CSC 349: Design and Analysis of Algorithms

Instructor: Christopher Siu, cesiu@calpoly.edu

Lectures: Section 03: MWF, 1:10pm–2:00pm, Baker Science (180–102)

Labs: Section 04: MWF, 2:10pm–3:00pm, Computer Science (014–255)

Office Hours: MWF, 3:10pm–5:00pm, Computer Science (014–236)

Office Hours: TR, 12:10pm–5:00pm,

Course Website: All course information can be found on Canvas.
This syllabus is at https://users.csc.calpoly.edu/~cesiu/csc349/syllabus.pdf

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>Percentage</th>
<th>Grade</th>
<th>Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>0%</td>
<td>A</td>
<td>92%</td>
</tr>
<tr>
<td>Quizzes (5) each</td>
<td>30%</td>
<td>B</td>
<td>82%</td>
</tr>
<tr>
<td>Assignments (8) each</td>
<td>40%</td>
<td>C</td>
<td>72%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
<td>D</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>F</td>
<td>below 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
There will be a quiz given at the beginning of lecture 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
Programming assignments will generally consist of a language-agnostic description and analysis of an algorithm to solve a specified problem, along with the source code implementing it. 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 85% credit or one week late for up to 70% credit.
Important Dates

- Final Exam: M, March 14th, 1:10pm–4:00pm
- Quiz 1: F, January 14th (in lecture)
- Quiz 2: F, January 28th (in lecture)
- Quiz 3: F, February 11th (in lecture)
- Quiz 4: F, February 25th (in lecture)
- Quiz 5: F, March 11th (in lecture)

No Class or Office Hours:
- M, January 17th
- M, February 21st

Attendance

Attendance is always expected, but it is only required on days when a quiz or exam is given or an assignment is due. 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.

COVID-19 Guidance

The university is committed to protecting the health and safety of the campus community. By participating in this course, you agree to abide by ongoing testing and safety protocols as outlined in the COVID-19 Presidential Order, including:

- Participating in COVID-19 testing and daily health screenings, as required by the university
- Wearing a face covering, maintaining physical distance, and adhering to health and safety signage

For further details, see https://ctlt.calpoly.edu/covid-19-faculty-resources.

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 in your homework assignments and program analyses; however, quizzes, exams, and program 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.