Course Syllabus

[Jump to Today](#)

Programming Concepts Methods II, CSC 20

Part 1: Course Information

Instructor Information

Instructor: Gita Faroughi

Student Hours: Virtual office hours through Zoom, Time will be posted on Canvas through announcements

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Course Description

Application of object-oriented techniques for systematic problem analysis and specification, design, coding, testing, and documentation. Semester-long project approach emphasizing larger programs. Managing program complexity using abstraction. Introduction to algorithm analysis and Big-O notation. Advanced language features. Basic sorting and searching algorithms. Recursion. Lecture two hours, technical activity and laboratory two hours.

Prerequisite: Completion of CSC 15 with grade of "C" or better

Textbook & Course Materials

Required Text

- "Building Java Programs", A Back to Basics Approach, Reges and Stepp, Fourth Edition Pearsons. ISBN 978-0134322766. Electronic version/rented copy is permissible. The latest version is fifth edition and can be used. Versions earlier than fourth, like third or second may not align with course work.

Supplemental Materials & Other Readings

- "Practice-It", website for programming practice, **practice-it**   **(http://practiceit.cs.washington.edu)**

- Other readings will be made available in the Canvas (See Modules).

Course Requirements

- Internet connection (DSL, LAN, or cable connection desirable)
- Access to Canvas
- Access to Microsoft Docs

Course Structure

This course will be delivered entirely online through the course management system Canvas. You will use your My Sac State account to login to the course.

In Canvas, you will access asynchronous online lessons, course materials, and resources. At designated times throughout the semester, we will participate in a blend of self-paced and group-paced activities using Canvas and alternative Internet-based technologies. Activities will consist of discussion forums, email, online labs and any other activity that promotes learning in this course.

Canvas Access

This course will be delivered online through a course management system named Canvas.

To access this course on Canvas you will need access to the Internet and a supported Web browser (Chrome, Firefox, Safari). To ensure that you are using a supported browser and have required plug-ins, please visit the "**Which browsers does Canvas support (https://community.canvaslms.com/docs/DOC-10720-which-browsers-does-canvas-support)** " website.

Technical Assistance

If you need technical assistance at any time during the course or to report a problem with Canvas you can:

- **Submit a Ticket   (https://csus.service-now.com/service/?id=help)** to Report a Problem to the Information Resources and Technology Support Team
- Call the Canvas Support line at Sac State: M-F 8a.m. – 5p.m. (916) 278-2450.
- **Schedule a Consultation   (https://www.csus.edu/information-resources-technology/get-support-consultation/consultation.html)** to get assistance with Canvas and other Academic technologies
- Visit the **Canvas Instructor Video Guides**

(https://community.canvaslms.com/community/answers/guides/video-guide#jive_content_id_Instructors)
- Visit the **Canvas Student Video Guides (https://community.canvaslms.com/community/answers/guides/video-guide#jive_content_id_Students)**
- Visit the Canvas **Student Web Tutorials**   **(https://community.canvaslms.com/docs/DOC-10701)**
- Visit the **Canvas Instructor Web Tutorials**   **(https://community.canvaslms.com/docs/DOC-10460)**

Important Note: This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in course announcement or through Canvas email.

Part 2: Course Learning Outcome

Students completing this course will be able to

- Implement linear lists with arrays and linked objects.
- Write programs that use the stack and queue data structures, based on provided specifications.
- Produce intermediate-sized programs using Object-Oriented design principles, with a combination of written and provided code.
- Identify effective techniques to test, debug, and document larger programs.
- Write a program that uses recursive algorithms operating on a binary tree.

You will meet the objectives listed above through a combination of the following activities in this course:

- Attend Asynchronous classes and participate in interactive dialogue
- use collaborative partnership techniques to solve smaller programming problems on the Practice-it platform
- Complete larger programming homework assignments
- Demonstrate mastery of theory and practice by taking periodic quizzes
- Take regular unit level exams and the final examination

Part 3: Topic Outline/Schedule

Week	Topics	Readings

1	Course orientation	Module 1
2	review arrays	Chapter 7, module 2
3	review conditional statements, loops, Java classes, printf	Chapter 3,4,5, module 3
4	Object oriented classes	chapter 8, module 5
5	**Inheritance**	**September 30th , covers week 2- 5 modules, module 6** **9.1, 9.2, module 7**
6	Exam 1	**covers week 2- 5 modules, module 6**
7	Polymorphism, Interfaces	9.3, 9.4,9.5, module 8
8	ArrayList	chapter 10, module 9
9	Link List	chapter 16, module 10
10	**exam 2** searching sorting	**October 28th, covers weeks 6-10 modules, module 11** **chapter 13, module 12**
11	Exam 2	**covers weeks 6-10 modules,**

12	Algorithm efficiency	chapter 13, module 13
13	Stack	chapter 14, module 14
14	queue,	chapter 14,
15	**recursive**	**Chapter 12**
16	**Final exam**	

Important Note: Refer to the course calendar for specific meeting dates and times. Activity and assignment details will be explained in detail within each week's corresponding module. If you have any questions, please contact your instructor.

Part 4: Grading Policy

Graded Course Activities

Visit the **Assignments** link in Canvas for details about each assignment listed below. Click on **Quizzes** to access quizzes and exams.

In order to receive a C or better in this class, you must receive a minimum average score of 70% on the laboratory activities and programming assignments AND a minimum average score of 70% on combined exams and quizzes, participation/discussion AND an overall weighted average of 70%.

If you plan to continue in the Computer Science curriculum, you are required to have a C or higher in CSC 15. So assuming you have met the 70% thresholds described above, your total percentage will be based on the following weighting factors:

Percent/Points	Description
20%	Exam 1

20%	Exam 2
20%	Exam 3
30%	Programming assignments /labs
5%	Quizzes
5%	Discussions and participation
100%	Total Points Possible

Late Work Policy

Example: Be sure to pay close attention to deadlines—**there will be no make up   for quizzes and the discussion boards. Programming assignments are due every Sunday, Any assignment submitted by the Wednesday of the following week will be subjected to a 10% penalty.**

Copy Work Policy

- Any work submitted by you must be your own creation and work.
- **Exams, labs, assignments submitted that is not your own work will receive zero points and may be reported as cheating.**

Viewing Grades in Canvas

Points you receive for graded activities will be posted to the Canvas Grade Book. From a computer or mobile device, select the Grades option from course navigation to view your grades.

Grades will be updated each time a grading session has been complete—typically one week following the completion of an activity. You will see a visual indication of new grades posted on your Canvas home page under Recent Feedback and/or next to the Grades link on course menu.

Letter Grade Assignment

Final grades assigned for this course will be based on the percentage of total points earned and are assigned as follows:

Letter Grade	Percentage	Performance
A	90-100%	Excellent Work
B	80-89%	Good Work
C	70-79%	Above Average Work
D	60-66%	Poor Work
F	<=59	Failing Work

Part 5: Course Policies

Participation

- Students are expected to participate in all online activities as listed on the course calendar. I will be using Canvas Course Analytics, Access Report, discussions, chat sessions, and group work, to monitor your participation in the course. You will need to allocate at least 10 -15 hours per week to participate in and complete activities in the course.

Build Rapport

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that we can help you find a solution.

Complete Assignments

All assignments for this course will be submitted electronically through Canvas. Assignments must be submitted by the given deadline or special permission must be requested from instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances.

Inform Your Instructor of Any Accommodations Needed

If you have a documented disability and verification from the **Office of** **(http://www.csus.edu/sswd/)** **Services for Students with Disabilities** **(http://www.csus.edu/sswd/)** (SSWD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of

disability to SSWD and meet with a SSWD counselor to request special accommodation *before* classes start.

SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) (916) 278-7239 (TDD only) or via email at

sswd@csus.edu **(mailto:sswd@csus.edu)** .

Commit to Integrity

As a student in this course you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom. Unless otherwise instructed (as, for example, team projects), **all assignments, quizzes, and exams are to be entirely your own work.** I do encourage students to discuss ideas, and use books and the Internet as resources, but no copying is allowed. Any cheating will be dealt with immediately and may subject you to academic disciplinary action, which can lead to failing the class and/or expulsion from the College.

Protect Your Work

Identical homework submitted by students will earn **zero** credit. You are encouraged to discuss the assignment with other students but all students must turn in their own program. Please don't copy solutions from other websites.

Definitions

"**Cheating** is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means."

"Plagiarism is a form of cheating. "Plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution." **Source:** Sacramento State University Library

Important Note: Any form of academic dishonesty, including cheating and plagiarism, may be reported to the Division's office.

Course policies are subject to change. It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be posted in Canvas.

[(https://www.sierracollege.edu/student-services/index.php)](https://www.sierracollege.edu/student-services/index.php)

Course Summary:

Date	Details	Due
Sun Jan 30, 2022	📝 **Meet your Peers** [(https://csus.instructure.com/courses/89845/assignments/1434821)](https://csus.instructure.com/courses/89845/assignments/1434821)	due by 11:59pm