Syllabus

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# Data Structures

CSCI 3302

# Professor

👨🏼‍🏫 Jeremy Becnel



🚪 STEM 312 Q

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⏲ Office Hours

10:45-12:30 TR

2:15-3:45 M  
 by appointment

# Course Info

🎓 Prereq:

CSCI 2302  
 CSCI 2311 (Rec.)

Section 001

📅 MW 12:30-1:45

🏫 STEM 316

# Catalog Description

Advanced programming techniques including indirection and recursion. Conceptual development and implementation of data structures, including arrays, records, linear lists, stacks, queues, trees, tables and graphs. Applications involving strings, sorting, searching and file operations.

## Official Course Syllabus

For additional details including **course description, the purpose of the course, student learning objectives, credit hour statement,** and **content**, see the official course syllabus here: [Course Syllabus](https://www.sfasu.edu/docs/computer-science/undergraduate-course-CSCI3302.pdf)

# Materials

* [*Data Abstraction and Problem Solving with Java*](https://www.pearson.com/en-us/subject-catalog/p/data-abstraction-and-problem-solving-with-java-walls-and-mirrors/P200000003405/9780132122306), 3rd Ed., Prichard and Carrano, Addison-Wesley, 2011.
* [Discord](https://discord.com/) (either on [Web](https://discord.com/) / [Windows](https://discord.com/download) / [Android](https://play.google.com/store/apps/details?id=com.discord&hl=en_US&gl=US&pli=1) / [Apple](https://apps.apple.com/us/app/discord-chat-talk-hangout/id985746746)); [Join Server](https://discord.gg/vzDEctZnpz)
* Java IDE and Interpreter, Recommended: [Visual Studio Code (for Java)](https://code.visualstudio.com/docs/languages/java)

# Grading

|  |  |  |
| --- | --- | --- |
| **Letter Grade** | **Assigned Score (***s***)** | **Definition** |
| A | 90% ≤ *s* | Excellent |
| B | 80% ≤ *s* < 90% | Good |
| C\* | 70% ≤ *s* < 80% | Average |
| D | 60% ≤ *s* < 70% | Passing |
| F | *s* < 60% | Failure |

Individual Programming Assignments 40%

Paired Programming Assignments 15%

Exams 25%

Final Exam – Comprehensive 20%

**Total: 100%**

**\*** To earn a grade of C or better you must complete all assignments and meet attendance requirements.

# Course Requirements

## Exams

There will be three regular exams during the semester and a final exam. All exams are comprehensive. The three regular exams will be given during the scheduled lecture period. Exams must be taken during the specified time period on the date scheduled. No makeup exams will be given. The final exam will be taken in accordance with the final exam schedule and is worth 25% of the final grade. There are no exemptions from the final examination and no changes in taking the final examination. Check the final exam time. If the final exam time is a problem, you need to drop this course. All exams must be taken in the classroom during the scheduled period.

## Individual Homework Assignments

There will be frequent (almost weekly) homework assignments to give you practice with the various topics covered in the class. These should be representative of your own work. Programming assignments are a major part of the total grade.

## Attendance

Attendance and constructive class participation are expected. Class attendance is mandatory and will be taken regularly. There are no excused or unexcused absences since you are allotted 4 personal days in the course. An absence may be recorded in the event of leaving early, arriving late, or lack of participation (such as excessive phone use during class). The table below details the overall change in your course grade due to absences:

|  |  |  |  |
| --- | --- | --- | --- |
| Total Absences | 0 – 4 | 5 – 8 | > 8 |
| Grade Change | None | Loss of one letter grade | Automatic Failure |

Faculty Notification Requests (formerly Absence Notifications)

The Dean of Students Office will help to notify faculty of a student’s absence for certain parameters. You can go [HERE](https://www.sfasu.edu/thehub/sos/notification-request) to learn more about this new process and also submit the form. It is still at the faculty member’s discretion on any missed assignments, tests, etc.

# Ground Rules

## Late Assignment Policy

All homework assignments are due no later than the time and date specified in the assignment. Assignments turned in after the specified date and time will earn an automatic 0.

## Policy Regarding Help on Graded Assignments:

Some graded assignments are restricted to individual effort, and you may not receive help from another student. Any resource used, other than the instructor or the course text, must be explicitly documented in your submission detailing the source and describing what was learned and how that information was used. You may receive help from the AARC, but you must clearly document what help was received. Submissions will be severely penalized if:

* copied in part or in whole from any source;
* the result of excessive help from any other individual; or
* documentation is missing, inadequate, or vague.

## AI Policy

Academic integrity is a core value of this course, and any form of academic dishonesty, including using artificial intelligence (AI) to cheat, will not be tolerated. Cheating with AI includes, but is not limited to, using AI-generated content for assignments or exams, using AI chatbots to communicate with others during exams, or using AI tools to generate responses to exam questions. Any student caught engaging in academic dishonesty using AI will face serious consequences, including but not limited to, failing the course and being reported to the appropriate academic authorities.

# Expectations of Students:

* **Be prepared for lectures and take notes.** I expect you to have read the assigned readings. Class time is primarily for extending and applying what you learn from the readings. If you come unprepared, you will get significantly less out of class and quickly fall behind. Be an active note-taker.
* **Attend the lectures and be on time.** There will be times when you will want to skip class. Make your education a priority. During the lectures, I will reinforce material from the textbook and cover things that are not in the textbook. You will still be responsible for this material. Missing a lecture should be a rare occurrence. If you do miss the lecture, get the notes from another student.
* **Take ownership of your learning.** You are solely responsible for how much you get out of this course. I hope that this course will challenge you. Deep learning happens when you struggle and succeed. During lectures, your participation and undivided attention are critical. On the assignments, leaning too much on looking at someone else’s code robs you of learning and tricks you into thinking you understand more than you do.
* **Seek my help early if you feel lost.** If you are doing the readings, attending the lectures and taking copious notes, and yet you still feel lost, do not convince yourself that things will get better on their own or that you will catch up this weekend. This course, like most others, builds on itself throughout the semester. Come see me before the feelings of confusion compound.

# University Required Items

## Student Learning Outcomes

This course will provide students an opportunity to do the following:

1. Demonstrate knowledge of the software life cycle and the program development process.
2. Analyze problems and develop program designs with a variety of data structures including stacks, queues, lists, strings, tables, trees and graphs involving both definition and implementation issues.
3. Apply analysis techniques to problems involving iteration and recursion.
4. Create small program systems from carefully specified requirements using software engineering design and reuse principles, appropriate data structure designs, and algorithmic and program performance measures.
5. Describe well known problems and solutions in computation including searching, sorting, arithmetic evaluation, backtracking, programming languages, and string manipulation.
6. Develop and implement abstract data type specifications.
7. Apply comprehensive language features including indirection.
8. Develop both structured procedural and object-oriented solutions.
9. Demonstrate an understanding of machine memory organization and operation.

## Program Learning Outcomes

Program learning outcomes define the knowledge, skills, and abilities students are expected to demonstrate upon completion of an academic program. These learning outcomes are regularly assessed to determine student learning and to evaluate overall program effectiveness.

* Students majoring in the Department of Computer Science may access program learning outcomes at <http://www.sfasu.edu/academics/colleges/sciences-math/computer-science/about/accreditations>

## Computer Laboratory Usage

Students utilizing equipment in university computing laboratories are expected to read and abide by all posted policies for the laboratories. Please note that no children and no pets are permitted in university computing laboratories.

## Software Policy

Disciplinary action will be taken against individuals who perform unauthorized duplication of software or who are involved in the unauthorized use of duplicated software. Such an action may make it impossible for you to successfully complete this course.

## Drop Policy

The official university add/drop policy is located at <http://www.sfasu.edu/policies/course-add-drop_6.10.pdf>. If you have questions concerning registration, add/drop, or the withdrawal process, contact the Registrar at (936) 468-2501 or E-mail: [REGISTRAR@SFASU.EDU](mailto:registrar@sfasu.edu). The Registrar is located on the 2nd floor of the Rusk building.

## Academic Integrity

[The Code of Student Conduct and Academic Integrity](https://www.sfasu.edu/docs/policies/10.4.pdf) outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

## Withheld Grades Semester Grades Policy (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

## Acceptable Student Behavior

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic, or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program.  This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

## Mental Health

SFASU values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support student mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**

SFASU Counseling Services

[www.sfasu.edu/counselingservices](http://www.sfasu.edu/counselingservices)

3rd Floor Rusk Building

936-468-2401

**SFASU Human Services Counseling Clinic**

[www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)

Human Services Room 202

936-468-1041

**Crisis Resources:**

Burke 24-hour crisis line 1 (800) 392-8343

Suicide Prevention Lifeline 1 (800) 273-TALK (8255)

Crisis Text Line:  Text HELLO to 741-741

## Asynchronous Minutes

The students are required to devote 150 minutes outside the instructional hours, where you will be asked to conduct independent study based on online resources (not covered in class) related to the course, and the material will be asked in the HW assignments(s), labs or exams.