

CS 240e – Data Structures and Data Management

Module 0E: Administrivia — Enriched

T. Biedl

Based on lecture notes by many previous cs240 instructors

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What is this course about?

“*merge-sort* is a recursive algorithm that solves the Sorting Problem in $O(n \log n)$ worst-case time”

- These terms should all be familiar to you.
(The regular section / course notes have a review.)
- This statement should be familiar from CS136/CS145.
- Predecessor courses: Solve problems somehow, don't care much about run-time.
- This course: Want to be *efficient*.
 - ▶ Also: more problems, more algorithms, more data structures, more ways to analyze algorithms.
 - ▶ Focus on how to store data and how to manipulate it.
 - ▶ Strong emphasis on theoretical arguments, proofs.

What is the enriched section about?

- Cover everything of cs240r, but faster:
 - ▶ Omit most of the review, some easy algorithms/proofs. (Lecture notes have in-depth reviews.)
 - ▶ Go faster over material that is likely known (quicksort, mergesort, heapsort?, hashing?).
- To enrich: More depth and more breadth.
 - ▶ Do some proofs deemed too complicated for cs240r.
 - ▶ Do more problems/algorithms/ways to analyze.
- Enrichment material is mostly theoretical:
 - ▶ More and harder proofs.
 - ▶ More attention to details of proofs.
 - ▶ Not much difference in difficulty of programming.
- *Important!* Course is aimed at students in 2B or later:
 - ▶ Need CS245, STAT230 a lot, CS241, CS246 a bit
 - ▶ Not official pre-requisites because enriched is offered rarely
 - ▶ Be ready to learn relevant parts quickly on your own.

Course Information

- Course Webpage

<http://www.student.cs.uwaterloo.ca/~cs240e/>

Primary source for up-to-date information for CS 240.

- ▶ Course policies and info
- ▶ Lecture slides—incomplete coverage
- ▶ Course notes (~ textbook)—complete coverage
- ▶ Assignments / Solution Sketches
- ▶ Tutorial questions / Solution Sketches

- Piazza: <https://piazza.com/uwaterloo.ca/Winter2025/cs240e>

- ▶ A forum that is optimized for asking questions and giving answers.
- ▶ Posting (partial) solutions publicly is forbidden.
 - ★ Use email for questions about (partial) solutions.

- LEARN

- ▶ No required material, may have quizzes

Course Information

- Instructor: Therese Biedl /bi:.d^əl/ biedl [at] uwaterloo.ca
- Assistant (ISA): Henri Kennedy cs240e [at] uwaterloo.ca
 - ▶ Main contact for questions, piazza, tutorials
 - ★ Tutorial: Friday 1:30-2:20 (recommended, not required)
 - ★ Tutorial-questions on web-page beforehand
 - ★ First in-person tutorial: Fri. Jan 10
- Numerous other ISAs, IAs or TAs (for regular section or grading only)
- Coordinator (ISC): Karen Anderson kaanders [at] uwaterloo.ca
 - ▶ Main contact for paperwork

Consulting hours: Some in-person, some on-line; see web page for details.

- Make an appointment (by email) if times do not fit.

Email: For private communication between students and course staff.

- Send email from your uwaterloo email address

Mark Breakdown

- Final Exam: 45%
 - ▶ As scheduled by UW
- Midterm Exam: 24%
 - ▶ Feb 27, 4:30pm-6:20pm
- Written Assignments 25%
 - ▶ 5 assignments each worth 5%, approximately every 2 weeks
 - ▶ All assignment to be submitted electronically as PDF via Crowdmark
- Programming Questions: 6%
 - ▶ 2 assignments each worth 3%, approximately week 5 and 9
- Due dates: Tuesdays at 5:00pm (plus a grace period).
See web page for dates; enter in your calendar now.
No lates allowed.
- Follow the *assignment guidelines* (on web page)
Marks may be deducted for hard-to-read solutions.

} Note: You must pass the *weighted average* of the midterm and the final assessments to pass the course

Warning and advice

Cheating:

- Standard penalties: a grade of 0 on the assignment you cheated on, and a deduction of 5% from your course grade. You will also be reported to the Associate Dean of Undergraduate Studies.
- Cheating includes copying from elsewhere (fellow students, Web, chatGPT etc.), and also excessive collaboration.
- Do *not* take notes if you get information from elsewhere. Wait until at least 30 minutes after before writing or typing
- Too much help on assignments \Rightarrow do badly on exams \Rightarrow fail course.
- Sign and submit Academic Integrity Declaration (AID), twice.

Advice:

- Don't fall behind! Read course notes (ideally before class).
- Pay attention! Don't multi-task.
- Seek help! Don't wait too long before asking.