

# CS251: Data Structures & Algorithms

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## Fall 2021

### Course Information

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CRN: 12283, 26787

Course credit hours: 3

Prerequisites: CS 18200 (Foundations of Computer Science) and CS 24000 (Programming in C)

Scheduled: From August 23rd to December 10th, 2021

- 11283: MWF 1:30 PM EST to 2:20 PM EST - MTHW 210
- 26787: MWF 2:30 PM EST to 3:20 PM EST - MTHW 210

### Instructor

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**Andres Bejarano**

**Office Location:** TBA

**Email:** abejara@purdue.edu

**Office Hours:** Tuesday, 1:30 PM EST to 3:20 PM EST. Please read Office Hour Guidelines below.

### Office Hours

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Office hours are open and public sessions where you can ask questions about the lectures and course activities. Due to the number of students enrolled in the course, we will not accommodate individual sessions or waiting rooms. All office hours take place on campus. We will post the Teaching Assistant (TA) Office Hours schedule in Brightspace once it is finalized.

**IMPORTANT:** We follow the Protect Purdue guidelines during office hours. You are required to wear a face mask and follow the official guidelines: "Effective Monday, Aug. 2, face masks will again be required in all indoor spaces for everyone on the Purdue University campus, including students, employees and visitors, regardless of vaccination status."

(<https://protect.purdue.edu/updates/purdue-strengthens-campus-face-mask-protocols-masks-re>)

[quired-for-all-indoors/](#)). We will provide updates to these policies as the university updates the official guidelines.

**IMPORTANT:** Questions of the form “*My code does not work, and I don’t know why. Can I show you my code?*” will not be allowed during office hours. You need to develop and strengthen your debugging skills as you learn new computer science and programming concepts. We encourage you to learn about assertions and JUnit tests. Also, look at your preferred IDE’s debugging tools. Avoid writing `System.out.println()` statements all over your code for debugging since it is considered bad practice. Remember that recruiters and interviewers during job interview processes usually ask how you deal with situations when you need to implement something but do not know how or something goes wrong. It is a classical behavioral question, and interviewers expect an answer that reflects your proactivity.

## Response Times

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You can expect responses as follows:

- Email: within 36 hours during working days/hours.
- Piazza: within 24 hours during working days/hours.
- Grades: within 5 days after the due date.

NOTES:

- TAs will reply to Piazza posts during working days/hours.
- Response times vary during weekends. You should expect a reply during working days.
- Release of assignment grades might be occasionally delayed due to the number of students using late days or with ODOS approved reasons for extensions.
- Regrade requests by email will be ignored. Use the respective mechanism for each type of activity. More information about such mechanisms in the respective sections in this document.

## Course Description

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In this course, we discuss common data structures and algorithms to understand how they affect the performance of programs. The course will include concepts related to algorithm design and analysis, data structures in the abstract and specific implementations of data structures, and specific algorithms. Some of the topics covered are listed below:

- Algorithm Analysis
- Order of Growth (Tilde Notation and Asymptotic Analysis)
- Arrays, Lists, and Trees
- ADTs, Stacks, and Queues

- Heaps (Min/Max Priority Queues)
- Comparison sorting methods
- Non-comparison sorting methods
- Intro. To Symbol Tables and Hash Tables
- Binary Search Trees
- Self-balancing Binary Search Trees
- Graphs
- Graph Traversals: Depth-First Search, Breadth-First Search
- Directed Graphs: Closure, Topological Ordering
- Shortest Path algorithms: Dijkstra, Bellman-Ford, DAGs, All-Pairs
- Minimum Spanning Tree algorithms: Prim, Kruskal
- String Pattern Matching Algorithms
- Prefix Tries, PATRICIA, Suffix Tries
- Data Compression: Huffman Encoding
- Regular Expressions
- Context-Free Grammars
- Finite State Automata

## **General Learning Goals of the Course**

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- Understand approaches to problem-solving and algorithm analysis.
- Understand and analyze various algorithms in terms of space and runtime.
- Understand basic data structures, including their operations, possible implementations, and performance.
- Integrate data structures into algorithms.
- Implement data structures and algorithms to solve specific problems.

## **Prerequisite Courses, Skills, and Knowledge**

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CS 18200 (Foundations of Computer Science) and CS 24000 (Programming in C)

The following are the concepts we assume every student already know when taking CS251:

- Basic math: equations, functions, fundamental set concepts, logarithms, summations.
- Fundamental discrete math: counting methods, Boolean expressions, proof techniques.

- Basic algorithm design and programming (statements, variables, conditionals, loops, functions, input/output, reading/writing files).
- Static data structures: Arrays and Matrices.
- Basic dynamic data structures: Linked lists (singly connected, doubly connected, circular), trees.
- Object-Oriented Design.
- Recursion.
- Programming using Java: basics, syntax, Input/Output mechanisms, working with an IDE (e.g., IntellyJ, Eclipse, Netbeans).

## Recommended Textbooks

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*Algorithms\**

Fourth Edition

Robert Sedgewick and Kevin Wayne

978-0-321-57351-3

*Data Structures & Algorithms in Java*

4th Edition

Michael T. Goodrich and Roberto Tamassia

0-471-73884-0

\*This is the main textbook for the course. The second is supplementary. Neither is required.

## Course Structure

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This course contains learning modules. Each module represents a unit of instruction. Everything you need for the instruction is located inside each module. We organize the modules on a week-to-week basis. We will cover the topics during the in-person lectures. The schedule published in Brightspace will let you know what work will be due during the week. This work includes quizzes, homework assignments, programming projects, and exams.

The TAs will review concepts, work examples, and discuss Java programming during the PSO sessions.

## Learning Commitment Expectations

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When learning about data structures and algorithms, the best way to master the concepts is by implementing them in a programming language. Do not assume

you will understand the concepts just by attending the lectures. That is not enough. Mastery comes from practice. There are many technical challenges to deal with in real life when you try to implement an algorithm or data structure (e.g., object design, memory allocation, data type sizes, language restrictions). We will not discuss such challenges since they are out of the scope of this course.

Similarly, we design algorithms and data structures in the abstract under certain assumptions or constraints. Once one of them does not hold, likely our design fails. Identifying such a situation comes from practice as well.

You will be successful in this course if you are disciplined enough to regulate your time on the course. In-campus learning requires the learner to take more responsibility in the learning process. You must be motivated and be responsible for understanding the topics and staying up to date with due dates for readings, assignments, and other activities. You need to log into the course in Brightspace daily to check for messages and additional important information.

Do NOT wait until the last minute to do work that requires you to submit by the due date. Also, please know that Brightspace goes down for maintenance regularly; you will find that information --Brightspace Maintenance Schedule-- on the Brightspace home page where your courses are listed.

You must check for messages every day as electronic communication is essential to the course. It is your responsibility to ensure that you check in regularly to see if we have made any announcements.

## How I Conduct this Class

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I will discuss the topics during the in-person lectures. Slides and lecture notes will be available each week. ***Please remember that all class content is subject to copyright laws and should not be used for anything other than your personal use in the course.***

## PSO (Practice/Study/Observation)

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The goal of the PSOs is to practice material covered in class. All PSO sessions will cover the same material and the focus is on students solving additional problems. PSOs are typically led by a graduate TA. Attendance is strongly encouraged.

**PSO problems will be posted; written solutions will not be posted. You are expected to attend PSOs.**

**IMPORTANT:** Questions of the form “*My code does not work, and I don’t know why. Can I show you my code?*” will not be allowed during PSOs. You need to develop and strengthen your debugging skills as you learn new computer science and programming concepts. We encourage you to learn about assertions and JUnit tests. Also, look at your preferred IDE’s debugging tools. Avoid writing `System.out.println()` statements all over your code for debugging since it is considered bad practice. Remember that recruiters and interviewers during job interview processes usually ask how you deal with situations when you need to implement something but do not know how or something goes wrong. It is a classical behavioral question, and interviewers expect an answer that reflects your proactivity.

## **Homework Assignments**

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There are five homework assignments. Each homework assignment must be uploaded to Gradescope by the stated deadline. Your answers should be clear, concise, and follow the guidelines given in the respective homework description. You need to read the given instructions before working on the homework.

You should type your homework solution using Latex, MS Word, or any text editor of comparable quality. We only accept PDF files on Gradescope. Put each question on a separate page and assign pages accordingly when you submit. You should explain all your answers, even if the problem description does not explicitly say so. Figures, diagrams, and complex mathematical notations can be handwritten and included in the PDF as an image, but illegible solutions will receive no credit. Note that the definitions of "complex" and "illegible" are at the grader's discretion, so it is in your best interest to type your solutions whenever possible.

**NOTE:** Homework assignments in Gradescope without correct page selection will be graded with 0 even if the answers are correct. We will not give partial credits in such a case either.

The following is the planned homework assignment schedule for the semester. It is subject to changes as we progress in the course. Changes will be announced in Brightspace and during lectures.

<b>Homework Assignment Schedule</b>		
<b>Homework Assignment</b>	<b>Release date</b>	<b>Deadline</b>
HW1	Friday, 08/27/2021	Friday, 09/03/2021 11:59 PM EST
HW2*	Friday, 09/10/2021	Friday, 09/17/2021 11:59 PM EST
HW3	Friday, 10/01/2021	Friday, 10/08/2021 11:59 PM EST
HW4*	Friday, 10/22/2021	Friday, 10/29/2021 11:59 PM EST
HW5	Monday, 11/29/2021	Monday, 12/06/2021 11:59 PM EST

*\* You cannot use late days to submit homework assignments 2 and 4 due to their proximity to the first and second midterm, respectively. Read the Late Days and Bonus Points section of this document for additional information.*

We will notify the homework grades through Gradescope. You have seven days (including weekends) to request a regrade after releasing the grades. You must submit homework regrade requests through Gradescope, which will notify the respective grading TA (which may not be one of your PSO TAs) of your request. A valid regrade request must show that you have looked carefully over the posted description/solution and explain clearly why you believe a regrade is in order. Therefore, your regrade request must include the following information:

- Explain why the released answer is not correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.
- Explain why your answer is correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

We will not consider homework assignment regrade requests that do not follow the above guidelines or requested after seven days (including weekends) of releasing the grades. Homework regrade requests made through a different mechanism (e.g., email, Piazza post, during lectures, during office hours, or during PSOs) will be ignored. If the grading TA does not review your request (which is different than reviewing your case but not granting points due to mistakes on your answers), email the instructor with your case. You must provide evidence that you followed the regrade request guidelines, you contacted the

grading TA, and the TA was not willing to review your request. You cannot use this mechanism to obtain additional partial credits. Doing so constitutes academic dishonesty, and we will report the incident to the Office of Student Rights and Responsibilities.

**NOTE: We will not answer regrade requests immediately. They will be reviewed by more than one TA and by the course instructor in some cases.**

Keep in mind a regrade request on any course activity may result in a lower grade if the person regrading determines that the submission merits a lower grade. Be polite and professional when making a request. Otherwise, we will deny it and report the incident to the Office of Student Rights and Responsibilities.

## Programming Projects

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There are five programming projects. Projects should be completed in Java and carefully follow all requirements and submission instructions in the project description. We design the projects such that their implementation takes the allotted time. So, do not wait until the last minute to start! You must upload your source code to Vocareum by the stated deadline. You need to include the .java files indicated in the respective project description and any other source code file you added to your solution.

The following is the planned programming project schedule for the semester. It is subject to changes as we progress in the course. Changes will be announced in Brightspace and during lectures.

Programming Project Schedule		
Programming Project	Release date	Deadline
Project 1	Friday, 09/03/2021	Friday, 09/10/2021 11:59 PM EST
Project 2	Friday, 09/24/2021	Friday, 10/01/2021 11:59 PM EST
Project 3	Friday, 10/15/2021	Friday, 10/22/2021 11:59 PM EST
Project 4	Friday, 11/05/2021	Monday, 11/22/2021 11:59 PM EST
Project 5	Wednesday, 12/01/2021	Wednesday, 12/08/2021 11:59 PM EST



Please note that Vocareum is for GRADING your project, not DEBUGGING it. As such, the platform limits the number of submissions (10 per project only). Also, Vocareum may not give you detailed information about what is wrong with your work. We provide you with test cases to test your code locally. However, the test cases are not exhaustive, which means you need to think about additional corner cases to satisfy any given input requirements.

### **IMPORTANT:**

- If your code passes the given test cases in your machine but fails in Vocareum means you do not consider in your solution other cases that may occur. It is your responsibility to figure out such cases and develop a more robust solution.
- Before running your code, Vocareum runs a script that removes/comments output statements from your code. Keep that in mind while checking the server's report.

Part of writing code is figuring out how to test it. For that purpose, we encourage you to define your code tests using assertions or JUnit. Using such debugging mechanisms is more professional than using `System.out.println()` statements throughout your code.

It may occur your code works fine locally but does not in Vocareum. In such a case, check that every member variable and function have their respective access modifier (public, private, or protected). Also, check you import default Java API packages and submitted the required .java files. Look at the error report thrown by Vocareum for additional information. Do not expect the report to be concise. You need to put your debugging skills to work.

We will notify the Project grades through Vocareum. You have seven days (including weekends) to request a regrade after releasing the grades. You must submit project regrade requests to your respective PSO GTA (preferably during the PSO time). A valid regrade request must show that you have looked carefully over the posted description/solution and explain clearly why you believe a regrade is in order. Each regrade request must contain the following information:

- Explain why the grading is not correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

- Explain why your solution is correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

We will not consider project regrade requests that do not follow the above guidelines or requested after seven days (including weekends) of releasing the grades. Regrade requests made through a different mechanism (e.g., Piazza post, lectures, or other PSO TAs) will be ignored. If your PSO TA does not review your request (which is different than reviewing your case but not granting points due to mistakes on your answers), email the instructor with your case. You must provide evidence that you followed the regrade request guidelines, you contacted your PSO TA, and the TA was not willing to review your request. You cannot use this mechanism to obtain additional partial credits. Doing so constitutes academic dishonesty, and we will report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** We will not answer regrade requests immediately. They will be reviewed by more than one TA and by the course instructor in some cases.

Keep in mind a regrade request on any course activity may result in a lower grade if the person regrading determines that the submission merits a lower grade. Be polite and professional when making a request. Otherwise, we will deny it and report the incident to the Office of Students Rights and Responsibilities.

**NOTE:** Project regrade requests based on “*my code works fine in my machine*” are not acceptable. We mention in each project description that passing the given test cases does not guarantee that your solution is robust and can handle other scenarios that fit within the scope of the problem. We define a set of test cases for each project and randomly select a few of them for testing. The remaining cases are used for grading.

## Quizzes

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There are 12 quizzes in total, one per week (except during Fall break, midterm weeks and Thanksgiving break). Working on the quizzes will help you to keep up with the topics on a week-to-week basis. Also, quiz questions are similar to the questions you will have during the exams.

All quizzes will be available on Brightspace in the Quizzes section. We release a quiz every Tuesday morning. Each quiz consists of between 2 and 3 questions

about the topics discussed the week before. You have 20 minutes to complete each quiz. You must take each quiz before Wednesday at 11:59 PM EST.

**NOTE:** Click Submit at the end of each quiz! Brightspace will not grade your quiz unless you click Submit at the end. We will not click Submit for you on the platform due to ethical reasons.

Quizzes are open notes, open textbook (only the official ones), and open slides. Still, you must work by yourself without any other kind of assistance. Any dishonest action during a quiz will result in immediate failure of the course and a report with the Office of Student Rights and Responsibilities.

We release quiz grades on Friday during the respective week. You have seven days (including weekends) to request a regrade after releasing the grades. You must submit quiz regrade requests to your respective PSO GTA (preferably during the PSO time). A valid regrade request must show that you have looked carefully over the posted description/solution and explain clearly why you believe a regrade is in order. Each regrade request must contain the following information:

- Question(s) number.
- Explain why the released answer is not correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.
- Explain why your answer is correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

We will not consider quiz regrade requests that do not follow the above guidelines or requested after seven days (including weekends) of releasing the grades. Regrade requests made through a different mechanism (e.g., Piazza post, lectures, or other PSO TAs) will be ignored. If your PSO TA does not review your request (which is different than reviewing your case but not granting points due to mistakes on your answers), email the instructor with your case. You must provide evidence that you followed the regrade request guidelines, you contacted your PSO TA, and the TA was not willing to review your request. You cannot use this mechanism to obtain additional partial credits. Doing so constitutes academic dishonesty, and we will report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** We will not answer regrade requests immediately. They will be reviewed by more than one TA and by the course instructor in some cases.

Keep in mind a regrade request on any course activity may result in a lower grade if the person regrading determines that the submission merits a lower grade. Be polite and professional when making a request. Otherwise, we will deny it and report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** Individual quiz reschedule due to a valid reason (e.g., medical, military, grief) should be requested through the Office of the Dean of Students. You need to send your request with anticipation. We will not consider requests made after the respective quiz day.

## Exams

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There are two midterms and a final exam for this course. They are scheduled as follows:

- **First midterm:** Wednesday, September 22<sup>nd</sup>, 8:00 PM to 9:30 PM.
- **Second midterm:** Tuesday, November 2<sup>nd</sup>, 8:00 PM to 9:30 PM.
- **Final exam:** To be defined by the Registrar (90 minutes). Cumulative.

**IMPORTANT:** Due to evening exams, there are no lectures on Friday, September 24<sup>th</sup>, and Friday, November 5<sup>th</sup>.

We encourage students with approved accommodations for exams to submit a request to take the exam at the DRC Testing Center. Please be proactive and submit your request at most a week before the exam date.

Exams are open notes, open textbook (only the official ones), and open slides. Still, you must work by yourself without any other kind of assistance. Any dishonest action during an exam will result in immediate failure of the course and a report with the Office of Student Rights and Responsibilities.

You have seven days (including weekends) to request a regrade after releasing the grades. You must submit exam regrade requests to your respective PSO GTA (preferably during the PSO time). A valid regrade request must show that you have looked carefully over the posted description/solution and explain clearly why you believe a regrade is in order. Each regrade request must contain the following information:

- Exam code (if any)
- Question(s) number.

- Explain why the released answer is not correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.
- Explain why your answer is correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

We will not consider exam regrade requests that do not follow the above guidelines or requested after seven days (including weekends) of releasing the grades. Regrade requests made through a different mechanism (e.g., Piazza post, lectures, or other PSO TAs) will be ignored. If your PSO TA does not review your request (which is different than reviewing your case but not granting points due to mistakes on your answers), email the instructor with your case. You must provide evidence that you followed the regrade request guidelines, you contacted your PSO TA, and the TA was not willing to review your request. You cannot use this mechanism to obtain additional partial credits. Doing so constitutes academic dishonesty, and we will report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** We will not answer regrade requests immediately. They will be reviewed by more than one TA and by the course instructor in some cases.

Keep in mind a regrade request on any course activity may result in a lower grade if the person regrading determines that the submission merits a lower grade. Be polite and professional when making a request. Otherwise, we will deny it and report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** Individual exams reschedule due to a valid reason (e.g., medical, military, grief) should be requested through the Office of the Dean of Students. You need to send your request with anticipation. We will not consider requests made after the respective exam day.

## Course Schedule with Activity Due Dates

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A detailed course schedule is located in the *Class Schedule* link. The dates and topics may change as we progress during the semester.

## Netiquette

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Because online communication generally lacks visual cues common to face-to-face interactions, you are expected to follow these standards. Netiquette is a combination of Network Etiquette. Please abide by the following netiquette rules when communicating with your instructor and peers in this class.

- Be sensitive and reflective to what others are saying.
- Don't use all caps. It is the equivalent of screaming.
- Don't flame - These are outbursts of extreme emotion or opinion.
- Think before you hit the post (enter/reply) button.
- Don't use offensive language.
- Use clear subject lines.
- Don't use abbreviations or acronyms unless the entire class knows them.
- Be forgiving. Anyone can make a mistake.
- Keep the dialog collegial and professional.
- Do not post inappropriate material. Posts deemed inappropriate will be removed and may result in you being suspended or banned from posting.
- **Do not post solutions to HW/assessment/exam problems.**

## Piazza

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We use Piazza for online Q&A. Read the Netiquette section before posting a question, answer, or general comment. We encourage student collaboration to answer questions and expand on the explanations to understand the topics better. Computer science and programming have reached the current levels thanks to software developers' cooperation and good faith worldwide. Consider your participation in Piazza as an opportunity to improve your communication skills using formal and technical terminology. The course staff will check the posts regularly and answer some of the questions as they deem convenient.

Still, you must be proactive when using Piazza. That is, do not assume your question will be answered immediately or in the short term. Instead, you must keep thinking about your problem (i.e., reviewing the topics or debugging your solution) or look for answers somewhere else (e.g., notes, textbooks, Wikipedia, Stack/Math/CS Overflow, Geeks for Geeks, Tutorials Point, dev blogs, among others). That is what professional software developers do. Keep in mind that recruiters and interviewers during job interviews usually ask how you deal with situations when you need to implement something but do not know how or something goes wrong. It is a classical behavioral question, and interviewers expect an answer that reflects your proactivity and sense of cooperation. If you find or figure out the answer to your question before someone else replies, post

the answer. Chances are that a fellow student who has the same problem has not found a satisfactory answer.

Like office hours, questions of the form "*My code does not work, and I don't know why. Can I post my code?*" will not be allowed. You need to develop and strengthen your debugging skills as you learn new computer science and programming concepts. You can post your pseudocode (i.e., no programming statements at all) through a private post (only the instructor and TAs will see it) if you need guidance.

You can post questions or comments about the topics, non-project-related code, debugging techniques/tools, the Java language, or programming in general. Keep in mind that the best software development material you can find on the Internet comes from people explaining how something works instead of replying to specific questions.

**NOTE:** The course staff moderates over the content and will remove posts that do not follow the Netiquette or Piazza guidelines. We will take disciplinary actions and reporting incidents to the Office of Student Rights and Responsibilities if necessary.

## **Late Days, Bonus Points, and Missing Work**

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You have three late days during the semester for submitting homework assignments and programming projects after a deadline. A late day is 24 hours after a deadline. Submission within the first 24 hours after a deadline uses one late day. Submission between 24 and 48 hours after a deadline uses two late days. Submission between 48 and 72 hours after a deadline uses three late days. You do not need to notify when using your late days.

You can track your used late days by checking the submission dates in Gradescope and Vocareum. Any submission timestamp after the respective deadline constitutes a late day (even if it is by a margin of seconds).

**IMPORTANT:** You cannot use late days to submit homework assignments 2 and 4 due to their proximity to the first and second midterm, respectively.

**NOTE:** Submitting after a deadline constitutes using a late day even by a margin of seconds. Keep in mind that Brightspace, Gradescope, or Vocareum may respond with latency during high-traffic periods. We are not responsible for late

system replies that result in using a late day. We encourage everyone to submit the assignments ahead of time.

Not used late days will be transformed into bonus points for Homework Assignments at the end of the semesters while calculating the final grades. Each non-used late day corresponds to a +10% of the final Homework score. For example, a student's final homework score is  $450/500=90\%$  at the end of the semester. Also, the student used one late day, which means the student will receive +20% bonus points. Then, the student's final homework score is 108%.

**NOTE: Bonus points are not transferable or distributable to other evaluation activities.**

Missing work will receive 0 points. Also, late submissions after using the three late days will receive 0 points even if the answers are correct. We will give no partial points in such a case either.

## Grade Calculations

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The following table indicates the percentage of each course activity for the final grade:

Activity	Percentage of Final Grade
Homework (x5)	20% (4% each)
Projects (x5)	20% (4% each)
Midterms (x2)	40% (20% each)
Quizzes (x10)	10% (1% each. I consider the best 10 quizzes for this item)
Final Exam	10%

## Grade Distribution

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We keep a record of the grades in Brightspace. The system assigns the final grades according to the grading scale below. We will determine the exact grading scale at the end of the semester. Use the following as a guideline throughout the course. Any alterations will be in favor of more generosity, not less.

**NOTE: This class is not graded on a curve. Do not assume score rounding at the end of the semester.**

Grade	Score	Grade	Score	Grade	Score
A+	[97-100]	A	[93-97)	A-	[90-93)
B+	[86-90)	B	[83-86)	B-	[80-83)
C+	[76-80)	C	[73-76)	C-	[70-73)
D+	[66-70)	D	[63-66)	D-	[60-63)

## Regrade Requests

You have seven days (including weekends) to request a regrade after releasing the grades of a course activity. For the Final Exam you have four days only due to the Final Grades deadline. A valid regrade request must show that you have looked carefully over the posted solution and explain clearly why you believe a regrade is in order. Each regrade request must contain the following information:

- Explain why the released answer is not correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.
- Explain why your answer is correct. A single statement is not enough. You must state your case formally, including mathematical expressions and logical rationale.

We will not consider regrade requests that do not follow the above guidelines or requested after seven days (including weekends) of releasing the grades. Check the respective course activity sections for additional instructions on the

respective regrade request mechanism. Regrade request made through a different mechanism will be ignored. If the respective TA does not review your request (which is different than reviewing your case but not granting points due to mistakes in your answers), email the instructor with your case. You must provide evidence that you followed the regrade request guidelines, you contacted the respective TA, and such TA was not willing to review your request. You cannot use this mechanism to obtain additional partial credits. Doing so constitutes academic dishonesty, and we will report the incident to the Office of Student Rights and Responsibilities.

**NOTE:** We will not answer regrade requests immediately. They will be reviewed by more than one TA and by the course instructor in some cases.

Keep in mind a regrade request on any course activity may result in a lower grade if the person regrading determines that the submission merits a lower grade. Be polite and professional when making a request. Otherwise, we will deny it and report the incident to the Office of Student Rights and Responsibilities.

## **Academic Guidance During Quarantine/Isolation**

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If you become quarantined or isolated at any point in time during the semester, in addition to support from the Protect Purdue Health Center, you will also have access to an Academic Case Manager who can provide you academic support during this time. Your Academic Case Manager can be reached at [acmq@purdue.edu](mailto:acmq@purdue.edu) and will provide you with general guidelines/resources around communicating with your instructors, be available for academic support, and offer suggestions for how to be successful.

If you must miss class at any point in time during the semester, please reach out to me via email so that we can communicate about how you can maintain your academic progress. If you find yourself too sick to progress in the course, notify your adviser and notify me via email or Brightspace. We will make arrangements based on your particular situation. Please note that, according to [Details for Students on Normal Operations for Fall 2021](#) announced on the Protect Purdue website, “individuals who test positive for COVID-19 are not guaranteed remote access to all course activities, materials, and assignments.”

## **Attendance Policy**

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This course follows Purdue's academic regulations regarding attendance, which states that students are expected to be present for every meeting of the classes in which they are enrolled. When conflicts or absences can be anticipated, such as for many University-sponsored activities and religious observations, the student should inform the instructor of the situation as far in advance as possible. For unanticipated or emergency absences when advance notification to the instructor is not possible, the student should contact the instructor as soon as possible by email. When the student is unable to make direct contact with the instructor and is unable to leave word with the instructor's department because of circumstances beyond the student's control, and in cases falling under excused absence regulations, the student or the student's representative should contact or go to the [Office of the Dean of Students website](#) to complete appropriate forms for instructor notification. Under academic regulations, excused absences may be granted for cases of grief/bereavement, military service, jury duty, and parenting leave. For details, see the [Academic Regulations & Student Conduct section](#) of the University Catalog website.

Guidance on class attendance related to COVID-19 are outlined in the [Protect Purdue Pledge for Fall 2021](#) on the Protect Purdue website.

Students should stay home and contact the Protect Purdue Health Center (496-INFO) if they feel ill, have any symptoms associated with COVID-19, or suspect they have been exposed to the virus. In the current context of COVID-19, in-person attendance will not be a factor in the final grades, but the student still needs to inform the instructor of any conflict that can be anticipated and will affect the submission of an assignment or the ability to take an exam. Only the instructor can excuse a student from a course requirement or responsibility. When conflicts can be anticipated, such as for many University-sponsored activities and religious observations, the student should inform the instructor of the situation as far in advance as possible. For unanticipated or emergency conflict, when advance notification to an instructor is not possible, the student should contact the instructor as soon as possible by email, through Brightspace, or by phone. When the student is unable to make direct contact with the instructor and is unable to leave word with the instructor's department because of circumstances beyond the student's control, and in cases of bereavement, quarantine, or isolation, the student or the student's representative should contact the Office of the Dean of Students via [email](#) or

phone at 765-494-1747. Our course Brightspace includes a link on Attendance and Grief Absence policies under the University Policies menu.

Students who are not engaging in these behaviors (e.g., wearing a mask) will be offered the opportunity to comply. If non-compliance continues, possible results include instructors asking the student to leave class and instructors dismissing the whole class. Students who do not comply with the required health behaviors are violating the University Code of Conduct and will be reported to the Dean of Students Office with sanctions ranging from educational requirements to dismissal from the university.

Any student who has substantial reason to believe that another person in a campus room (e.g., classroom) is threatening the safety of others by not complying (e.g., not wearing a mask) may leave the room without consequence. The student is encouraged to report the behavior to and discuss next steps with their instructor. Students also have the option of reporting the behavior to the [Office of the Student Rights and Responsibilities](#). See also [Purdue University Bill of Student Rights](#).

*Related Considerations:*

1. *A listing of recommended safe practices for the specific class or laboratory setting (other PPE or safety behavior) can be found at the links below.*
  - [Overarching SOP for Classrooms, Instructional Laboratories, and Experiential Courses](#)
2. *References Supporting Protect Purdue Compliance:*
  - Office of the Dean of Students [Protect Purdue Compliance Plan: Ask, Offer, Leave, Report](#)

Office of the Dean of Students [Managing Classroom Behavior and Expectations](#)

## **Academic Integrity**

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Academic Integrity is a critical foundation for any form of higher education, and Purdue University takes this concept seriously. All submitted assignments will automatically be checked for plagiarism. Any student found guilty of plagiarism and/or other forms of academic dishonesty will automatically fail this course and face any additional consequences that the University deems necessary. To know and understand what is academic integrity, what is expected from you, and what you should NOT do, read carefully this document: [Academic Integrity](#).

For this class in particular, the following list gives examples of things that are considered academic dishonesty. Please note that this is in no way an exhaustive list.

- Sharing answers/solutions to any of the assignments in the class with another student.
- Posting any part of a class assignment online. This applies to both questions and answers.
- Reading solutions to any part of a class assignment that is not your own. This applies to solutions from other current students, previous students, tutors, or online forums. It also applies to all assignments, including quizzes, homework, exams, and programming projects.
- Looking for answers to questions online.

Please realize that this does not mean you are not allowed to use resources or get help from tutors, TAs, or other students. What it means is that there is a difference between using something or someone as a resource and using them to get the answer. If you ever have any questions or concerns about this, feel free to ask, but you are encouraged to ask before doing something you are not sure about.

## **Nondiscrimination Statement**

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Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. [Link to Purdue's nondiscrimination policy statement.](#)

## **Students With Disabilities**

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Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: [drc@purdue.edu](mailto:drc@purdue.edu) or by phone: 765-494-1247.

## Emergency Preparation

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In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructors or TAs via email or phone. You are expected to read your Purdue email on a frequent basis.

## Mental Health Statement

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- **If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try [WellTrack](#).** Sign in and find information and tools at your fingertips, available to you at any time.
- **If you need support and information about options and resources,** please see the [Office of the Dean of Students](#) for drop-in hours (M-F, 8 am- 5 pm).
- **If you're struggling and need mental health services:** Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact [Counseling and Psychological Services \(CAPS\)](#) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

**NOTE: The following course policies and expectations will be followed unless they directly contradict something written above.**