-homework websites, e.g. Chegg, Brainly, Quizlet, and other similar websites will result in an Academic Dishonesty Report (ADR), in addition to receiving a zero on the project your final grade for the course will be reduced a full grade, i.e. we take your final numerical grade and subtract 1.0.
- Note the policy of Chegg and similar websites. The policy of all courses in the Department of Computer Science and Engineering for submission of student work (e.g. assignments and/or exam solutions) based on those found on Chegg, Brainly, Quizlet, and other similar websites will result in an Academic Dishonesty Report (ADR) and an automatic failing grade of zero (0.0) for the course. Note that in this course, we have a lesser penalty.
- We frequently send email from msu.edu and cse.msu.edu . It is important that you ensure that your email client isn't routing our emails to Junk -- otherwise you will miss critical email about the course.
- We will never ask you to send us your assignments by email or any other means. The only way to submit an assignment is through Mimir.
- Students will take exams remotely through Zoom. We require a camera (e.g., cellphone camera, tablet camera). The camera should be positioned in a way we can see the student, his entire desk and his screen. For exams you must have access to a computer that can run a lockdown browser, e.g. a Chromebook will not work. Note that this might change at the start of the semester as we figure out the allowed room capacity
- A Chromebook is not a general purpose computer and will not run the IDE used in this course (or any non-browser-based-tool).
- For Section 1-13 (in-person), Labs will meet in STEM 1201 that will run in-person from the first day of class. Our experience from the pandemic is that an in-person lab is favored by most students and greatly helps learning programming. We will accomodate students who cannot attend the lab during the first three
weeks (or choose not to because of Covid) -- these students will "attend" lab over Zoom during their scheduled lab time. Lab attendance is required either in-person or on zoom.

Instructors

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Office Hours: To schedule an appointment go to my Google calendar, find an available slot, send an email requesting an appointment at that time -- the email is to handle overlapping requests. Note: if you look at the month view of the calendar it shows every day as busy but that is not the case. (With 700 students I find that any regularly scheduled times do not work for too many students so individual appointments are more convenient for students.)

Course Web Site

Couse Web Site: https://www.cse.msu.edu/~cse231  
Discussion boards will be on https://piazza.com

Required Course Material

- The Practice of Computing using Python, 3rd Ed. by Punch and Enbody. ISBN-13: 9780134379760 (or 9780134380315) Other ISBN-13 numbers are website only (not text) or a text bundled with extraneous material.  
- Several copies are available in the Affordable Textbook Program at the MSU Main Library. Follow that link, sign in with your MSU netID, click GetIt!, click the highlighted link under Request Digital Learning, fill out the form. Note that the form asks for the barcode but does not require it (so those without a physical ID can still get the text).  
- For submission and auto-testing of projects we use Mimir, a commercial product. There is normally a $25 charge, but don't pay it because the Engineering Dean has agreed to pay it -- details are being worked out at the start of the semester.

Due Dates
The Due Dates Page is your guide to due dates for the semester:
https://www.cse.msu.edu/~cse231/due_dates.html

To allow some flexibility:

- **Programming Projects**: late submissions are reduced 50% for up to one day late; no credit after one day.
- **Labs**: Contact your TA about any extenuating circumstances *before* lab. Old labs cannot be made up.

Except for extreme circumstances (e.g. a car crash puts you overnight in a hospital) there will be no other extensions.

Due times are U.S. Eastern Standard Time. Mimir uses your computer's time setting to display time in your browser so if your computer's time is set to a different time zone, you will be misled by displayed due dates and times.

### Course Grades

Each student's course grade will be based on the sum of the points earned in the following categories:

- **Examinations**: (45% of total course points)
- **Computer Projects**: (45% of total course points)
- **Chapter Exercises**: (10% of total course points)

To be eligible to earn a non-zero grade in the course, a student normally must earn at least 50% of the total points for the examinations and earn at least 50% of the total points for the computer projects. If you do not take the final exam, your course grade will be zero.

The following table gives the scale for course grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage of Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>90%</td>
</tr>
<tr>
<td>3.5</td>
<td>85%</td>
</tr>
<tr>
<td>3.0</td>
<td>80%</td>
</tr>
<tr>
<td>2.5</td>
<td>75%</td>
</tr>
<tr>
<td>2.0</td>
<td>70%</td>
</tr>
<tr>
<td>1.5</td>
<td>65%</td>
</tr>
<tr>
<td>1.0</td>
<td>60%</td>
</tr>
</tbody>
</table>

The instructor reserves the right to adjust the scale for course grades, if necessary. The instructor also reserves the right to make changes in the course schedule and syllabus as necessary.

**Important**: Students who get a zero ("no credit") on more than two (2) laboratory exercises will have their course grade reduced by 0.5 for each laboratory exercise missed beyond two. For example, if a student had sufficient points to normally earn a 3.0, but zeros four (4) laboratory exercises, that student's grade will be reduced by 2*0.5 to a 2.0 course grade.

### Exams

https://www.cse.msu.edu/~cse231/Online/General/syllabus.html
Two midterm examinations and a final examination will be conducted during the semester, and will constitute 45% of the total course points. You will be allowed one sheet of notes (8.5x11 inches) both sides, but no electronic devices. Non-native English speakers may bring a paper dictionary. Students will take exams remotely through Zoom. We require a camera (e.g., cellphone camera, tablet camera). The camera should be positioned in a way we can see the student, his entire desk and his screen. The exam is online and is required to be done through the lockdown browser (failure to use the lockdown browser is grounds for a zero on the exam and possibly the course). Note that this might change at the start of the semester as we figure out the allowed room capacity. Coding keystrokes are recorded. Finally, you are not allowed to use the coding window to test multiple-choice questions.

- Midterm Exam Exam1 (10%) Tuesday, February 07, 7:00 PM - 9:00 PM EST, Location: Online
- Midterm Exam Exam2 (15%) Tuesday, March 21, 7:00 PM - 9:00 PM EST, Location: Online
- Final Exam (20%) Monday, May 02, 10:00 AM-12:00 PM EST, Location: Online

All issues related to the final examination will follow the policies and schedule of the University: [MSU Final Exam Schedule](https://www.cse.msu.edu/~cse231/Online/General/syllabus.html).

**Labs**

Labs are mandatory and there will be a laboratory exercise due every week. Missing labs will reduce your final grade (see below).

Sections 1-13 meet in STEM 1201 (ground floor of the new STEM building); Section 730 students do labs on their own and due Friday.

The labs are designed to be learning tools that complement the lectures and assigned readings. They are designed to be collaborative experiences where students work with each other and the Teaching Assistant to complete the lab exercises.

- Labs are credit/no-credit. To receive credit for a lab
  1. You must complete the Pre-Lab, before your lab or the pre-lab deadline, whichever comes first. Pre-labs are "warm-up" for the labs and are not expected to be perfect -- our expectation is necessarily fuzzy for pre-labs: "you are expected to get most of them correct most of the time."
  2. When Mimir tests exist, they test perfection. The Mimir tests allow you to verify that your code is correct. However, you can get credit for correct Lab code that isn't perfect, i.e. it is possible to get credit for code that fails Mimir tests. (Note that Projects are more strict with respect to Mimir tests.)
  3. Adhering to the Coding Standard is expected, but expectations are less strict than for Projects.

Section 730 Hand in lab exercises using Mimir and are due at 11:59 PM on the due date (usually Fridays).

**Important:** Students who get a zero on more than two (2) laboratory exercises will have their course grade reduced by 0.5 for each laboratory exercise missed beyond two. For example, if a student had sufficient points to normally earn a 3.0, but zeros four (4) laboratory exercises, that student's grade will be reduced by 2*0.5 to a 2.0 course grade.

**Chapter Exercises**

Students will be assigned Chapter Exercises (on Mimir). Collaboration is encouraged.

Chapter Exercises constitute 10% of the course points. Chapter Exercises are recorded as Correct/NotCorrect. There is no limit to the number of tries to getting a chapter exercise correct. For each question your solutions will
be submitted if you click on either "Submit Assignment" or "Save Work". Final grades are not recorded until instructors manually hit the "grade" button.

**Computer Projects**

A series of computer projects will be assigned, and will constitute 45% of the total course points. The projects will include the design and implementation of solutions using Python. Projects are submitted through Mimir. Late projects are not accepted (see exception above). If you are unable to complete a project by the due date because of illness or personal emergency, contact your instructor. If appropriate, an extension will be granted.

Programming projects are to be done individually -- unlike labs and chapter exercises that are done collaboratively. If a programming project is done in collaboration with another student, you will both be assigned a zero with an Academic Dishonesty report filed with the University: see note about Academic Integrity below.

For submission and auto-testing of projects we use Mimir, a commercial product. There is normally a $25 charge, but don't pay it because the Engineering Dean has agreed to pay it -- details are being worked out at the start of the semester.

Hard Coding: For some tests it is possible to cheat the tests by simply printing the expected output instead of writing code that solves the specified problem. An alternative is to assign a variable with a particular value to achieve the same effect. That is called "hard coding" and will earn a score of zero for the entire project.

**Academic Integrity**

The Department of Computer Science and Engineering expects all students to adhere to MSU's General Student Regulation 1.00, Protection of Scholarship and Grades, which states:

The principles of truth and honesty are fundamental to the educational process and the academic integrity of the University; therefore, no student shall:

1.01 claim or submit the academic work of another as one's own.

1.02 procure, provide, accept or use any materials containing questions or answers to any examination or assignment without proper authorization.

1.03 complete or attempt to complete any assignment or examination for another individual without proper authorization.

1.04 allow any examination or assignment to be completed for oneself, in part or in total, by another without proper authorization.

1.05 alter, tamper with, appropriate, destroy or otherwise interfere with the research, resources, or other academic work of another person.

1.06 fabricate or falsify data or results

In particular, examinations and computer projects are individual assignments: anything which you submit for grading must be your own work.

For the computer projects, you are encouraged to discuss the specifications and problem-solving strategies with your instructor, your Teaching Assistant, and other students from the class. However, once you begin implementing your solution in Python, you must work individually. Under no circumstances should you allow another student to view or copy your solution. Note that each project solution is electronically compared to all other solutions to identify similar solutions.
Students who submit similar solutions will receive a penalty grade, such as a score of zero for that assignment or a grade of zero in the course.

If you show your code to another student, you are almost guaranteed a zero because most novice programmers will not be able to think of another way to do it and end up copying your code or sharing it with someone else who copies it.

If you use or copy code from any of the pay-to-do-my-homework websites, e.g. Chegg, in addition to receiving a zero on the project your final grade for the course will be reduced a full grade, i.e. we take your final numerical grade and subtract 1.0. Note that this rule applies if Chegg, or similar, code is in your submission, e.g. if a friend gave you Chegg code, this rule applies as you are responsible for the code you submit.

In all cases of penalty grades an Academic Dishonesty Report is filed with the University.

The "oops" rule: Sometimes a student will use another students code as a deadline nears and regret it the next day so we have the following option. Within 24 hours of the regular due date for a programming project you may withdraw your submission by sending an email to both instructors. A withdrawn project will be worth 0 points, and will not be considered for academic dishonesty (that is, no Academic Dishonesty Report will be filed). Alternatively, you can tell us to grade a particular submission by sending an email identifying the submission by date and time to both instructors within 24 hours of the regular due date. Only the specified submission will be considered when we do our academic dishonesty check.

Failure to use the lockdown browser on an exam is grounds for a zero on the exam and possibly the course.

Finally, consider the Spartan Honor Code: As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do.

Notes

Any extenuating circumstances that impact on your participation in the course should be discussed with your lecture instructor as soon as those circumstances are known (such as absences due to illness, religious observances, or other required school activities).

All students are expected to be responsible users of the computer system provided for this course. Account usage guidelines published by the Department of Computer Science and Engineering are posted under: Account Usage Guidelines ( https://www.cse.msu.edu/facility/security/msu_policy.php )

Commercialization of lecture notes and course materials is not permitted in this course.

Calendar

See https://www.cse.msu.edu/~cse231/due_dates.html