

Data Abstraction and Structure, Spring 2023

Instructor: Behrouz Forouzan

Class: 4.5 unit Lab: 4.5 unit

CRN: 47512 CRS: D022C Sect: 88Z

1. GENERAL INFORMATION

Course Description

Application of software engineering to the design and development of programs implementing data structures such as stack, queue, linked list, tree, graphs, recursion and design patterns.

Prerequisite

CIS22B, CIS22BH, or CIS35A.

Student Learning Outcomes

The course is designed to provide three major student learning outcomes. After taking the course, student must be able to:

1. Read, analyze, and explain advanced data structures programs.
2. Design solutions for advanced problems using appropriate design methodology incorporating advanced data structure programming constructs.
3. Create and analyze the efficiency of advanced level data structure algorithm, code, document, debug, and test advanced data structures programs using multiple source and header files.

Instructor and Office Hours

Table 2 gives the information you need to know about your instructor and office hours:

Table 1 *Information about your instructor and office hours*

| |
|--|
| Name: Behrouz Forouzan |
| Office Hours: Tuesdays 11:00 AM to 12:AM using Zoom |
| Email: forouzanbehrouz@fhda.edu |

Some Important Dates

Table 3 gives you some important dates that needed to be remembered. Please double-check them at the college site.

Table 2 *Some Important Dates*

| |
|---|
| First day of the Spring Quarter: Monday, April 10 |
| Last day to add (if space available): Saturday, April 22 |
| Last day to drop without a “W” grade: Friday, April 23 |
| Last day to drop with a “W” grade: Friday, June 02 |

Canvas

For help with Canvas: <https://www.deanza.edu/online-ed/help.html>.

Log-In to Canvas

Canvas is a single sign-on application. Use your MyPortal credential to log in.

2. REQUIREMENTS

The following is the minimum requirements for the course:

1. Make sure you have a valid e-mail address on record with De Anza.
2. Submit questions by posting them on Canvas.
3. Download and print the course materials of each week from Canvas.
4. Do assignments as shown in Table 7.

3. ORIENTATION

Do the orientation on line. The information is given below:

<https://deanza.instructure.com/courses>

4. DROP POLICY

I have to drop those students who did not participate in the course on the census day. One indication of participation is to do one-line orientation and finish the assignments (quizzes, homeworks, and discussion) during the first week of the course.

After the census day, dropping is your responsibility. If you do not drop yourself, it means that you want to stay in the course. In this case, an appropriate grade will be assigned to you at the end of the quarter.

5. COURSE MATERIALS

The following course materials are required for the course: Reading Materials and email address.

Reading Materials

I will post the reading materials (in C++) for each week on Canvas. You can also order and use any book in data structure in any language you are comfortable with.

E-mail Address

Make sure you have a valid e-mail address on record with De Anza.

6. ASSIGNMENTS

To receive knowledge about the course, follow the steps below:

1. Read materials posted in Canvas for each week.
 2. Do the problems at the end of each week materials.
 3. Do the lab assignments.
 4. Take the midterm and final tests and post your answers before the due date.
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7. TESTS

Midterm Test

Carefully note the information in Table 4 about the midterm.

Table 3 *Midterm test*

Available: Monday, 5/15/2023, after 6 PM on Canvas

Due: Tuesday, 5/16/2023, before 6 PM

Delivery: Post on Canvas

Chapters: Midterm test covers assignments in week 01 to week 05.

Points: The test is worth 100 points.

Final Test

Carefully read information provided in Table 6 about the final test. .

Table 4 *Final Test*

Available: Monday, 6/26/2023, after 6 PM on Canvas

Due: Tuesday, 6/27/2023 before 6 PM

Delivery: Post on Canvas

Chapters: Final Exam covers assignment in week 06 to week 11

Points: The test is worth 150 points.

8. GRADING

We will have problems, lab assignments, midterm test, and final examination during the term.

Points

Students can obtain the points for each activity as listed in Table 7.

Table 5 *Points*

| <i>Activity</i> | <i>Subtotal Points</i> |
|---------------------|------------------------|
| Problem set | 50 |
| Lab assignments | 100 |
| Midterm test | 100 |
| Final test | 150 |
| Total Points | 400 |

Final Grade

The final grade is based on the points obtained according to Table 8:

Table 6 *Grades*

| <i>Percentage of Points</i> | <i>Grades</i> |
|-----------------------------|---------------|
| 99% to 100% | A+ |
| 92% to 98% | A |
| 90% to 91% | A- |
| 88% to 89% | B+ |
| 82% to 87% | B |
| 80% to 81% | B- |
| 78% to 79% | C+ |
| 70% to 78% | C |
| 60% to 69% | D |
| 0% to 59% | F |

Incomplete

Academic work is incomplete for unforeseeable, emergency and justifiable reasons at the end of the term. At least 60 percent of the class must have been completed to qualify for Incomplete status. In other words, the student must have done all assignments in Table 7 except the final test to qualify for Incomplete status.

Academic Integrity:

The De Anza College Schedule of Classes, in the section titled, “Academic Integrity” states that “the submission of work which is not the product of a student's personal effort, or work which in some way circumvents the given rules or regulations will not be tolerated.” Based on this statement, copying another person's work, is an infraction of academic integrity and may result in a failing grade.

9. EACH WEEK'S ASSIGNMENTS

The course content comes from the readings. Table 8 shows each week activity.

Table 7 *Weekly activities*

| Week | From - To | Reading | Homework | Lab Assignment |
|------|----------------|---------|--------------|----------------|
| I | 04/10 to 04/16 | Week 01 | HW week 01 | Lab week 01 |
| II | 04/17 to 04/23 | Week 02 | HW week 02 | Lab week 02 |
| III | 04/24 to 04/30 | Week 03 | HW week 03 | Lab week 03 |
| IV | 05/01 to 05/07 | Week 04 | HW week 04 | Lab week 04 |
| V | 05/08 to 05/14 | Week 05 | HW week 05 | Lab week 05 |
| VI | 05/15 to 05/21 | Review | Midterm test | |
| VII | 05/22 to 06/28 | Week 07 | HW week 07 | Lab week 07 |
| VIII | 05/29 to 06/04 | Week 08 | HW week 08 | Lab week 08 |
| IX | 06/05 to 06/11 | Week 09 | HW week 09 | Lab week 09 |
| X | 06/12 to 06/18 | Week 10 | HW week 10 | Lab week 10 |
| XI | 06/19 to 06/25 | Week 11 | HW week 11 | Lab week 11 |
| XII | 06/26 to 06/30 | Review | Final test | |

10. INSTRUCTOR RESPONSE

You receive the grade for homeworks, quizzes, discussions, midterm, and final exam withing the 48 hours of the assignment due date. You need to check the final grade with the college at the end of the quarter.

11. DISABILITY

De Anza College views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. Disability Support Services (DSS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact DSS to arrange a confidential discussion regarding equitable access and reasonable accommodations. If you are registered with DSS and have accommodations set by a DSS counselor, please be sure that your instructor has received your accommodation letter from **Clockwork** early in the quarter to review how the accommodations will be applied in the course. Students who need accommodated test proctoring must meet appointment booking deadlines at the Testing Center.

- a. **Midterm exam** be booked at least five (5) business days in advance of the instructor approved exam date/time.
- b. **Final exams** must be scheduled seven (7) business days/weekdays in advance of the instructor approved exam date/time.

- c. Failure to meet appointment booking deadlines will result in the forfeit of testing accommodations and you will be required to take your exam in class. Contact the DSS if you cannot find or utilize your MyPortal Clockwork Portal.
Access

The following shows how you can access DSS.

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|---------------------|--|
| DSS Location | RSS Building, Suite 141 |
| DSS Phone: | 408-864-8753 |
| DSS Site | http://www.deanza.edu/DSS |
| DSS email | DSS@denaza.edu |