COMP 1900 CS 1: Introduction to Programming – Fall 2022

Kriangsiri ("Top") Malasri

Instructor Contact Information:

- kmalasri@memphis.edu - I will almost always respond within 24 hours
- I'm on the unofficial CS Discord server as **Slothington IV**. Discord invite link: https://discord.gg/7brNMvuz76
- Office:
  Dunn Hall 396
  901.678.5689

Fall 2022 Office Hours
No formal hours, but feel free to contact me to schedule an appointment! I also encourage you to ask questions in the **#comp-1900** channel on Discord, as that can be beneficial for other students. However, do *not* post full programs there! Post only the parts that are giving you trouble.

Lecture Meeting Times/Locations:

Section	Meeting Times	Location	Instructor	Grader(s)
001	MW 1240-1405	PAN 115	Baggett	TBA
002	TR 1440-1605	PSY 204	Malasri	TBA
003	TR 0940-1105	FIT 226	Malasri	TBA

Lab Meeting Times/Locations:

Section	Meeting Times	Location	Instructor*	Lab TA
101	W 1020-1220	DH 232	Malasri	TBA
102	R 1440-1640	DH 232	Malasri	TBA
103	W 1420-1620	DH 232	Baggett	TBA
105	F 1020-1220	DH 232	Malasri	TBA
106	F 1240-1440	DH 232	Malasri	TBA
107	F 1500-1700	DH 232	Malasri	TBA

* This is just the instructor of record. The lab sections will be supervised by TAs.

The purpose of lab meetings is to provide an opportunity to get one-on-one assistance from TAs on your lab assignments. TAs may also answer questions about previously submitted lab assignments. Attendance at lab meetings is optional but strongly encouraged.

Catalog Description:

COMP 1900 – CS 1: Introduction to Programming (4) Overview of computer science as a field; problem-solving strategies with emphasis in fundamental programming skills, primitive data types, control structures, arrays, strings, I/O, basic recursion, documentation, testing and debugging techniques; introduction to object-oriented concepts. Three lecture hours, two laboratory hours per week. PREREQUISITE or COREQUISITE: MATH 1910 or MATH 1421 (or MATH 1830 for COMP minors)

Note on Prerequisites:

Although COMP 1900 does not assume you have any prior programming experience, it moves quite briskly. If programming is brand new for you, you'll likely find it more difficult to keep up. We recommend COMP 1800 (Problem Solving with Computers) as a warm-up course for COMP 1900 if you are just starting out with programming.

Course Outcomes:

After completing this course, students should be able to:

1. Read and write code involving variables and assignments.
2. Read and write code involving conditionals.
3. Read and write code involving loops.
4. Read and write code to manipulate strings, lists, and dictionaries.
5. Read and write code to manipulate one- and two-dimensional lists.
6. Write programs to define functions and make function calls with various input and output types.
7. Be able to decompose code into sections using functions.
8. Be able to define simple classes.
9. Be able to create objects and invoke method calls.

Course Website:
Course materials and grades will be posted to the Canvas system at https://memphis.instructure.com/

Required Text:
Online text through zyBooks. A subscription costs $77 and will last until January 5, 2023. Please sign up at https://learn.zybooks.com and use the registration code **MEMPHISCOMP1900Fall2022**. Some notes:

- *You must register using your memphis.edu email address*.
- If you're retaking the course or have otherwise subscribed to the zyBook previously, you may be eligible for a free or reduced-cost subscription. Please email support@zybooks.com to take advantage of this.

Additional Free Online Resources:

- Official Python tutorial: https://docs.python.org/3/tutorial/
- Educative: https://www.educative.io/courses/learn-python-3-from-scratch
- W3Schools: https://www.w3schools.com/python/
- CodingBat (interactive code practice): https://codingbat.com/python

Evaluation:

Lecture Attendance and Classwork	100 pts
zyBook Assignments	100 pts
Lab Assignments	300 pts
Quizzes	225 pts (3 @ 75 pts each)
Final Exam (Comprehensive)	325 pts

Your final grade is determined by your total points on all graded items. There are 1050 maximum possible points; however, my letter grade scale is based on only 1000 points. This gives you some built-in buffer in case your second cousin's ex-wife's brother-in-law has an event that forces you to miss an assignment, or a temporary zombie apocalypse happens to just your neighborhood, or whatever. *This also means I'll be strict about enforcing assignment deadlines. Please don't beg for late credit.*

Note that you receive a single combined grade for COMP 1900; there's *no* separate grade for the lab section unlike some science courses.

Grading Scale:
Letter grades will be determined from your total points as follows:

A+: 960+; **A**: 900-959; A-: 890-899
B+: 870-889; **B**: 800-869; **B-**: 790-799
C+: 770-789; **C**: 700-769; **C-**: 690-699
D+: 670-689; **D**: 600-669
F: Below 600

Assignments:
This is a programming course, and the only way to get better at programming is to do a lot of it. There will be many assignments throughout the semester to give you hands-on practice. Altogether, assignments make up *about half your grade* for this course. You cannot pass unless you do them!

The assignments fall into different categories:

1. **Classwork** consists of simple problems to immediately reinforce what was covered during lecture. Attendance is also indirectly taken through classwork submissions. We will do at least one classwork assignment almost every lecture.
2. **zyBook assignments** are short exercises selected from the required textbook. These are done on your own, to further reinforce what was covered during lecture. There will be a zyBook assignment given most weeks. You should complete all **Participation** and **Challenge** activities from the assigned sections.
3. **Lab assignments** allow you to explore a topic more deeply and are more involved than the classwork and zyBook assignments.

Time Expectations:
Programming definitely has a learning curve, and many people find this to be a demanding class. Most students should expect to spend 2-3 hours per week outside of class per hour of credit. Since this is a 4-hour class, that translates to *8-12 hours per week of work outside of class*. If you are unable or unwilling to devote this time, I strongly recommend that you postpone taking the course until you can. There is no substitute for hands-on experience to improve your programming skills!

Attendance:
It is crucial that you attend class (both lecture and lab) regularly, especially if this is your first experience with computer programming. The class will keep building on itself and moves at a brisk pace, so you need to get a good handle on each concept soon after we discuss it. As mentioned above, *I will indirectly take attendance via classwork submissions*.

Late/Makeup Policy:
All assignments are expected to be completed and turned in on schedule. Due dates will be clearly indicated for each assignment. Late assignments are NOT accepted except in extreme circumstances. Likewise, makeup quizzes and exams will be given only under extreme circumstances. *If you feel that your circumstances warrant a late work submission or a makeup quiz/exam, get in touch with me as soon as possible. Be prepared to show some kind of documented proof of your situation.*

Plagiarism/Cheating Policy:
By the end of this course, you are expected to be a competent programmer. For this to happen, you need to get plenty of practice yourself. As such, *all grade items (unless specifically indicated otherwise) must be individual efforts*. Although you are welcome to work in study groups, NEVER submit any code that you did not write yourself.

Examples of ACCEPTABLE behavior:

- Discussing the general solution approach to an assignment with other students, then writing the code to solve the problem individually
- Using Internet resources to help with an assignment, then writing your own code that incorporates what you've learned

Examples of UNACCEPTABLE behavior:

- Submitting the same code as another student. Making trivial changes like changing variable names and/or order of functions does not hide this.
- Copying and pasting code that you found from the Internet
- Copying someone else's code during a quiz or exam

I have a zero-tolerance policy against cheating. Plagiarized code is very obvious. If I catch you submitting code that you did not write yourself, the first offense will result in a 0 for that grade item. Further offenses will possibly result in a failing grade in the entire course, and/or referral to the Office of Student Accountability for further disciplinary action. *Please don't put me (or yourself) in this situation.*

Getting Help:
Although I expect your work for this class to be done individually, I encourage you to seek help if you get stuck:

- Contact me! I'm very willing to provide hints without giving away the solution. I can be reached via email and/or Discord.
- Contact your lab TA. They are there to help you during lab sessions.
- Online tutoring: The UofM offers free online tutoring through the Educational Support Program (ESP): https://www.memphis.edu/esp/onlinetutoring.php

Miscellaneous Policies:
Email - Please check your University of Memphis email account at least once a day, as that is my primary means of communicating with you outside of class.

Student Disabilities - If you have a disability that may require assistance or accommodations, or if you have any questions related to any accommodation for testing, note taking, reading, etc., please contact me as soon as possible. You must contact the Disability Resources for Students office (901.678.2880, drs@memphis.edu, https://www.memphis.edu/drs/) to officially request such accommodations / services.

Tentative Course Schedule

Date	Lecture Material	Text	Quizzes	Labs
8/23 8/25	Intro to computers and CS, number systems, first Python programs	Ch. 1		
8/30 9/01	Variables and expressions	Ch. 2		Lab 1: Number systems, basic programs
9/06 9/08	Types	Ch. 3		Lab 2: Variables and expressions
9/13 9/15	Conditionals	Ch. 4	**Quiz 1 (9/15)**	
9/20 9/22	Conditionals	Ch. 4		Lab 3: Conditionals
9/27 9/29	Loops	Ch. 5		
10/04 10/06	Loops	Ch. 5		Lab 4: Loops
10/11 10/13	*NO CLASS – Fall Break* Loops	Ch. 5	**Quiz 2 (10/13)**	Lab 5: More loops
10/18 10/20	Functions	Ch. 6		Lab 6: Functions
10/25 10/27	Strings, lists, and dictionaries	Ch. 7-8		
11/01 11/03	Strings, lists, and dictionaries	Ch. 7-8		Lab 7: Strings
11/08 11/10	Strings, lists, and dictionaries	Ch. 7-8		Lab 8: Lists and dictionaries
11/15 11/17	Intro to object-oriented programming concepts	Ch. 9	**Quiz 3 (11/17)**	Lab 9: OOP
11/22 11/24	Recursion *NO CLASS – Thanksgiving*	Ch. 14		
11/29 12/01	Review for final *NO CLASS – Study Day*			

FINAL EXAM (same classroom as lecture):
Section 002 (TR 1440) – Tuesday, Dec. 6, 1300-1500
Section 003 (TR 0940) – Tuesday, Dec. 6, 1030-1230

Tentative Quiz and Exam Topics:

- Quiz 1: Number systems, variables and expressions, types
- Quiz 2: Conditionals, loops
- Quiz 3: Functions, strings, lists
- Final Exam: Everything!