CSCI 136: Data Structures

Spring 2026

Instructor:	Sam McCauley sam@cs.williams.edu	**Lab Instructor:**	Lida Doret lida@cs.williams.edu
Lecture Times:	MWF 9:00–9:50; 10:00–10:50	**Place:**	Schow 30B

Webpage: https://williams-cs.github.io/cs136-s26/index.html

Office Hours: Monday 3–4:30PM, Tuesday 3–4:30PM, Friday 1:30–2:30PM, in TPL 304

Textbooks: This course does not have an assigned textbook.

Students who want access to an additional—fully optional—textbook are recommended to use use Java Structures by Duane A. Bailey. You can find more information about the book (including a PDF download) here: https://www.cs.williams.edu/~bailey/JavaStructures/Welcome.html

Goals: The goal of this course is to enable you to write good programs, and to instill both an intuitive and an analytical understanding of what we mean by a "good" program in computer science. Throughout the semester, you will design, analyze, code, and verify that your programs work as expected.

Data structures: The primary vehicle for learning the above skills will be through the study of data structures, which are principled methods for storing and manipulating data. Data structures and algorithms, which you will study in CS256 (Algorithms), are two sides of the same coin. Both are essential for the construction of the kinds of large, reliable computer programs used by billions of computers users on a daily basis.

Java: We will be using the Java programming language for this course. Unlike Python, Java is augmented with a number of features intended simplify the challenges of writing large-scale programs (e.g., static types). Learning these features will require some effort. However, developing a fluency in Java will benefit not just your performance in this class, but your abilities as a programmer in the future, whether you ultimately use Java or not in your professional life.

The elements of style: In addition to correctness and performance, this course will help you learn how to write programs in a clear and modular manner. Programs written and documented clearly are easier to maintain and result in fewer bugs. Modular code substantially reduces coding effort and also results in fewer bugs. Don't be surprised if you receive feedback that your program needs work even if it correctly implements an assignment's specification.

Lab resources: This course will primarily use the MacOS computers in TCL 216 & 217 for programming assignments. These rooms are unlocked during working hours, and your cards should give you access at all other hours. While you are permitted to use your own computer if you wish, we only guarantee support for the lab environment, and all submitted assignments will be graded using the lab environment.

AI and Large Language Models: Modern code is increasingly written with the help of AI, specifically Large Language Models (LLMs) such as CoPilot, ChatGPT, Gemini, or Claude. These tools greatly help developer productivity, and are often built into the code development pipeline directly.

However, LLM usage is **not permitted** in this class. All assignments are to be done without LLM help. If students are using a code environment with a built-in LLM, it should be turned off. Instructions for ensuring

that CoPilot is disabled in VSCode can be found in the computer setup pdf: https://williams-cs.github.io/cs136-s26/handouts/computer-setup.pdf

The reason why LLMs are not permitted is that the purpose of this class is not to simply to write code, but rather to develop code-writing skills (see the discussion above). In practice, LLMs are best used to write relatively small and simple snippets of code—snippets the developer would otherwise be able to write themselves, but they would rather not spend the time to. This class is about developing the skills to get to this point: the materials students learn in this class is exactly what will allow them to efficiently use development tools like LLMs in the future.

Students should direct any questions on this topic to one of the instructors. A particularly common occurrence may be that a student is unsure if autocomplete suggestions are AI-generated or not; the instructors are happy to clarify this point.

Working at Home: A large amount of time in lecture on labs is spent on assessment—assignments, quizzes, and midterms take up a substantial amount of the course. With this in mind, it is crucial that students spend time studying between lectures and lab periods. Students at Williams are advised to spend 10 hours per class outside of lab/lecture times. Students are strongly encouraged to explicitly schedule time outside of class to review the materials, and ask questions in labs, office hours, and TA hours to resolve any confusion.

The assessments should help give guidance on what topics to study. In the days immediately before a quiz, students should study the topics covered by the quiz; in the days before an in-person lab, students should study the topic covered by the in-person lab. Similarly, the assessments should provide helpful feedback on areas that need further review.

Students are strongly discouraged from using LLMs for studying at home. Instead, they should use slides and handouts from class, use the recommended textbook, or even use free web resources (the topics covered in this class are extremely well known, and nearly universally have many resources: lecture notes from other classes, wikipedia articles, blog posts, and even questions on forums like StackExchange). To briefly explain this recommendations, LLM explanations often omit key context: they may use concepts not present in the class, and are not very good at tying together concepts that we have seen. LLMs can come up with questions about materials, but with similar downsides.

Assessments: This course will have weekly labs, weekly quizzes, two in-class midterms, and a final.

Labs will be of two types: in-person labs, and take-home labs. In-person labs will short; they will be released at the beginning of lab, and due at the end of lab. Take-home labs are released a week before they are due; they can be done at any time. Students are encouraged to get help from the instructors and TAs in order to complete the labs (of both kinds).

There will be an in-class quiz once a week except the first week and any week where there is a midterm. Each quiz will be 15 minutes long, but students will be given up to 20 minutes to complete the quiz. Each quiz will focus on the topics covered since the previous quiz; this includes topics covered in lecture and in lab. Quizzes will generally have very short questions and answers, and focus on a base level of knowledge.

There will be two midterms, on March 6 and April 17, both during class. Midterm 2 will focus more on material covered since Midterm 1; however, it may also have material from earlier in the course.

The final will be comprehensive—it will cover all material in the course. It will be an in-person ("Scheduled") final, two hours and 30 minutes in length in total. The scheduled time will be posted here when it is announced; generally a few weeks into the semester.

Grading Policy: Labs (10%), Quizzes (20%), Midterm 1 (20%), Midterm 2 (20%), Final (30%)

The lowest two quiz scores and lowest two lab scores will be dropped. The exams (between the two midterms and final) will be slightly reweighted based on performance: the lowest score will be worth 5% less, and the highest will be worth 5% more.

Attendance: Students are strongly encouraged to attend labs and lecture; however, there will not be recorded attendance.

We will generally not have "make up" opportunities for missed quizzes or in-person labs, even if there is a good reason for the absence. The lowest two scores will be dropped anyway. If a student anticipates missing more than two labs or quizzes they should talk to the instructor.

Late Policy: Late assignments will not be accepted. As mentioned in the attendance policy, the lowest two lab scores are dropped anyway; this is expected to be sufficient for any unforseen circumstances. If a student has extenuating circumstances which would cause them to frequently be unable to turn in labs on time, they should talk to the instructor.

Peer Tutoring: If you find that you need extra help in the course, the office of Peer Academic Support and Content Tutoring can be an excellent resource. They give peer tutors (similar to TAs) who can meet with you on an individual basis.

I (Sam) know and have worked with several of the 136 peer tutors for this semester and they are excellent. I'm happy to give recommendations.

Here's the standard blurb: Free individual tutoring is available for any student enrolled in this course through the office of Content Tutoring. You are able to schedule an individual tutoring session with one of our peer tutors through our Accudemia page at https://williams.accudemia.net/. If you have any questions about finding a tutor, please contact Madison Kelsey at mjk5@williams.edu

Academic Honesty: For a full description of the Computer Science Honor Code, please see: https://csci.williams.edu/the-cs-honor-code-and-computer-usage-policy/. If you have any doubt about what is appropriate, please email me at sam@cs.williams.edu.

Midterm and final exams, as well as quizzes, are to be the sole work of each student. No collaboration or discussion is allowed.

For labs (both in-person and take home), students should not use any LLM assistance, including built-in tools like CoPilot (see the policy above) for any purpose. For debugging, students may use use online resources (Google and other search tools, but not LLMs); however, no online resources should be used to write code.

Students should never look up answers to assignment questions, or to similar assignment questions. Students are encouraged to use course materials—textbooks, notes from lectures, and slides—as a reference when answering questions, as well as the TAs and instructors in lab and office hours.

While students are permitted to discuss high-level strategy, they should not share code with each other. Students should never send each other code, and should not view others' code, nor allow others to view their code.

Accommodations: Students with disabilities of any kind who may need accommodations for this course are encouraged to contact Katy Evans (Director of Accessible Education) at 597–4672. I am happy to discuss accommodations personally as well. Also, students experiencing mental or physical health challenges that are significantly affecting their academic work or well-being are encouraged to contact me and/or speak with a dean so we can help you find the right resources. The deans can be reached at 597-4171.

The college generally reaches out to professors about accommodations. If any of your accommodations affect how you interact with the course (e.g. by changing a due date), I will reach out to you with these changes. If you have not heard from me about accommodations you should have, please let me know as soon as possible so that we can make sure any resources are prepared in time.

Health and Accessibility Resources: Students with disabilities or disabling conditions who experience barriers in this course are encouraged to contact me to discuss options for access and full course participation. The Office of Accessible Education is also available to facilitate the removal of barriers and to ensure access and reasonable accommodations. Students with documented disabilities or disabling conditions of any kind who may need accommodations for this course or who have questions about appropriate resources are encouraged to contact the Office of Accessible Education at oaestaff@williams.edu

Inclusion and Classroom Culture: The Williams community embraces diversity of age, background, beliefs, ethnicity, gender, gender identity, gender expression, national origin, religious affiliation, sexual orientation, and other visible and non visible categories. I welcome all students in this course and expect that all students contribute to a respectful, welcoming and inclusive environment. If you have any concerns about classroom climate, please come to me to share your concern.

Addressing Each Other: In this class, we use the name and gender pronouns that individuals ask us to use as a sign of mutual respect. I will use the pronouns you have indicated on GLOW unless you alert me to a different pronoun (I'll also ask in the intro form). That said, everyone makes mistakes—in general, should you use an incorrect pronoun or name, the best course of action is to make a quick correction and move on, rather than dwelling on it.