

Prerequisites: CS 15900 with a minimum grade of C

Textbook: Computer Science: A Structured Programming Approach Using C (3rd Edition) by Behrouz A. Forouzan (ISBN 9780534491321). Same as CS 159 textbook.

Reference: Intermediate C programming by Yung-Hsiang Lu, Available at WALC (QA76.73.C15 L83 2015) or read it online <https://www.safaribooksonline.com/library/view/intermediate-c-programming/9781498711647/?ar>. Dr. Lu does not manage this book in the library. If you have difficulty getting the book, please contact Purdue Library.

Topics: (The topics may be adjusted as needed based on students' interactions in class)

- program structure, main, and stack memory
- string, function call
- pointer
- heap memory
- structure, copy, and memory management
- file read and write
- recursion: mathematics, code, applications
- gdb
- linked list: insert, search, delete, merge
- bitwise operations
- binary file
- image processing
- binary tree: insert, search, delete
- machine learning: if time permits
- thread: if time permits

Learning objectives: Every student who passes will have mastered the following learning objectives:

- an ability to read and write C programs that use recursion
- an ability to read and write C programs that use structures
- an ability to read and write C programs that use dynamic data structures
- an ability to read and write C programs that use files

Grades: 50% Homework, 50% Exams, 5% bonus points.

Grade	Homework	Exams
A	38	38

B	35	35
C	30	30
D	30	25

These conditions are "AND". A student that receives A must have 38 or higher in programming assignments AND 38 or higher in exams. If a person has 48 in homework assignments and 26 in exams, this person will receive D.

The full score (including bonus) is 105. If the second highest score in the class is below 100, the second highest score will become 100 and the entire class will be moved up proportionally. Please understand that this has happened only once in the past 10 years when the second highest score was 99.7.

If you need accommodation for examinations, please contact the Testing Center (drc@purdue.edu) for arrangement.

There are at least 16 assignments. Each homework assignment has the same number of points. The lowest score of one (only one) assignment is not included in the calculation of the final grade. Please notice that **YOU NEED TO SUBMIT ALL ASSIGNMENTS.**

Because each assignment accounts for only a small percentage of the final score and the lowest score is not used for the final grade, the instructor will not grant any request for extension. Nor will the instructor accommodate any "small mistake" such as forgetting to submit or submitting wrong files. You do not need to inform the instructor which assignment should be excluded in calculating the final grade.

Truly exceptional cases (such as serious illness) should be requested to the Purdue Office of Dean of Students (<https://www.purdue.edu/odos/>).

DO NOT ASK FOR EXTENSION FOR ANY REASON. The instructor will not respond to any request of extension.

ECE 264 is not emergency service. If you have an emergency, please call 911. YOU MUST NOT USE "URGENT" or "EMERGENCY" in your message. Any message marked with "URGENT" or "EMERGENCY" will be ignored.

Exams are open-book, open-notes. Anything that is printed on paper is allowed. Electronics (including calculators and mobile phones) are not allowed. Bring your **Purdue ID** to the exams.

Homework assignments are due at **11:59PM of the due day**. This is electronically enforced. Being late by one second is late. To accommodate rare unexpected situations, everyone gets one hour no-penalty grace period. After the grace period, **2% penalty will be imposed every hour**. Please understand that the grace period is not a new deadline.

ECE 264 experimented different submission time, including noon, 6PM, and 11:59PM. None is perfect and always a few students complained, regardless of the time. Thus, 11:59PM is as good (or bad) as any other choice.

Attendance: Attendance is required. You are responsible for attending the lectures. The instructor is not responsible waking you up to attend the lectures.

Discussion Forum: Please use Blackboard Discussion Board. Everyone is encouraged to post questions and answer questions. Before you post any question, please check whether the same question has already been posted and answered.

Email Policy: Email is used for *personal issues* only. The teaching staff will not respond to emails about the class. Such messages should be posted in the Discussion Forum.

Bonus Points: Each person can earn up to 5 points bonus by

- Post lecture notes (Discussions) within 48 hours after the lectures. 0.25 points per posting.
- Asking or answering questions (Discussions) in the discussion forum. 0.25 points per posting.
- There will be at least 20 online tests throughout the semester. Each test is worth 0.25 point. If you receive full score in 20 online tests, you receive the full 5 bonus points.
- Additional assignments as specified.
- There will be no additional assignments based on students' requests. The teaching staff has no time dealing with these requests.

The bonus point will be added either to the homework or the exams depending on which gives a student a higher grade. The bonus point cannot be divided and assigned to both homework and exams.

ECE 264 is a large class. To accommodate students' diverse needs, the final grades are cumulations of many small assignments and four tests. There is no "high stake assignment or test". Failing any one assignment or any test does not immediately make a student fail the class. The student has multiple chances to gain points in other assignments or tests.

If a student makes a mistake in submission (such as missing a file or submitting a wrong file), the instructor will not grant any exception for accommodation because each assignment accounts for only a small percentage of the final score and the lowest assignment score is not used for final grade. Do not make the same mistake again.

The grades in ECE 264 are absolute, not relative. A student's final grade does not depend on the performance of the other students. Thus, it is possible that everyone receives A, although this has not happened yet.

It is not possible to objectively evaluate how much a effort a student takes. Thus, the grades do not depend on the amounts of efforts. Please do not ask the instructor to adjust your grade "because you work very hard." Nor is personal experience part of the grade. Please do not tell the instructor, "I like this class very much and I want to get A."