Programming Concepts and Methodology I

Hello! Welcome to CS M125, Programming Concepts and Methodology I.

This is an intense, compressed-schedule summer course! This course will require about **13-18 hours per week of online engagement for success**! Please double check your availability this summer over the next eight weeks -- is that level of time commitment to this course this summer realistic? If not, that is totally understandable -- consider taking a more extended version of this same course another semester. We offer fifteen-week and eighteen-week versions of CS M125 that require much less time commitment per week.

Ready to start? Welcome aboard! Here's some key info about your class this semester.

Course Info

CRN: 59351 **(https://ssb.vcccd.edu/prod/pw_pub_sched.p_course_popup?vsub=CS&vcrse=M125&vterm=202405&vcrn=59351)**
CS M125, 3.0 Units
8-week course, June 10 - August 2
Summer 2024
Pre-requisite: None required. Recommended preparation of CS M01 and MATH M06 or MATH M07.
Delivery Mode: This is a fully online class without pre-scheduled meetings.

Instructor and Communication Preferences

Instructor Name: Scott Feister (I go by “Dr. Feister”, pronounced like "Easter")
Instructor Office Hours: Thursdays, 1 PM – 4 PM via Zoom (see Office Hours page on Canvas)
Instructor Email: sfeister@vcccd.edu
Communication to Instructor: I’d like to hear from you a lot -- more rather than less -- so error on the side of over-communicating. I’m glad to get your messages!

The best way to message me is on Canvas. I’ll aim to respond within one business day (that is, after one weekday, and not over the weekend).

Note: As a general policy, I won’t answer questions about assignments “just in time” before they’re due -- the uncertainty of whether I’ll see and answer the message is too stressful for everyone involved. Please send your questions about assignments more than 24 hours (one business day) before the due dates.
Communication from Instructor: I will frequently post announcements on Canvas. For feedback on your work, I will communicate by leaving annotations on those assignments. Make sure your notification settings in Canvas are enabled so that you receive these announcements and my comments on your assignments! As needed, I will also reach out to you individually through Canvas or email.

Department & Division Leadership

Department Chair: Scarlet Relle, Ph.D.
Dept. Chair E-mail: srelle@vcccd.edu
Dept. Chair Voicemail: (805) 553 – 4162
Dean: Robert Cabral
Dean Email: rcabral@vcccd.edu
Dean Phone & Location: (805) 553-4862 in Admin. Building A-136
Communication to Leadership: Do you have questions that go beyond the scope of the course itself, or any issue that you’d like to discuss with division leadership? Please reach out to your chair or dean through email. They will respond to your message as soon as they are able.

Teacher Expectations

You can expect me to be responsive throughout the semester. You can expect me to remain actively engaged in your education. You can expect me to help you through Canvas messages and through video-calls (with screen sharing) in Zoom Office Hours. In Office Hours calls, I can answer your questions and help you troubleshoot.

You can expect me to be imperfect, but generally competent in the technology for in-person teaching, online teaching, and collaboration. As problems arise, you can expect that I will make an effort to correct mistakes for future weeks. (Note: I worked remotely as a professional for two years, I’ve taught both synchronous and asynchronous online courses for several years, and I have frequent videocalls with research collaborators around the world.)

You can expect that I will grade your assignments in a timely manner. If there are delays of more than two weeks, you can expect me to explain the grading timeline. If I don’t notice the delay, you can expect that I will welcome your questions as to a grading timeline.

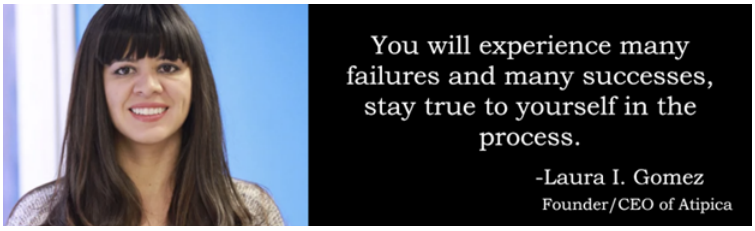
Student Expectations

I will expect you to dedicate serious time and effort into the class readings/videos. I expect that you will reach out to me to ask questions about the readings as you go,

either if you are curious or confused.

I expect you to set phone reminders, alarms, etc. to help remember our to log into Canvas and complete your coursework multiple times per week. If you are struggling to keep your schedule, I expect you to be pro-active and make a change, and involve me so I can give you tips on asynchronous classroom success. I expect you to participate in class discussions good faith and good spirits. 😉

During Zoom Office Hours, I completely understand that you may have to do your videocalls from odd places, like from your bed or from your kitchen table. I will expect that you'll have interruptions: your cats may join the videocall, or your children. All this is perfectly alright!



Instructional Materials

I am aware that textbook cost can be a burden on many of you, and increase the disparity between you and your classmates (as some students will buy the textbook and others may try and find a lower-quality copy online.) To completely sidestep this potential burden and inequity, I do not use any resources which cost you money in this course. In academic terms, this is a "zero-cost course".

I will post everything you need to Canvas. I will incorporate a variety of scanned PDFs, open-source textbooks, websites, my own content, and YouTube videos.

Recipe for Success in this Online Course Environment

As your teacher, I am invested in giving you the tools for success. I recommend and encourage the following actions and student engagement activities:

- Set an alarm in your phone reminding you to log into Canvas every day, or at minimum every two days. This is an intense, eight-week online course, so frequent check-ins are essential!
- Complete all the asynchronous Canvas reading/video materials and take notes.
- Do not hesitate to ask questions: Write down any questions that you may have and send me your questions via Canvas or bring them to my Zoom office hours
- Complete the assigned homework on Canvas and check your work against the solutions provided
- Actively participate in the learning process; meaning, study and practice problem solving. Try to solve problems on your own using clear and organized thought processes. Do not rely on internet-provided solutions to help you succeed in this course because during quizzes and exams you will have to do your own work. So, study and practice to think and solve problems on your own.
- Turn on your Canvas Notifications so that when I post an Announcement about the course you get notified immediately. Announcements are going to be one of my primary means of communication with you.
- I won't accept late work. However, that doesn't mean you can't reach out beforehand! If life circumstances happen contact me immediately before the due date so that we can have a discussion and find a path forward, in other words, communicate with me. I may grant an exception once depending on the circumstances. Exams and quizzes have their own rules. See below.
- Be sure to find classmates that you can study with, collaborate with, and work on assignments and projects together. Join class social channels like Discord. Get out to Moorpark College library and meet up with students, if you wish. Go to coffee shops. Change up your environment! Just because the course is online doesn't mean all your studying has to be at home alone at your desk!

Course Structure

All the instructional elements of the course will be conducted online including lectures, assignments, quizzes, projects, and exams. This is a fully asynchronous course, which means that we have no pre-scheduled class meetings, even on Zoom. You are therefore responsible for logging into Canvas of your own initiative multiple times throughout the week to complete assignments. You are also responsible for setting up notifications in Canvas so that you receive timely course announcements. All assignments must be submitted to their assignment page on Canvas (via the "Submit" button); emailed assignments are never accepted. Reach out at least one day before an assignment is due for help if you get confused about submission.

All the necessary course materials will be posted on Canvas in the course shell, this includes some lecture notes, solutions to assigned problems, assignments, projects, quizzes, and other reference materials. Graded assignments will be collected on Canvas on Sundays, Tuesdays, and Thursdays (unless otherwise stated). Within about a week after submission, grades will be posted on Canvas under Grades.

I will assign Homework exercises and activities multiple times per week in Canvas. These will include discussions, programming activities, and traditional programming assignments requiring you to analyze a problem, determine a solution, implement the solution using a programming language, and test and verify the program. Homework must be completed by the due date (which will typically be Sundays, Tuesdays, and Thursdays) for credit.

Two midterm Exams will be administered online through Canvas and they also will be timed. Exams will be available for 12 to 14 hours. The Exam dates are posted in the Class Schedule below. As soon as you start the exam, the timer will begin. The allowed time for a midterm Exam will be 1 hour and 15 minutes.

The Final Exam will be administered online through Canvas within a 7 hour time window Once you start the exam, the timer will begin and you must complete the Final Exam within two hours, finishing by no later than the end of the 7 hour window.

Unit-Level Student Learning Outcomes (USLOs)

I wrote these student-learning outcomes myself, and they are specific to what we will be doing this semester in our section.

I am invested in your education. Here are our shared outcomes: our specific metrics for success this semester. You will be able to:

1. Design and write short C++ programs using a simplified cloud development environment, building cumulatively from concepts of control flow up through object-oriented classes
2. Explain, in your own words, several foundational concepts in computer programming (non-specific to C++)
3. Write comments that explain the purpose of your programming choices rather than re-stating the program line-by-line
4. Show attention to detail in design phase, code-writing phase, and troubleshooting phase, required to make programs run successfully
5. Articulate your high-level approach to solving problems using computer programming, in plain English

Course-Level Description

The official course description below is the same across all professors and sections at Moorpark College:

Provides an introduction to the C++ programming language. Covers the basic components, syntax, and semantics of the C++ programming language. Introduces basic programming concepts such as algorithms, data and control structures, documentation, structured programming, arrays, and pointers.

Course-Level Objectives

The official course objectives below are the same across all professors and sections at Moorpark College:

Upon satisfactory completion of the course, students will be able to:

1. describe the basic organization of a computer system.
2. describe the basic components, syntax, and semantics of the C++ programming language.
3. analyze programming problems and design algorithms to solve those problems.
4. identify sequential, selection, and iteration control structures.
5. apply the concepts of structured programming including function usage and parameter passing.
6. apply composite data types such as arrays and structures.
7. demonstrate and understanding of user defined data types such as enumerations and structured data.
8. describe and apply dynamic memory allocation using pointers.
9. identify file input and output.
10. identify good programming practice and style.

Course-Level Student Learning Outcomes (CSLOs)

The official student learning outcomes below are the same across all professors and sections at Moorpark College:

Upon satisfactory completion of the course, students will be able to:

1. analyze programming problems and design algorithms to solve those problems that require file management
2. apply best practices when writing code
3. apply the concepts of structured programming such as arrays, functions, loops to solve given problems.
4. demonstrate ability to communicate solutions to non-technical audience.
5. solve complex problems using Object Oriented Concepts.

Grades

Throughout the semester, I will make clear which category each assignment falls into using Canvas. The categories will be tallied separately and then weighted as follows:

Assignment Category Grade Weighting

Category	Weighting in Final Grade
Formative Exercises/Assessments/Class Participation/Discussions	20%
Programming Demonstrations	40%
Midterm Exams (2 exams, each 10%)	20%
Final Exam	20%

Based on your final grade (%), you will be assigned a letter grade from the following table. This letter grade is what will show up in your official transcript record, not the % grade.

Letter Grade Corresponding to Final Grade (%)

A	B	C	D	F
90%+	80%+	70%+	60%+	below 60%

Please note that final grade % are rounded towards the nearest tenth of a percent (e.g. 89.9499% --> 89.9% --> B). Although I do understand that it can be frustrating to have an 89.9499% and get a B, this rounding cutoff is not negotiable.

A.I. Policy

I'd like to share my nuanced policy on A.I. in the classroom, by way of a story and metaphor.

This Spring, I tried out weight lifting at a gym.

The goal of weight lifting is **not** to achieve the task of lifting a heavy object. Machines can do that easily. We have forklifts. Cranes. Much stronger than any person.

So what is the goal? In my case, it was to **become stronger in certain muscle areas so I could keep lifting up my daughters with my own arms as they get older.** I don't want a machine to lift my daughters. **I want to lift them myself.**

One thing I noticed is that there are fantastic machines in the gym that help you target specific muscles. These machines are incredibly helpful for developing certain areas of strength in your body, allowing you to sit down and work that particular muscle.

However, the machines at the gym don't actually lift the weights for you, even though they could easily be designed to do that. Why not? **Because the actual point of going to the gym is not to lift weights, it's to build your own muscle.** If you get a bunch of weights lifted but don't build any muscle, you're missing the point.

You may use A.I. tools in our class strategically to develop your own mental muscles (such as asking questions, digging deeper into topics, getting support in areas to target a specific learning objective). The analogy here is how you use machines at the gym to target specific muscle-building.

However, you may not use A.I. to complete your assigned tasks, because there's really no inherent benefit to anyone in just getting those tasks completed. Just like your personal trainer isn't trying to get any particular task done besides training *you*, I am not giving you work because it needs to get done. I'm giving you an assignment because I think it will help you build your mental muscle! At the point where A.I. is saving you the bulk of your work to complete your assignments, you're using a forklift to lift weights and you've violated this policy.

University Resources and Policies

Important Dates

See the **Summer 2024 Academic Calendar** **(https://www.moorparkcollege.edu/Summer-2024)** for important university dates, such as add/drop deadlines.

Disabilities Accommodation

Appropriate accommodations will be made for students with disability related needs. Students with a disability, whether physical, learning, or psychological, who believe they will need accommodations in this class, are encouraged to **contact ACCESS** **(https://www.moorparkcollege.edu/departments/student-services/access)** as soon as possible so accommodations can be set up in a timely fashion. Accommodations are based on eligibility and can only be provided if you have submitted verification from ACCESS in the form of a Confidential Memo. The ACCESS office can be reached at (805) 378-1461.

Academic Integrity

Academic integrity and honesty is of utmost importance. Cheating of any kind will not be tolerated in this course. Cheating includes turning in someone else's work as your own, using the textbook or any course material and online resources such as Chegg during quizzes and exams. Cheating will result in a letter grade of "F" equivalent to zero points for that particular assignment/quiz/test, and any previous assignments will be called into question. In addition, a report will be made to the Behavior Intervention Team (BIT).

Title IX / Sexual Misconduct

Moorpark College is committed to creating a safe learning environment for all members of our community, providing an academic environment that respects the dignity of all individuals. Our campus shall be free from gender-based discrimination and violence. Our college does not tolerate sexual misconduct, which includes, but is not limited to sexual harassment, domestic violence, dating violence, sexual assault, stalking, and gender-based hate crimes.

If you (or someone you know) experience or witness sexual misconduct, you can report it to any employee (including me, your professor, Dr. Feister). If you would like to discuss the matter with someone confidentially, you may visit the Student Health Center webpage to discuss the matter with one of our mental health providers. All other employees of the college are required to report allegations to our Title IX Coordinator, who will then reach out to provide resources, support, and information after receiving a report. Reported information will remain private. For more information regarding our Title IX procedures, reporting, or support measures, please visit the Sexual Misconduct/Title IX Information website.

Health, Safety, and Behavior

Your health, safety, and behavior in our online classroom and when you are on campus are of utmost importance. If I see, recognize, or find out about a concerning behavior or a health and safety issue, I will both approach you first and then make a report to the BIT team, or I may just directly make a report to the BIT team. The BIT team is committed to helping protect everyone's safety and well-being, in addition to helping to maintain the integrity of our academic environment.

Eight-Week Schedule

Detailed Course Schedule Including Exam Dates

Date	Topics	Mark in Your Calendar:

Week of 6/10	Welcome! Icebreakers, Course Structure Introduction to C++ Lexical Elements, Operators, and the C++ System	
Week of 6/17	Flow of Control	
Week of 6/24	Functions and Structured Programming	**Midterm Exam I** **Wednesday - 6/26** Exam is available 5 AM – 11:59 PM. Block off your calendar for one hour fifteen minutes within this window.
Week of 7/1	Pointers	
Week of 7/8	Arrays	
Week of 7/15	Structures	**Midterm Exam II** **Wednesday - 7/17** Exam is available 5 AM – 11:59 PM. Block off your calendar for one hour fifteen minutes within this window.
Week of 7/22	Classes File Input and Output	
Week of 7/29	Final week of the course!	**Final Exam** **Wednesday - 7/31** *Covers: Entire Semester* Exam is available **12 PM – 7 PM.** Block off your calendar for two hours within this window. (e.g. the latest you can take the exam is to start at 5 PM and end at 6:59 PM)

Syllabus Update Policy

I will try to keep all policies outlined in this syllabus consistent throughout the entire semester. I will plan to make minor updates to the wording and class schedule for clarity, as confusion arises. In necessary circumstances, I also reserve the right to make major changes to the syllabus, class policies, and class schedule. However, I don't anticipate major changes will be needed, and please use the syllabus as official guidance on the course throughout this semester.

Instructor Drop Policy

I reserve the right to drop you after five missed assignments. This is reduced to three missed assignments if I either (1) receive no communication from you within one week (seven days) of the first missed assignment's due date, explaining the circumstances of the missed assignment, or (2) observe no further engagement in the course on Canvas within seven days of the first missed assignment.