CS 211 – Computer Science II
Winter 2024 – CRN: 31305

SYLLABUS

General Course Information

Prerequisites	CS 210 or equivalent. CS 211 assumes familiarity with Python programming.
Lecture	Tuesday and Thursday, 10:00 - 11:20. 101 Living Learning Center South (https://classrooms.uoregon.edu/101LLC).
Lab Sessions	0 29 1200-1250 t B026 KLA Palmstrom L 0 29 1300-1350 t B026 KLA Palmstrom L 3 29 0900-0950 w B026 KLA Lisan A 0 29 1000-1050 w B026 KLA Lisan A 0 29 1300-1350 w B026 KLA Hasanisaznaghi M
Description	CS 211 is the second course in the three-term "Introduction to Computer Science" series at the University of Oregon. The course focuses on object-oriented programming and its application to problem-solving.

Major Topics

- Object Oriented Programming
- Classes and objects
- Subclasses and inheritance
- Information hiding
- Recursion and objects
- Development of larger projects

Objectives

CS 211 builds on the computational problem-solving and Python programming skills developed in CS 210 and introduces object-oriented programming techniques.

After successfully completing CS 211, you should be able to:

- Use *classes* and *objects* in an object-oriented programming language, including polymorphism and inheritance.
- Develop an operational understanding and idiomatic problem-solving tactics in object-oriented programming. You will read and write program source code in an object-oriented style, including:
  - Using polymorphism and dynamic dispatch to simplify program logic.
  - Using dynamic dispatch to create listener/notifier connections between program modules.
  - Using abstract classes and methods to organize related concrete subclasses and methods, with inheritance and overriding.
  - Constructing recursive object-oriented data structures, with recursive algorithms factored into base and inductive cases by subclass.
- Decompose a moderately complex problem specification into parts that can be solved and developed piece by piece, testing your solution at each stage in its implementation.
- Write software that communicates intent to human readers and correctly expresses intended instructions

for the computer.
- Reason about asymptotic performance (the relation of time and space requirements to problem size) to devise programs with acceptable performance on moderate to large problems. (You will learn more sophisticated reasoning about asymptotic performance in CS 212, CS 313, and CS 315.)

Acquired Skills

- Effectively use an IDE in the development and testing of moderate-sized Python programs.
- Understand, develop, and implement Object-Oriented programs in Python.
- Develop recursive data structures (objects) and algorithms.
- Read, write, revise, document, test, and debug code.

Teaching Team

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Course Materials (Required)

Development Environment. We use Python version 3.10. or later in this course. I recommend using the VSCode IDE.

Introduction to Computer Science II. Free online book by Professor Michal Young (https://uo-cs-oer.github.io/CS211-text/intro.html). You can expect to read 10-20 pages from the textbook and project documentation each week.

Coding Rooms. We will use a tool – https://codingrooms.com - to code together in lectures *and* programming projects. Join CS 211 S 24 in coding rooms using the join link (https://app.codingrooms.com/app/?joinCode=C-NenzHBV) or join code (C-NenzHBV) and use this link to submit the $30.00 payment as soon as possible (https://buy.stripe.com/aEUdTR3i0g57as0cNA).

iClicker. I will use quizzes as a proxy for taking roll. To respond to those quizzes, Download the iClicker app (https://apps.apple.com/us/app/iclicker-student/id899690067). The join link for this course is (https://join.iclicker.com/SUGH). **Do not buy a physical iClicker - you will not need it for this course!!!**

Attendance

This course abides by the University of Oregon course attendance and engagement policy (https://provost.uoregon.edu/course-attendance-and-engagement-policy).

- If I get a note from the Accessible Education Center (AEC - https://aec.uoregon.edu/request-accommodations) stating that you may need to miss class, I will provide the requested accommodations. Please communicate with AEC immediately since I will not grant any accessibility accommodations not coming from AEC (as per their suggestion.)
- Absence required for religious observance (https://provost.uoregon.edu/religious-observance-accommodations-policy) will be excused, but you need to submit a form (https://registrar.uoregon.edu/sites/registrar1.uoregon.edu/files/pdf/form-religious-accommodation-request.pdf) before, not after, your absence (and preferably by the second week in the term).
- University-sponsored events are considered verifiable, legitimate reasons for participating students to miss class. Students are responsible for providing documentation signed by a university employee verifying their participation in the activity and listing the dates they might miss class. Students must send this notification during week one of the term.
- Except for the legitimate and verifiable reasons for absences referenced above, I will not excuse absences since there is no equitable way to confirm the veracity of student-provided reasons or documentation outside the university context.
- Suppose you encounter an emergency that will cause you to miss more than the allowed absences. In that case, your options are (a) withdrawing from this course, (b) an incomplete, provided you satisfy the UO incompletes policy (https://provost.uoregon.edu/grades-incompletes-policy), or (c) contacting the Dean of Students to request an emergency academic notification (https://dos.uoregon.edu/dos-faq).

I will use brief quizzes as a proxy for taking roll. To respond to those quizzes, you must purchase an iClicker at the UO Duckstore (https://www.uoduckstore.com/Iclicker-2_142928048). If you already bought an iClicker for other courses, you can use that one.

I will give these quizzes regularly throughout the term. Attendance will count for 5% of the course grade.

Following the lectures is the only way to provide timely interaction with the course instructor. There will be no lectures in hybrid instruction mode or parallel Zoom meetings for lectures or lab sessions. This course will

not provide any recordings of lectures or lab sessions.

Grading

We will use cumulative grading – you *accumulate points* as you complete assignments, exams, and other requirements. The table below shows the point values of each component.

Component	# Events	Dropped Events	Weight (%)
Exams (in person)	2	0	50
Projects	9	2	30
Mini-exams (online)	4	1	10
Code demo	1	0	5
Attendance	-	-	5
Total			**100**

Mini-projects and labs are related to the following project. In coding rooms, you will find separate workspaces for Projects, Labs, and Mini-projects. Make sure you upload your work to its respective workspace. The weights for the projects, labs, and mini-projects to compute the project grade are:

Lab - 10%
Mini-project - 5%
Project - 85%

The weeks we don't have a mini-project,

Lab - 10%
Project - 90%

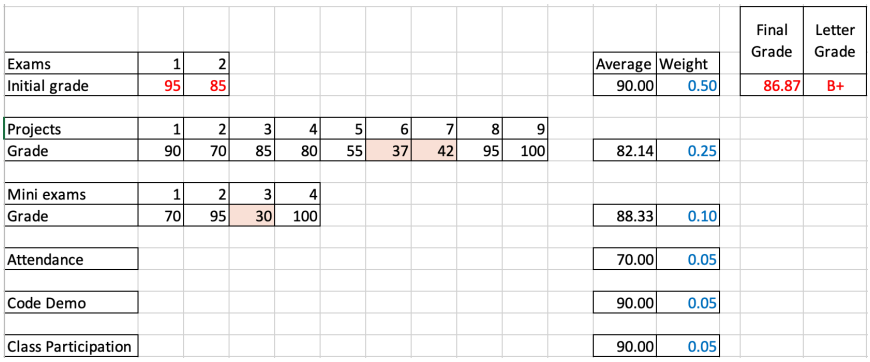
Canvas will automatically drop the two lowest-grade projects and the lowest-grade mini-exam (independently). **Exam grades will not be dropped.**

Canvas will round the final score and compute the letter grade from your final score according to the following table.

Letter grade	Percentage	GPA	C+	77–79%	2.33
A+	97–100%	4.33 or 4.00	C	73–76%	2.00
A	93–96%	4.00	C-	70–72%	1.67
A–	90–92%	3.67	D+	67–69%	1.33
B+	87–89%	3.33	D	63–66%	1.00
B	83–86%	3.00	D-	60–62%	0.67
B–	80–82%	2.67	F	0–59%	0.00

There is no grade curving in this course.

Here is an example of the grade calculation procedure; the following image shows a grade simulator, with its components explained below.



												Final Grade	Letter Grade
Exams	1	2								Average	Weight		
Initial grade	95	85								90.00	0.50	86.87	B+
Projects	1	2	3	4	5	6	7	8	9				
Grade	90	70	85	80	55	37	42	95	100	82.14	0.25		
Mini exams	1	2	3	4									
Grade	70	95	30	100						88.33	0.10		
Attendance										70.00	0.05		
Code Demo										90.00	0.05		
Class Participation										90.00	0.05		

The cells with an orange background mean dropped grades; their respective averages are computed with the remaining grades. The blue cells indicate weights. The final grade is the sum of the averages multiplied by their weights.

CS majors, minors, and DSCI majors must take CS 211 graded; others may take it graded or P/N.

Late Submission and Makeup Work

No assignments can be turned in late or made up in this course. Canvas will drop two projects and one mini-exam. Note that dropping a project includes dropping its related lab and mini-project grades.

Course Communication

E-mail

Use ***E-mail*** for grade clarifications and personal questions.

Canvas

Do not use Canvas Messaging for any course communication. Canvas' messaging system is impractical. Make sure you understand that ***Canvas is not E-mail***.

Campus Wire

This course will use the *Campus Wire* platform for online peer-to-peer communications. Participation is optional (not required), although you are encouraged to use this online tool. You may also reply to your peers' questions. When a student answers a question, anyone in the staff team can reinforce, complement, or correct the previous answer. Instructors may (but are not required or expected to) answer questions on *Campus Wire*.

Do not Post Code. Students will undoubtedly need help with specific code. You may post 1-2 lines of code with a particular question; however, **do not post code blocks to** *Campus Wire*.

You can enroll in the CS 211 S 24 Course Campus Wire Server by using the following link (https://campuswire.com/p/GFBCB993F). The code is 0465.

You may also reply to your peers' questions. When a student answers a question, anyone in the staff team can reinforce, complement, or correct the previous answer.

Do not Post Code

Students always need help with specific code. You may post 1-2 lines of code with a particular question; however, **do not post code blocks to *Campus Wire* unless you post privately** (not to your peers).

Netiquette Policy

Please use appropriate online etiquette to post or respond to any electronic communication. This course does not tolerate inappropriate forum postings. Below are specific online Netiquette guidelines:

- Never post personal information about another person.
- You may disagree with someone but never insult another person or use any profanity, including Internet abbreviations known to represent profanity.
- Do not repeatedly post the same content (also known as scrolling).
- Post only material relevant to this course.
- Avoid posting content in ALL CAPS. Avoid emphasis in response to other posters that indicate derision.
- Try to follow the Golden Rule: treat others as you would like to be treated.

Academic Integrity Policy

The CS 211 Academic Integrity Policy is as follows:

1. Do not share any program code with other students.
2. Do not submit the work of others, including any code found online, as your own work.
3. Be prepared to explain any program code you submit.

The instructor and the University expect academic honesty; they will handle suspected dishonesty according to university policy: "academic misconduct … affects our entire university community … it devalues the reputation of our institution, its faculty, its students, and the degrees we offer. Moreover, academic misconduct is particularly unfair to the students who do their work with integrity and honor. All suspected academic misconduct incidents must be reported to the Office of Student Conduct and Community Standards."

All work you submit for this course toward completion of course requirements must be your original work done specifically for this course and without substantive assistance from others, including artificial intelligence systems (e.g., ChatGPT). Work you have completed for previous courses or are developing for other courses this term should not be submitted for this course. Please note that we may use AI or plagiarism detection tools to ensure all work is human-created and original. Please also carefully read the academic integrity policy concerning plagiarism.

Cheating means any deception by which a student misrepresents or misleadingly demonstrates that the student has mastered information on an academic exercise that the student has not learned. See UO Student Conduct Code – https://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code. *The work you submit must be the result of your engagement with the process of computational problem-solving.* When you turn in the solution to an assignment with your name on it, you state that you are its author. Academic misconduct (e.g., plagiarism, copying code, cheating on exams) is a severe violation of the UO student conduct code, and its consequences can be severe and permanent. **Students who cheat in CS 211 will fail the class**.

"Ignorantia juris non excusat" – Ignorance of the law is no excuse. A student unaware of important course information may not escape liability for not meeting deadlines or expectations merely by being unaware of their content.

You must credit all online sources you used as references by including a single comment in your code with the source URL. Referencing online material does not mean you may duplicate the online material.

AI Use

Throughout this term, you must report all interactions with AI tools for course credit. If you use any AI tool to produce (partial) solutions for projects, you must:

- Include comments around the code segment produced by AI tools.
- In the comments, include the tool you use, your prompts, the AI's responses, how you used the response, exploratory use of the tools, and reflections on your experience.
- Be ready to answer questions about the solutions you provide. Failure to do so will result in no points for that assignment.

Through such documentation and reflection, you will contribute to a knowledge base of best practices and help others learn from your experiences.

Tips for CS 211 Students

- **Come to lectures and participate.** Lectures provide a detailed introduction to new material and examples relevant to the current or upcoming assignments and exams. Do the assigned reading before lectures. Participation in lectures and laboratories is the reason why you are paying tuition.
- **Monitor your grades in Canvas using the Grades Menu Option.** Notify your instructor of problems or discrepancies without delay. You must deal with any grading issues by e-mail.
- **Come to office hours.** Office hours allow you to get one-on-one help, ask questions, and seek general advice. Work smart and ask for help (sooner rather than later).
- **Complete all assignments and submit them on time.** Missing projects will have a significant effect on your final grade. Do not fall behind; start projects early. You will always get partial credit for partial solutions.
- **Inform the instructor ASAP if you are having difficulties.** Options often exist early in the course that simply do not exist later.
- E-mail **Forwarding.** Canvas sends you all the course notifications to your UO e-mail address. You can automatically have your UO e-mail forwarded to your primary e-mail account.

Universal Learning Environment

The University of Oregon, the CS department, and I are all working to create inclusive learning environments. Notify me if aspects of this course's instruction or design hinder your participation.

Students with a UO disability notification letter should meet with me as early as possible. You may get information about Support and Services for Students with Disabilities by seeing the Accessible Education Center (http://aec.uoregon.edu/).

Inclement Weather

Class is generally expected to meet unless the University is officially closed for inclement weather. If it becomes necessary to cancel class while the University remains open, this will be announced on Canvas and by e-mail. Updates on inclement weather and closure are also communicated in other ways described here: https://hr.uoregon.edu/about-hr/campus-notifications/inclement-weather/inclement-weather-immediate-updates.

Reporting Discrimination, Harassment, or Violence

Students experiencing sex or gender-based discrimination, harassment, or violence should call the 24-7 hotline at 541-346-SAFE [7244] or visit safe.uoregon.edu for help. Students experiencing all forms of prohibited discrimination or harassment may contact the Dean of Students Office at 541-346-3216 or the non-confidential Title IX Coordinator/OICRC at 541-346-3123. Additional resources are available at investigations.uoregon.edu/how-get-support.

Mental Health and Wellness

Life at college can be very complicated. Students often feel overwhelmed or stressed, experience anxiety or depression, struggle with relationships, or need help navigating challenges. If you face such challenges, you don't need to handle them alone – there's help and support on campus.

As your instructor, if I believe you may need additional support, I will express my concerns and the reasons for them and refer you to resources that might be helpful. My only intention is to let you know I care and that help is available. Getting help is a courageous thing to do.

University Health Services helps students cope with difficult emotions and life stressors. If you need general resources on coping with stress or want to talk with another student who has been in the same place as you, visit the Duck Nest (located in the EMU on the ground floor) – get help from one of the specially trained Peer Wellness Advocates. Find out more at health.uoregon.edu/ducknest.

University Counseling Services (UCS) has a team of dedicated staff members to support you with your concerns, many of whom can provide identity-based support. All clinical services are free and confidential. Find out more at counseling.uoregon.edu or by calling 541-346-3227 (After-Hours Support and Crisis Line).

Basic Needs

If you are facing difficulties affording groceries to eat every day or lack a safe and stable place to live, contact the Dean of Students Office (346-3216, 164 Oregon Hall) for support. Visit https://blogs.uoregon.edu/basicneeds/food/; this site provides resources for food, housing, healthcare, childcare, transportation, technology, finances, and legal support.