

CS 2334: Programming Structure/Abstractions

Spring 2026 Syllabus

Instructor: Sanjana Mudduluru (sanjana@ou.edu, Devon Energy Hall 231)
Office hours: Dr. Sanjana Mudduluru [T/Th 1:00 – 2:00 PM]
Teaching Assistants: Huan Pham, Matthew Agron,
Preston Weinheimer, Thomas Petersen
TA Office hours: TBD

Contact Policy:

- For all course-related queries, contact cs2334_spring26@groups.ou.edu, which the TAs and I will monitor. This ensures a faster response and keeps the entire instructional team informed.
- For personal matters or private concerns, please email me directly at my university email address, sanjana@ou.edu.
- TA office hours are posted on Canvas under ‘pages’. These office hours are subject to change.

Lecture Time & Location:

| | | |
|-------------|----------------------|----------------------------------|
| Section 001 | MWF 9:00 – 9:50 AM | Felgar Hall 0304 |
| Section 002 | MWF 10:00 – 10:50 AM | Felgar Hall 0304 |

Prerequisites:

(C S 1323 or 1321 or 1324) and MATH 1503 or higher.

Ambitious, Tentative List of Topics (not all topics necessarily covered, not necessarily in this order) The design and implementation of computer programs using disciplined methodologies. Use of several abstract data types. Software reuse through encapsulation, composition, aggregation, inheritance, polymorphism, and generics. Topics include recursion, GUI development, file processing, and unit testing. A program design tool will be used. Introduction to ethics in computer science, including philosophical ethics theories. Discussion of intellectual property rights and privacy.

CS 2334 Learning Objectives:

By the end of this course, you should be able to:

- Outline the process of encapsulation, inheritance, polymorphism, aggregation, recursion, generics & composition.
- Analyze simple computing problems and define the requirements that are appropriate to their solution.
- Create programming solutions to computing problems by application of design and development principles & tools (umlet). Specifically, implement a program in Java using abstract data types and objects.
- Apply GUI development and file processing techniques.
- Design and apply unit tests.
- Evaluate and analyze the professional, ethical, legal, security and social issues that are faced by computer scientists, specifically in the areas of intellectual property rights and privacy.

ABET Outcomes- By the end of the semester, the students will be able to apply computer science theory and software development fundamentals to produce computing-based solutions. For more information, see <https://www.abet.org/> . These include:

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Labs are mandatory & are held on Wednesdays.

| | | | |
|-------------|----|------------------|--------------|
| Section 011 | TA | 11:00 – 12:50 PM | Sarkeys M207 |
| Section 012 | TA | 1:00 – 2:50 PM | Sarkeys M207 |
| Section 013 | TA | 3:00 – 4:50 PM | Sarkeys M207 |
| Section 014 | TA | 5:00 – 6:50 PM | Sarkeys M207 |

Each lab grade has two parts.

1. (Manual grade) will be awarded by TAs after each lab(includes attendance & comprehensive questions related to Labs).
2. (Auto grade) The ZyBook auto grader is used to test and grade your lab submission.

Required Textbooks and Resources:

- **Programming Structures and Abstraction (Zybooks)**

<https://zybooks.com>.

1. Sign in or create an account at learn.zybooks.com [must use your official OU email ID]
2. Enter zyBook code: **OUCS2334MudduluruSpring2026**
3. Subscribe

When you create your Zybooks account, you **must use your official OU email ID** (the one with your full name, not your alias). We will otherwise be unable to match your Zybooks grades with your Canvas identity.

Students must read the assigned readings and complete the associated exercises and always make sure to have access to the textbooks since most of the assignments will be there.

- **Java SE Development Kit (JDK) Version 17**

<https://www.oracle.com/java/technologies/javase/jdk17-archive-downloads.html>

Note that just having the Java Runtime Environment (JRE) is not sufficient (which you may have installed for previous classes).

- **Eclipse integrated development environment (IDE)**

If you install Java SDK before Eclipse, the installation process usually goes smoothly. We strongly recommend the latest version from <https://www.eclipse.org>

- **GitHub**

We will be relying on GitHub for labs and projects. Setup an account using OU email ID on <https://github.com/>

Attendance policy:

Attendance accounts for 10% of your overall grade and is monitored through in-class participation tasks. These tasks may include programming exercises completed during specified classes or days.

- Students can miss up to three class sessions throughout the semester without penalty.
 - For the labs (approximately 10 sessions), students can miss one lab session during the semester.
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Grading Breakdown:

The following requirements may change during the semester. [Tentative breakdown and subject to change as we progress through the summer]

| Required Work | Percentage |
|--|------------|
| <ul style="list-style-type: none">• Programming Projects<ul style="list-style-type: none">○ Each semester 4 individual projects | 20% |
| <ul style="list-style-type: none">• Attendance (In-class participation)<ul style="list-style-type: none">○ In-class programming tasks○ Gradescope assignments○ Due at the end of each class unless stated otherwise | 10% |
| <ul style="list-style-type: none">• Zybooks Assignments<ul style="list-style-type: none">○ Reading assignments released each week | 10% |
| <ul style="list-style-type: none">• Labs | 20% |
| <ul style="list-style-type: none">• Exams:<ul style="list-style-type: none">○ Midterm1: 10%○ Midterm2: 10%○ Final Exam: 20% [Final group project that leads to a poster presentation] | 40% |

Late Work Policy:

There are no makeup assignments for Labs & Zybook assignments, but Projects have up to 2 days after the deadline. If you have any emergencies, please do not hesitate to contact the instructor. Your request for appropriate accommodation will be reviewed on a case-by-case basis for one of the following reasons:

- (a) Medical situation, (b) Family emergency & (c) University-approved business (for example, business travel including OU Athletics).

Generative AI Policy:

We learn best when we are actively engaged in the process of completing all aspects of an assignment. Even the brainstorming and initial draft phase is a time of discovery that is an integral part of your learning. To empower you to fully engage in the learning process, the use of Generative AI, including, but not limited to, ChatGPT, CoPilot, ClaudeAI, Gemini, and Grammarly AI, is considered a violation of the academic integrity policy for this course. As the use of Generative AI to assist in completing any aspect of work for this course is prohibited, this includes using Generative AI to write or edit your assignments, projects and to take your quizzes or exams. If using an e-book or search engine that has integrated Generative AI, then you should not rely on the Generative AI output and engage instead with the source material.

To implement this policy, assignments have been designed to either occur in a controlled environment (such as in-class or with Lockdown Browser) or so that it is unlikely that one can be successful in completing an assignment using Generative AI. I also want you to reach out to me if you have any questions or concerns. If you have any questions about this policy or what counts as Generative AI, please talk with me.

Consequences for Violating the Generative AI Usage Policy: Any usage of Generative AI in this course may be considered a violation of the academic integrity policy for this course and could result in a zero for an assignment or a failing grade on the course.

Canvas Postings

Course materials, including videos, slides, homework assignments, programming project and announcements will be posted on Canvas. You should check the Canvas page at least twice a week, but daily is even better.

Communication channels

Often, we need to alert the class to an important issue or problem. You should check your outlook e-mail at least twice a week but daily is even better. Course e-mails are sent to your official OU e-mail address.

| MONTH | DAY | DATE | TOPIC | DEADLINES |
|----------|--------|--------|---|-----------|
| January | M | Jan 19 | Martin Luther King Day: No class Week 1: Introduction & Review of 1323 | |
| | W | Jan 21 | | |
| | F | Jan 23 | | |
| | M | Jan 26 | Week 2: Classes & Objects | |
| | W | Jan 28 | | Lab2 |
| | F | Jan 30 | | |
| February | M | Feb 2 | Week 3: Inheritance & Polymorphism | |
| | W | Feb 4 | | Lab4 |
| | F | Feb 6 | | |
| | M | Feb 9 | Week 4: Abstract methods & classes | Project 1 |
| | W | Feb 11 | | Lab5 |
| | F | Feb 13 | | |
| | M | Feb 16 | Week 5: Java Interfaces | |
| | W | Feb 18 | | Lab6 |
| F | Feb 20 | | | |

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|-------|---------------|--------------------|---|-------------------------------|
| | M | Feb 23 | Week 6: Exception Handling | |
| | W | Feb 25 | | |
| | F | Feb 27 | | Midterm 1 |
| March | M | Mar 02 | Week 7: Generics | Project 2 |
| | W | Mar 04 | | Lab7 |
| | F | Mar 06 | | |
| | M | Mar 09 | Week 8: Java Collections Framework | |
| | W | Mar 11 | | Lab8 |
| | F | Mar 13 | | |
| | M | Mar 16 | Week 9: Spring Break: No classes | |
| | W | Mar 18 | | No Lab |
| | F | Mar 20 | | |
| | M | Mar 23 | Week 10: Java Collections Framework | |
| | W | Mar 25 | | Lab9 |
| | F | Mar 27 | | Project 3 |
| M | Mar 30 | Week 11: Recursion | | |
| W | Apr 01 | | | |
| F | Apr 03 | | Midterm 2 | |
| April | M | Apr 06 | Week 12: GUI Basics | |
| | W | Apr 08 | | Lab10 |
| | F | Apr 10 | | |
| | M | Apr 13 | Week 13: GUI Component | |
| | W | Apr 15 | | |
| | F | Apr 17 | | |
| | M | Apr 20 | Week 14: CS Ethics | |
| | W | Apr 22 | | |
| | F | Apr 24 | | Project 4 |
| | M | Apr 27 | Week 15: Review, Git, Database connection | |
| | W | Apr 29 | | |
| | F | May 01 | | |
| May | M | May 04 | Week 16: Pre-finals week | |
| | W | May 06 | | |
| | F | May 08 | | Final Project |
| | MON | May 11 | 8:00 – 10:00 AM @ Felgar Hall 304 | Final Exam Section 001 |
| | TUE | May 12 | 8:00 – 10:00 AM @ Felgar Hall 304 | Final Exam Section 002 |

Note: The schedule provided is provisional, and certain topics may be subject to change as we move forward in the semester. Labs, ZyBook assignment deadlines will be posted to canvas.

[University Policies](#)

University Policies

Mental Health Support Services

Support is available for any student experiencing mental health issues that are impacting their academic success. Students can either be seen at the University Counseling Center (UCC) located on the second

floor of Goddard Health Center or receive 24/7/365 crisis support from a licensed mental health provider through [TimelyCare](#). To schedule an appointment or receive more information about mental health resources at OU please call the UCC at 405-325-2911 or visit [University Counseling Center](#). The UCC is located at 620 Elm Ave., Room 201, Norman, OK 73019.

Title IX Resources and Reporting Requirement

The University of Oklahoma faculty are committed to creating a safe learning environment for all members of our community, free from sex-based discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking, in accordance with Title IX. There are resources available to those impacted, including: speaking with someone confidentially about your options, medical attention, counseling, reporting, academic support, and safety plans. If you have (or someone you know has) experienced any form of sex-based discrimination or violence and wish to speak with someone confidentially, please contact [OU Advocates](#) (available 24/7 at 405-615-0013) or [University Counseling Center](#) (M-F 8 a.m. to 5 p.m. at 405-325-2911).

Because the University of Oklahoma is committed to the safety of you and other students, and because of our Title IX obligations, I, as well as other faculty, Graduate Assistants, and Teaching Assistants, are mandatory reporters. This means that we are obligated to report sex-based violence that has been disclosed to us to the Institutional Equity Office. This means that we are obligated to report sex-based violence that has been disclosed to us to the Institutional Equity Office. This includes disclosures that occur in: class discussion, writing assignments, discussion boards, emails and during Student/Office Hours. You may also choose to report directly to the Institutional Equity Office. After a report is filed, the Title IX Coordinator will reach out to provide resources, support, and information and the reported information will remain private. For more information regarding the University's Title IX Grievance procedures, reporting, or support measures, please visit [Institutional Equity Office](#) at 405-325-3546.

Adjustments for Pregnancy and Related Issues

Should you need modifications or adjustments to your course requirements because of pregnancy or a pregnancy-related condition, please request modifications via the [Institutional Equity Office](#) website or call the Institutional Equity Office at 405/325-3546 as soon as possible. Also, see the Institutional Equity Office [FAQ on Pregnant and Parenting Students' Rights](#) for answers to commonly asked questions.

Reasonable Accommodation Policy

The University of Oklahoma (OU) is committed to the goal of achieving equal educational opportunity and full educational participation for students with disabilities. If you have already established reasonable accommodations with the Accessibility and Disability Resource Center (ADRC), please log into iAdvise to request your semester accommodations as soon as possible and contact me privately, so that we have adequate time to arrange your approved academic accommodations.

If you have not yet established services through ADRC, but have a documented disability and require accommodations, please complete [ADRC's pre-registration form](#) to begin the registration process. ADRC facilitates the interactive process that establishes reasonable accommodations for students at OU. For more information on ADRC registration procedures, please review their [website](#). You may also contact them at (405)325-3852 or adrc@ou.edu, or visit www.ou.edu/adrc for more information.

Note: disabilities may include, but are not limited to, mental health, chronic health, physical, vision, hearing, learning and attention disabilities, pregnancy-related. ADRC can also support students experiencing temporary medical conditions.

Religious Observance

It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty. [[See Faculty Handbook 3.15.2](#)]

Final Exam Preparation Period

Pre-finals week will be defined as the seven calendar days before the first day of finals. Faculty may cover new course material throughout this week. For specific provisions of the policy please refer to OU's [Final Exam Preparation Period policy](#).

Emergency Protocol

During an emergency, there are official university [procedures](#) that will maximize your safety.

Severe Weather: If you receive an OU Alert to seek refuge or hear a tornado siren that signals severe weather.

1. Look for severe weather refuge location maps located inside most OU buildings near the entrances.
2. Seek refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building.
3. Go to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows.
4. Get in, Get Down, Cover Up
5. Wait for official notice to resume normal activities.

Additional [Weather Safety Information](#) is available through the Department of Campus Safety.

The University of Oklahoma Active Threat Guidance

The University of Oklahoma embraces a Run, Hide, Fight strategy for active threats on campus. This strategy is well known, widely accepted, and proven to save lives. To receive emergency campus alerts, be sure to update your contact information and preferences in the account settings section at one.ou.edu.

RUN: Running away from the threat is usually the best option. If it is safe to run, run as far away from the threat as possible. Call 911 when you are in a safe location and let them know from which OU campus you're calling from and location of active threat.

HIDE: If running is not practical, the next best option is to hide. Lock and barricade all doors; turn off all lights; turn down your phone's volume; search for improvised weapons; hide behind solid objects and walls; and hide yourself completely and stay quiet. Remain in place until law enforcement arrives. Be patient and remain hidden.

FIGHT: If you are unable to run or hide, the last best option is to fight. Have one or more improvised weapons with you and be prepared to attack. Attack them when they are least expecting it and hit them where it hurts most: the face (specifically eyes, nose, and ears), the throat, the diaphragm (solar plexus), and the groin.

Please save OUPD's contact information in your phone.

NORMAN campus: *For non-emergencies call (405) 325-1717. For emergencies call (405) 325-1911 or dial 911.*

TULSA campus: *For non-emergencies call (918) 660-3900. For emergencies call (918) 660-3333 or dial 911.*

Fire Alarm/General Emergency

If you receive an OU Alert that there is danger inside or near the building, or the fire alarm inside the building activates:

1. *LEAVE* the building. Do not use the elevators.
2. *KNOW* at least two building exits
3. *ASSIST* those that may need help
4. *PROCEED* to the emergency assembly area
5. *ONCE safely outside, NOTIFY first responders of anyone that may still be inside building due to mobility issues.*
6. *WAIT* for official notice before attempting to re-enter the building.

[OU Fire Safety on Campus](#)