

Imperative Problem Solving

CS110 Fall 2022

Class Meetings

(Section 1) Mon. Weds. Fri. 11:00 am -11:50 am Taylor Hall, Room 205

Personnel Information

Professor

Kowshik Bhowmik

kbhowmik@wooster.edu

Office: Taylor Hall 201

Zone Intern (ZI)

Section 1

Levi Gainer

lgainer24@wooster.edu

See course website for
office hours

** All times are in Eastern Standard Time (EST) **

Course Description

This course emphasizes the imperative view of problem solving, supported by problem solutions implemented in the C programming language. Topics include: procedural design, algorithm development for various problems, recursion, the fundamentals of C and its standard library, pointers and addressing, binary number representation, and the distinction between stack allocated and heap allocated memory.

Course Goals

Upon completion of this course, a successful student will be able to:

- Design and implement small to mid-sized programs in C using appropriate imperative programming design principles.
- Understand the memory model of a C program during execution.
- Use the basic functionality of Git.

Course Prerequisites

CS100 or CS102

Textbook

The textbook is available online. You can buy a physical copy if you like, but it is not required. See the course web page for a [link to the book](#).

- *Programming in C, Fourth Edition* by Stephen G. Kochan (ISBN: 0321776410)

Course Resources

Course Website -

<http://cswb.wooster.edu/kbhowmik/cs110/>

The course website provides access to all class resources, information updates, and the tentative schedule of activities and assignments. External resources such as webpages, videos, or other types of content will be used, and everything will be accessible from the course website. Bookmarking this site is highly encouraged as the course website will be updated regularly throughout the semester.

Moodle Classroom

Our Moodle online classroom will primarily facilitate quizzes and exams. I will keep all assessment scores in this system so you will always know your current performance in the class.

Course Policies

Office Hours

The Zone Interns (ZI) and I will have regular office hours. I encourage you to take these opportunities to talk with us about any questions you have during the course. If you are unable to meet during the scheduled office hours, please contact me to schedule an appointment. One of us would be more than happy to accommodate. Any changes made to the office hour times or locations will be communicated in advance.

Late Work

Homework and in-class assignments are due by midnight on the posted due date. Assignments are determined late after this time. Late assignments will be penalized 20% starting after the beginning of class on the posted due date. Each additional late day will result in an additional 20% penalty. Work submitted three days late will not be accepted for a grade. Late work will be accepted with an approved exemption. If a dire situation occurs that will affect your ability to turn in an assignment, please contact me as soon as possible.

Extension

I will extend an assignment's due date for the entire class if it is clear that the original time frame was unreasonable. **If you are going to inquire about a due date extension for a programming project, be prepared to demonstrate that you have already made substantial progress on the project.** Once again, if a dire situation occurs that will affect your ability to turn in an assignment, please contact me as soon as possible (via email or direct message on Teams).

Missed Exam

If you are unable to attend a scheduled examination time and know in advance, please contact me prior to the exam so that we may reschedule your examination. In the event of an emergency, please contact me as soon as you are able so we can discuss an alternate examination opportunity. For the final exam, no examinations will be given during the last week of classes or on reading days. If you wish to reschedule a final exam, you must petition the Dean for Curriculum and Academic Engagement in writing in advance of the examination. You must confer with the instructor prior to submitting a petition, and the instructor will indicate to the Dean if he or she supports the petition.

Attendance

It is in your best interest to make all reasonable efforts to attend class sessions. Missed classes will directly affect the 'Engagement' portion of your grades and will generally make it difficult to follow along with your peers on future course materials since you will need additional work to catch up with what is already covered in the previous class.

Assignment and Exams

Your grade will be calculated based on the following items:

- **Quizzes:** To assess whether or not you are engaging with the materials outside of class, there will be regular quizzes on Moodle in which the concepts are applied.
- **Engagement:** Taking part in discussions, activities, group work, asking/answering questions on Teams, and meeting with the instructor or ZIs all count towards engagement.
- **Programming Exercises:** Programming exercises will be assigned regularly throughout the semester. Often you will have some time in class to work on assignments, but you may not always be able to finish these exercises during the class session. Most of the programming exercises will be automatically tested by git-keeper, a server that will run tests against your code and email you the results. Grades for these exercises will be based on the test results, style, and organization of your code. **You are responsible for ensuring that assignments are submitted correctly.** You will always receive an email from git-keeper when your submission has been received successfully. If you do not receive an email and you are certain you pushed your submission and there were no errors on your end, contact me.
- **Projects:** These assignments will be more involved than the programming exercises, and you will be given more time to complete them. Completion time and grading will vary from project to project.

- **Midterm Exams:** There will be 2 midterm exams during the semester.
- **Final Exam:** There will be a cumulative final exam given during the final exam period.

Grading

Grades will be weighted as follows:

- 10% Quizzes
- 5% Engagement
- 40% Exercises and Projects
- 25% Midterm Exams (2, 12.5% each)
- 20% Final Exam

NOTE: The main purpose of homework and labs is to provide valuable opportunities to hone your skills. Do not regard these exercises solely as a grading source. With this in mind, I will choose to grade a subset of homework and lab assignments. The remaining subset can be graded partially or based on whether a completed assignment was submitted.

Letter grades will be awarded based on the following scale:

| A | A- | B+ | B | B- | C+ | C | C- | D | F |
|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ≥ 93 | 92-90 | 89-87 | 86-84 | 83-80 | 79-77 | 76-74 | 73-70 | 69-60 | < 60 |

Academic Honesty and the Code of Academic Integrity

The academic program at the College seeks to promote the intellectual development of each student and the realization of that individual's potential for creative thinking, learning, and understanding. In achieving this, each student must learn to act rigorously, independently, and imaginatively.

The College's understanding and expectations in regard to issues of academic honesty are fully articulated in the Code of Academic Integrity as published in [The Scot's Key](#) and form an essential part of the implicit contract between the student and the College. The Code provides framework at Wooster to help students develop and exhibit honesty in their academic work. You are expected to know and abide by these rules.

Dishonesty in any of your academic work is a serious breach of the Code of Academic Integrity and is grounds for serious penalties. Such violations include turning in another person's work as your own, copying from any source without proper citation, violating expectations for a group project, submitting an assignment produced for a course to a second course without the authorization of all the instructors, and dishonesty in connection with your academic work. You will be held responsible for your actions. Particular attention should be directed to the appropriate use of materials available online. Whether intentional or not, improper use of materials is a violation of academic honesty. If you are unsure as to what is permissible, please contact your course instructor.

Class Engagement (aka Class Participation & Attendance)

Engagement with class materials (and each other) is a major component of this class, and you have many different options for how you participate, including:

- regular attendance in classroom
- contributing to in-class discussions
- low-stakes quizzes and homework
- participation in collaborative group/lab work
- meeting with TAs and/or instructor during office hours

Helping to create an inclusive and welcoming environment where other students can learn is also considered part of your Class Engagement grade.

Conflicts with Academic Responsibilities

The College of Wooster is an academic institution, and its fundamental purpose is to stimulate its students to reach the highest standard of intellectual achievement. As an academic institution with this purpose, the College expects students to give the highest priority to their academic responsibilities. When conflicts arise between academic commitments and complementary programs (including athletic, cultural, educational, and volunteer activities), students, faculty, staff, and administrators all share the responsibility of minimizing and resolving them.

As a student you have the responsibility to inform the faculty member of potential conflicts as soon as you are aware of them, and to discuss and work with the faculty member to identify alternative ways to fulfill your academic commitments without sacrificing the academic integrity and rigor of the course.

Final Examinations

No final examinations are to be given during the last week of classes or on reading days. Students who wish to reschedule a final exam must submit a petition to the Dean for Curriculum and Academic Engagement in advance of the examination. The student must confer with the instructor before submitting a petition, and the instructor should indicate to the Dean if they support the petition. Normally, such petitions are granted only for health reasons. If other reasons necessitate a request for a change in a final exam, the request must be submitted three weeks in advance of the examination. [Find electronic petition forms on the Registrar's website.](#)

Course Withdrawal Options

Students may withdraw from a course after the 6th-week drop deadline until the last day of classes (Friday, December 9, 2022 in Fall 2022 and Tuesday, May 9, 2023 in Spring 2023). Students may withdraw from one course, up to 1.25 credits, at any time through the last day of classes, as long as their total remaining credits are 3.0 or above. This may be done without documentation of extenuating circumstances. Requests to drop enrollment below 3.0 credits will require additional documentation through a [Petition for an Exception to an Academic Policy](#).

Note that because federal government guidelines define courses as 'attempted' after 6 weeks, if a student withdraws from a course after 6 weeks, it will be noted as a 'W' on their transcript.

Academic Resource Center: Academic Support and Disabilities

Contact: Amber Larson, alarson@wooster.edu, (330)263-2595, [ARC Website](#)

The Academic Resource Center, which is in APEX (Gault library) offers a variety of academic support services, programs and 1:1 meetings available to all students. Popular areas of support include time management techniques, class preparation tips and test taking strategies. In addition, the Academic Resource Center coordinates peer-tutoring for several academic departments. Students are encouraged to schedule an appointment.

An additional support that the Academic Resource Center offers is English Language Learning. Students can receive instruction or support with English grammar, sentence structure, writing, reading comprehension, reading speed, vocabulary, listening comprehension, speaking fluency, pronunciation, and American culture through 1:1 meetings with the Academic Resource Center staff, ELL Peer Tutoring, ELL Writing Studio courses, and other programming offered throughout the year.

The Academic Resource Center also coordinates accommodations for students with diagnosed disabilities. At the beginning of the semester, students should contact the Academic Resource Center to make arrangements for securing appropriate accommodations. Although the Academic Resource Center will notify professors of students with documented disabilities and the approved accommodations, students are encouraged to speak with professors during the first week of each semester. If a student does not request accommodations or does not provide documentation to the Academic Resource Center, faculty are under no obligation to provide accommodations with a librarian for help on a project; and learning how to evaluate the information you discover.

Basic Needs, Food Security & Access to Course Materials

Contact: Dean of Students Office, dos@wooster.edu, 330-263-2545, Galpin Hall

We learn as whole people. To learn effectively you must have basic security: a roof over your head, a safe place to sleep, enough food to eat. If you have trouble with any of those things or need assistance obtaining the course materials for this or other classes, please talk with me or with staff in the Dean of Students office. Together we can work to make sure those needs are met. There is a [Technology Assistance Application](#) (Wooster login required) and Wooster alums have created a fund to assist students who encounter a personal financial crisis during their time at the College; find out more about this [Emergency Funding](#) through the DoS office.

Inclusive Learning Statement

Your success in this course is important to me. If there are circumstances that may affect your academic performance or impact your learning in particular portions of the class, please let me know as soon as possible. You do not need to share specifics, but together we can develop strategies to meet both your needs and the requirements of the course. I encourage you to visit the [Academic Resource Center](#) to determine how you could improve your learning as well. If you need official accommodations, the ARC can work with you to make sure your needs are met. There are also a range of resources on campus, including the [Writing Center](#), [Math Center](#), [STEM Success Initiative](#), and [APEX](#).

It is also important that we all be respectful of everyone's privacy around health concerns, vaccination status, and any accommodations that are necessary in the classroom. It is not appropriate to question why someone requests physical distancing, chooses to wear a mask, or requires any other accommodations. As part of our participation together in this class, we commit to showing respect to each other as individuals, to working together to create a learning environment that fosters a sense of belonging and inclusion to all members, and to understanding that our differences are also strengths. Your suggestions are encouraged and appreciated, and please contact me—via email, office hours, or after class—if you have any concerns or questions.

Names, Pronouns & Pronunciation

All people have the right to be addressed and referred to as they prefer. I will do my best to address and refer to all students by the names and pronouns that they share in class, regardless of what is listed on the roster, and I support classmates in doing so as well. I would like for you to refer to me as Professor Bhowmik (bhoU-mik) or Kowshik (koU-shik). I use he/he/his pronouns. Please share the name you prefer to be called and pronouns you wish to use in this class with me via classroom introductions or privately.

If you are interested in changing your chosen name and/or including your pronoun(s) in The College of Wooster system, [you can find additional information here](#). What appears in The College of Wooster system is what will display in all platforms across Microsoft Teams. At present, there is no alternative way to change your name or to add pronouns in Teams, but you can add a background that includes these for any video platform (see [instructions for Microsoft Teams here](#)).

I encourage everyone in this classroom to create a space of mutual respect and support by also giving each other some grace around pronouns, pronunciation of names, etc., if or when we make mistakes. This is not at all to absolve anyone of responsibility for using correct pronouns, names, and pronunciations. But I find it useful to acknowledge that even with the best of intentions, sometimes we can all still make mistakes.

Title IX Reporting Policy Regarding Sexual Misconduct, Harassment, Relationship Violence, and Stalking

Contact: Joe Hall, jhall@wooster.edu, [Title IX website](#)

The College of Wooster is committed to fostering a campus community based on respect and nonviolence. To this end, we recognize that all Wooster community members are responsible for ensuring that our community is free from discrimination, gender bias, sexual harassment, and sexual assault. In accordance with Title IX, Wooster is legally obligated to provide supportive options for all reports of sexual harassment and sexual assault that occur on our campus. Faculty who become aware of an incident of sexual violence, including harassment, rape, sexual assault, relationship violence, or stalking, are mandated reporters at the College and are required to notify Wooster's Title IX Coordinator. The purpose of this disclosure is to ensure that students are made aware of their reporting options and resources for support. For more information about your rights and reporting options at Wooster, including confidential and anonymous reporting options, please visit <https://inside.wooster.edu/title-ix/>

Discriminatory or Bias-Related Harassment Reporting Policy

Contact: Visit the [Bias Reporting website](#)

The College of Wooster is committed to promoting its mission of inclusivity and equity in all aspects of the educational enterprise. This commitment extends to all rights, privileges, programs and activities, including housing, employment, admissions, financial assistance, and educational and athletic programs at the College. The College's Bias Incident Reporting Process is designed to effectively respond to bias concerns raised by faculty, students, staff, alumni and visitors to the College. If you or someone you know are the victims of bias, you can:

- [File a report online](#) (where you may choose to identify yourself or not)
- Contact Campus Safety: 2590 (from campus phone) or 330-263-2590
- Call the Anonymous Tip Line: 2337 (from campus phone) or 330-263-2337
- Contact the Dean of Students Office: 2545 (from a campus phone) or 330-263-2545
- Contact the Vice President for Equity, Inclusion, and Diversity Cheryl Nuñez at 330-263-2356

Wellbeing at Wooster

Contact (24/7): (330) 263-2319, or visit the [Wellness Center website](#)

The College of Wooster is committed to supporting the wellbeing of our students. During the course of their academic careers, students experience challenges that may interfere with their learning & health (both physical and mental), including but not limited to: strained relationships, adjusting to a new environment, chronic worrying, persistent sadness or loss of interest in enjoyable activities, family conflict, grief and loss, domestic violence, unwanted sexual experiences, difficulty concentrating, drug/alcohol problems, significant changes in eating and sleeping patterns, microaggressions, challenges with organization, procrastination and/or lack of motivation. Counseling Services at the Longbrake Student Wellness Center is a free and confidential resource providing short-term counseling and connections to community agencies for students needing longer term or specialized resources. You can make an appointment by calling 330.263.2319 between 8:30am-4:30pm during weekdays or by emailing Lori Stine (lstine@wooster.edu). You can also find helpful resources on the Counseling Services website at <https://inside.wooster.edu/health/counseling/>.

Students also have free access to TimelyCare, a telehealth service providing scheduled medical and counseling appointments as well as 24/7 crisis consultation with licensed professionals. Students use their Wooster email to establish an account at [TimelyCare: Telehealth for Scots](#). TimelyCare also provides students access to nutritionists and health coaches about issues of sleep and exercise, and psychiatry (with a referral from doctor or counselor).

If you or a friend is in crisis, please call Campus Safety at 330-287-3333 or the Suicide and Crisis Lifeline (988, available 24 hours) or connect with the Crisis Text Line by Texting "4HOPE" to 741-741.

For financial concerns: Dean of Students Office, dos@wooster.edu (330) 263-2545, [DoS website](#)

For safety concerns: Campus Safety 330-263-2590 or cw-security@wooster.edu, [Campus Safety website](#). **In the care of an emergency, call: 330-287-3333.**