CSC 349: Design and Analysis of Algorithms

Instructor: Christopher Siu, cesiu@calpoly.edu

Lectures: Section 03: MWF, 9:10am–10:00am, Fisher Science (033–457)

Labs: Section 04: MWF, 10:10am–11:00am, Engineering East (020–127)

Office Hours: MWF, 2:10pm–3:00pm, Computer Science (014–236)
TR, 8:10am–12:30pm, TR, 2:10pm–4:00pm, https://calpoly.zoom.us/my/cesiu

Course Website: https://canvas.calpoly.edu/courses/116045

Supplementary Texts
This course covers the following topics:

- Correctness and complexity
- Divide and conquer
- Graph algorithms
- Greedy algorithms
- Dynamic programming
- Complexity classes
- Reductions
- Approximation algorithms

The following texts may be helpful, but are not required:


Grade Breakdown

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>0%</td>
<td>A 92%</td>
</tr>
<tr>
<td>Quizzes (4)</td>
<td>30%</td>
<td>B 82%</td>
</tr>
<tr>
<td>Assignments (7)</td>
<td>40%</td>
<td>C 72%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
<td>D 60%</td>
</tr>
</tbody>
</table>

Plus/minus grades will be given at 2% offsets. Rounding will be done on a strictly case-by-case basis.

Homework and Quizzes

Quizzes will be given in lab every other Friday, beginning with the second full week of instruction, except when there is an academic holiday. Homework will not be collected, however, quiz problems will be based on those in the homework.

Assignments

Assignments will generally consist of design, analysis, and implementation of an algorithm to solve a specified problem. Each assignment must be submitted via GitHub Classroom for automated grading by the end of the day it is due, and may be (re)submitted one class day late for up to 90% credit, two class days late for up to 80% credit, or by the day of the final exam for up to 70% credit.
Important Dates

- Final Exam: W, March 20th, 10:10am (in lab)
- No Class or Office Hours:
  - M, January 15th
  - M, February 19th
- Quiz 1: F, January 19th (in lab)
- Quiz 2: F, February 9th (in lab)
- Quiz 3: canceled
- Quiz 4: F, March 1st (in lab)
- Quiz 5: F, March 15th (in lab)

Attendance

Attendance is always expected, but it is only required on days when a quiz or exam is given. Contact your fellow students if you have missed a class and wish to know what was covered; unless previously arranged, I will not reiterate missed lectures.

Classroom Etiquette

You are free to use computers, tablets, phones, or other electronic devices in the classroom, except during quizzes and exams. However, out of respect for your classmates, please silence your devices and consider sitting in the back. If I feel that you are distracting your classmates, I may ask you to put away your devices.

Disability Accommodations

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Resource Center, Building 124, Room 119, at (805) 756–1395, as early as possible in the term.

Work Stoppage During the Term

The California Faculty Association (the labor union of Lecturers, Professors, Coaches, Counselors, and Librarians across the 23 CSU campuses) is in a difficult contract dispute with CSU management. It is possible that the CFA will call a strike or other work stoppage this term. I will promptly inform you of any schedule disruption. The faculty’s working conditions are students’ learning conditions; the CFA seeks to protect both. For further information, see https://www.calfac.org.

Academic Integrity

The university does not condone academic cheating or plagiarism in any form. Students are expected to behave in accordance with the university’s expectations. I encourage you to collaborate on homework, assignment design, and assignment analysis; however, quizzes, exams, and assignment implementations must be solitary efforts. Collaboration includes but is not limited to:

- Copying even a single line of another student’s code or of code found online
- Reading, writing, or discussing any part of another student’s code
- Transferring, publishing, or otherwise distributing your code to other students

Cheating requires, at minimum, a grade of ‘F’ given for the assignment, exam, or task to all students involved.

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1 Portions of this course adapted from material by Dr. Theresa Migler.
2 That is, an ‘A−’ requires a grade of at least 90%; a ‘B+’, 88%; and so forth.
3 I reserve the right to review your submitted code manually and adjust your automated grade accordingly.