

CIS 203 – Computer Science II, Spring 2024

Textbook:	Required: <i>Big Java Late Objects</i> , 2nd Edition (2017) by Horstmann, Cay S. ISBN-13: 978-1119398721.
Instructor:	Dr. Laura Grabowski
Office:	Dunn 303
Office Hours:	Mon/Wed/Fri 11:00 AM - 11:50 AM; Tue 9:00 AM – 10:30 AM; other times available by appointment
CS Discord:	https://discord.gg/raZaTRJ
Class Time/Place:	Mon/Wed/Fri, 9:00 -9:50 AM, Dunn 206
Lab Time/Place:	Mon 1:00 - 2:50 PM, Dunn 302
Final Exam:	Tuesday May 14, 2:45 – 4:45 PM, Dunn 206

Learning Objectives:

CIS 203 Computer Science II advances student understanding of computer programming and computer science beyond CS I.

Upon finishing this course, students will be able to:

1. Apply interfaces and polymorphism to program their own classes.
2. Implement dynamic, recursive data structures such as linked lists, reflecting the structure in recursive code.
3. Perform simple Big-O analysis of algorithm and program efficiency.
4. Apply standard testing and debugging techniques such as describing expected *versus* actual program behavior, finding and fixing program bugs, and designing effective tests.

Grading for the Course:

1. Programming Assignments: 20 %

Programming assignments will be given based on the concepts discussed in lectures. These programming assignments will be the essential part of the course. Programming assignment materials will be posted in Gitea, and you will turn in your assignments to Gitea. Timing of assignment and due dates will be in Brightspace. Your final submitted assignment should represent your individual work; it is, however, acceptable to discuss the solution approach with other students. You will be responsible for keeping track of programming assignments due dates posted on Brightspace. Assignment submission policies are detailed in a separate section of this document. **Note: All programs submitted for grading must compile on the CS Lab machines using Java 17.** Programs that do not pass the compiler in the lab will be considered “non-compiling”. If you are developing on your own computer, be sure that you install the correct Java version.

Please see the separate document for CS Department policy on the use of artificial intelligence (AI) in assignments, “Appropriate use of AI in the Computer Science Classroom”.

2. Quizzes: 15%

Quizzes will be given in class at intervals, typically once each week, to provide feedback on your understanding of course topics. Some quizzes will not be announced in advance.

Quizzes are considered in-class work and cannot be made up if you are absent without prior arrangement.

3. **Exams: 45%**

- a. Midterm 1 – 12.5 %
- b. Midterm 2 – 12.5 %
- c. Final Exam – 20 %

Tests (midterms and final exam) are written and closed book and closed notes. Any request for re-grading must be received in email and within 3 days of receiving your exam grade. Prior notice must be given to your instructor if you can't make it to the exam due to an emergency. **No make-ups will be granted unless satisfactory evidence is produced to show an extenuating circumstance.**

4. **Labs: 20%**

- **Lab instructions:** Labs will be available on Brightspace or in Gitea each week on the lab course page.
- **To prepare for lab:**
 - Attend lectures.
 - Do the assigned homework and reading as we discuss the associated material in class.
 - Complete any assigned pre-lab work or checkpoints before coming to lab.
- **Working through the laboratory exercises:** For a given lab, you will work through the lab exercises as described in the instructions. The laboratory exercises contain checkpoints. When you reach a checkpoint, your lab instructor will check your work and mark the checkpoint when it is completed satisfactorily. You are required to do the lab work on the lab computers during lab meetings.
- **Laboratory Grade:**
 - You are expected to attend all lab meetings, arrive on time, and stay throughout the lab time. Your grade for an individual lab will be the number of checkpoints you have completed by the end of the lab meeting.
 - You may finish incomplete lab checkpoints between lab meetings, for a maximum of 75% credit on the out-of-lab checkpoints. All lab checkpoints must be completed by the end of my official office hours on Friday of the week the of lab (that is, the Friday immediately following the lab day). I will announce the times I am available to do late lab checkpoints.
 - The lab component of your grade is simply the percentage of checkpoints that you complete over the semester. For example, if you complete 70 out of 80 checkpoints over the semester, your lab grade will be $70/80 = 87.5\%$.
- **Lab (programming) tests:** There will be 3 lab tests, corresponding to the written exams for the course (two midterms and a final). Lab test grades will be part of the lab grade. Because they are tests, the procedure differs from a regular weekly lab. Lab tests:
 - will be administered during the regular lab time.
 - are time limited. You will receive credit for only the checkpoints that are completed during the lab meeting time. Grading for lab tests will be different from weekly lab grading and will be explained more fully when the date of the first lab test approaches.

- must be proctored live and are therefore very difficult to make up. Make ups for lab tests will be granted only for emergency situations and are to be approved in advance by the instructor.
- **Missed Labs:**
To make up a missed weekly lab for full credit, you must contact me through email *in advance of the absence* with an explanation for the absence. The missed lab must be made up before the next lab meeting (by the end of the week of the lab), unless we make other arrangements as warranted by circumstance.

Course Policies:

1. Due Dates, Late Work, and Extensions

- All due dates for the course will be strictly enforced.
- Late assignments will be accepted according to the following policy. **You will be allowed to turn in no more than 2 assignments up to 72 hours late, with a 20% grade penalty.** To qualify for a late submission, you must:
 - Notify me through email of your intention to turn in a late assignment *before* the assignment deadline.
 - Submit all assignment files to Gitea within 72 hours of the posted due date/time of the assignment.
 - No additional late assignments will be accepted. Please note that you must choose your late assignments carefully. You will not be allowed to turn in more than 2 late assignments during the semester.
- In general, “extensions” are given to the entire class **ONLY**, not to individual students. **I do not grant individual extensions except in exceptional circumstances. All late assignments will be assessed the 20% penalty unless I have informed you otherwise.** Simply wanting more time to finish an assignment is not reason to request or be granted an extension.

2. Attendance

Attending all lectures and labs and completing required work is crucial to your success in this course. While attendance is not graded *per se*, in-class graded work cannot be made up without prior arrangement with the instructor. In the event of absences from weekly labs, you are required to complete the missed lab work before the beginning of the next lab session (see the Labs section for more information). The instructor and CS tutors will be available to help you with completing labs during posted office and tutoring hours.

3. Grade Distribution

At the end of the semester, I will calculate what fraction of the possible points you have earned, and your grade may be based on this distribution:

4.0: 95 – 100%	1.7: 67 – 69%
3.7: 90 – 94%	1.3: 63 – 66%
3.3: 85 – 89%	1.0: 60 – 62%
3.0: 80 – 84%	0.0: < 60%
2.7: 77 – 79%	
2.3: 73 – 76%	
2.0: 70 – 72%	

4. *Impact of extracurricular activities on class work*

You make the choices about how you will spend your time, including investing your time in non-academic activities. As a student, you need to give priority to your academic work, and prevent extracurricular commitments from negatively impacting your work for classes. You are, of course, free to participate in activities that are meaningful to you; however, do not expect me to give special consideration because of time management issues that arise from those activities. You should not be missing class because of extracurricular activities, nor should you allow yourself to fall behind on assignments.

NOTE: I will not give extensions that relate to participation in extracurricular activities, even if the activity is related to Computer Science. Absences due to organized university athletics will be handled according to the university's policies. Please note that it is your responsibility to ensure that I have the information about athletic schedules.

5. *Expectations and Classroom Policies for the Course*

- Food and Drink in Class and Lab: Beverages are allowed in the classroom as long you clean up after yourself and do not disturb others. In the CS lab, food and drink are forbidden.
- **No devices are allowed during class. Notes must be hand-written.**
- **UNDER -NO- CIRCUMSTANCES ARE FOOD AND BEVERAGES (EVEN GUM) ALLOWED IN THE CS LAB.**
- You are expected to ask questions and participate in class discussions. However, talking out of turn, engaging in non-class-related discussions with others (including the instructor), and other disruptive behavior will not be tolerated. If you are disrupting class, you may be asked to leave. Repeated offenses could result in your referral to the Office of Student Conduct and Community Standards and possible dismissal from the class.
- Academic dishonesty: Students are expected follow the "SUNY Potsdam Academic Honor Code" (SUNY Potsdam Undergraduate Catalog) by doing their own work on quizzes, exams and programming assignments unless specifically directed otherwise by the instructor. Copying is strictly forbidden. Students caught cheating will receive a grade of 0 for that evaluation. Repeated offenses will result in dismissal from the course and possible disciplinary sanctions by the university. Academic Misconduct definitions, procedures, due process, and student rights are described in the SUNY Potsdam Undergraduate Catalog.
 - **NOTE: ANY COPYING CODE, INCLUDING CODE COPIED FROM ANY ONLINE SOURCE, IS STRICTLY FORBIDDEN AT ALL TIMES IN COMPUTER SCIENCE COURSES. "ANY ONLINE SOURCE" INCLUDES ARTIFICIAL INTELLIGENCE SYSTEMS.**

6. *Assignment Submission Policy and Guidelines*

- You do not need to have any specialized software installed on your own computer unless you want to work on assignments outside of the CS Lab (Dunn 302). All the software you need for the course is installed in the CS Lab. If you want to work at home, you will need the following software:
 - Java 17 (find the right installation for your computer at <https://www.oracle.com/java/technologies/javase/jdk17-archive-downloads.html>)

- Git (<https://git-scm.com/downloads>)
- Plain text editor for README files.
- You will receive a new programming assignment every week. Programming assignments are to be submitted by the published due date. Assignments will be submitted electronically through Gitea (the CS Department's internal Git server). The lab is set up for using Git, and the first lab will walk you through basic use of the tool. You may turn in assignments from your own computer by installing a Git client on your local machine. See <https://git-scm.com/downloads> for more information.
- Setup of your Gitea repository will be part of the first lab. Help videos that do the process step by step will be available. Your Gitea repositories must be named according to the following requirements:
 - Organization: S24-203-yourPotsdamUserName
 - Assignments: aXX-ShortAssignmentName
 - Labs: lXX-ShortLabName
 - Where XX is the number of the assignment or lab, and yourPotsdamUserName is your Potsdam computer username.
 - ShortAssignmentName or ShortLabName will be included in the repo names that I create for the assignments/labs. You can use those names.
 - Examples, if I were a student:
 - Organization: S24-203-grabowlm
 - Assignment: a01-LoopReview
 - Lab: l01-GitLoops
- Each submitted file must adhere to the Department's coding standards (covered in detail in another document). A substantial part of an assignment grade (approximately 1/3 of the score) will be allocated for coding standards, including the required README file.
- You MUST do your own work on assignments. While we encourage you to share ideas with other students and seek help from the CS Department Tutors, anything that you turn in for a grade must be your own independent work. As noted earlier, use of ANY copied code – whether copied from another student or from online – is considered cheating and will be pursued accordingly.
- **Please see the separate document for CS Department policy on the use of artificial intelligence (AI) in assignments.**

Note (for the second time, in fact): All programs submitted for grading must compile on the CS Lab machines using Java 17. Programs that do not pass the compiler in the lab will be considered “non-compiling”. If you are developing on your own computer, be sure that you install the correct Java version.

Additional Policies and Information:

- Office hours: You are welcome to drop in during my office hours. All office hours are in person in Dunn 303. You do not need an appointment to come to office hours. If you can't come to office hours, you may arrange an appointment by emailing me or sending a private Discord message so we can arrange a time.
- CS Department Discord: I encourage you to join the CS Department Discord server (link at the beginning of this syllabus). I am usually very quick to reply to Discord

messages, even after hours and on weekends. Emails will require much more turnaround time for replies. If you are new to the server, you must adhere to our nickname rules (either Firstname Lastname or your Potsdam username) in order to see anything other than the general channel. Only those who adhere to our naming rules will be given student role. You can easily change your nickname on our server without affecting your name on other Discord servers.

- **Disability Assistance:** Anyone who has special needs that must be accommodated to fulfill the course requirements should notify the Director of Accommodative Services, 111 Sisson Hall, 267-3267. Only the accommodations office may determine appropriate accommodations for class. The college has resources available to assist qualified students with their academic studies.
- **Accommodation of Religious Observances:** We will make reasonable accommodation for a student's religious beliefs. Please notify us within the first week of classes about any scheduled class date that conflicts with a religious observance.

Tentative Schedule:

Week	Read Chapter	Topics	Lab	Assignment
Week 1: 22 Jan	6.1 – 6.7	Course intro; coding standards; arrays re-view	Intro to Git; loop re-view	Loop review, printing with loops
Week 2: 29 Jan	7; 6.8	Review: I/O, arrays	Designing and documenting tests	Review: I/O, arrays, exception handling 1
Week 3: 5 Feb	8.1 – 8.3	Objects and Classes	I/O and arrays re-view	Review: I/O, arrays, exception handling 2
Week 4: 12 Feb	8.4 – 8.12; 9.6	Objects and Classes	Classes	Classes 1: Simple object class
Week 5: 19 Feb	15; 16.1	Interfaces and ADTs Midterm 1: Ch 6, 7, 8, 9; (Wed 21 Feb) <i>Winter recess, Thu-Fri</i>	Programming Test 1 (Mon 19 Feb)	Midterm preparation
Week 6: 26 Feb	16.1	Java Collections; Java ArrayList Basic data structures: List nodes, Linked Lists	Interfaces and Java Collections	Classes 2: More complex object class
Week 7: 4 Mar	16.1	Linked Lists	List Nodes and Linked Lists	Implementing SimpleList interface with arrays
Week 8: 11 Mar	16.2	List, SimpleList interfaces Array-based lists	Writing Linked Lists	Linked List
Week 9: 18 Mar	13.1 – 13.3	Recursion	Writing Linked Lists	Implementing SimpleList interface with LL
Week 10: 25 Mar	13.4 – 13.5	Recursion Midterm 2: Ch. 6, 13 (Wed 27 Mar)	Programming Test 2 (Mon 25 Mar)	Midterm preparation

	Spring Break			
Week 11: 8 Apr	13.6	Recursion	Recursion: Using Str	Recursion 1
Week 12: 15 Apr	16.3	Data structures: stacks, queues	Stacks and queues	Recursion 2
Week 13: 22 Apr	TBD	CPU/Machine cycle Big-O	CPU/Machine cycle	Recursion 3
Week 14: 29 Apr	14.1 – 14.6	Big-O; Sorting, searching algorithms	Big-O, sorting, searching	Recursion 4
Week 15: 6 May	14.7 – 14.8	Sorting, searching Review	Programming Test 3 (Mon 6 May)	Sorting, searching, and Big-O analysis
Finals: 13 May	Written Final Exam: Tue May 14, 2:45 – 4:45 PM			

SUNY Potsdam Department of Computer Science Code of Professional Conduct

1. *Preamble*

All members of the ACM, including the Computer Science faculty of SUNY Potsdam, are committed to ethical professional conduct as specified in the ACM Code of Ethics and Professional Conduct. Students, taking courses from the faculty, are bound by our commitment.

All members of the Department are obliged to remind one another to behave professionally. Violations should be reported promptly; however, capricious or malicious reporting of violations is, itself, a violation. When reporting, bring all relevant aspects of the incident to the faculty's attention.

2. *Moral Imperatives*

As a Computer Science student you will...

- 1.1. Respect all members of the Department.
 - 1.1.1. Be professional in face-to-face and electronic interactions.
 - 1.1.2. Be fair so everyone is free to work and learn.
 - 1.1.3. Be active in preventing discrimination in physical and electronic spaces frequented by Department members.
- 1.2. Accept and provide appropriate feedback.
 - 1.2.1. Avoid starting or spreading rumors.
 - 1.2.2. Respect confidentiality.
- 1.3. Be honest, trustworthy, and respect intellectual property.
 - 1.3.1. Only take credit for your own work.
 - 1.3.2. Respect the privacy of others.
 - 1.3.3. Access computing resources only when authorized and report any access risks discovered.
- 1.4. Contribute to society and human well-being.
 - 1.4.1. Improve public understanding of computing and its consequences.
 - 1.4.2. Consider both the direct and indirect impacts of my actions.

Based on the ACM Code of Ethics and Professional Conduct, retrieved
<https://www.acm.org/code-of-ethics>

Student Support (included at the request of university administration)

Every student in this class is a valued individual. If you are struggling with issues outside of the classroom, please know that there are professionals both on and off campus who can assist you. If you need immediate assistance, please contact our campus Counseling Center (with free counseling) at (315) 267-2330 or visit their website. Links to other resources are provided below:

- Title IX Support Staff & Title IX Core Team
Draime Extension S184, (315) 267-2350
VanHousen Extension, Rm. 392, (315) 267-2516
<http://www.potsdam.edu/offices/hr/titleix>
- Bias Incident Reporting
<http://www.potsdam.edu/about/diversity/biasincident>
- Center for Diversity
223 Sisson Hall
(315) 267-2184
<http://www.potsdam.edu/studentlife/diversity>
- University Police
Van Housen Extension
(315) 267-2222 (number for non-emergencies; for an emergency please dial 911)
- Student Conduct and Community Standards
208 Barrington Student Union
<http://www.potsdam.edu/studentlife/studentconduct/codeofconduct>
- Reachout (24-hour crisis hotline)
(315) 265-2422
- Renewal House (for victims of domestic violence)
SUNY Potsdam Campus Office: Van Housen Extension 390 (open Wednesdays, 9-5:00)
(315) 379-9845 (24-hour crisis hotline)
Renewalhouse_campus@Verizon.net

And please if you see something, say something. If you see that someone that you care about is struggling, please encourage them to seek help. If they are unwilling to do so, Care Enough to Call has guidelines on whom to contact. Everyone has the responsibility of creating a college climate of compassion.

Additional information may be found at: <https://www.potsdam.edu/studentlife/support>