Contact Information

Instructor(s):	Dr. Chung-Wen (Albert) Tsao
Office Location r	

Prerequisite(s): CS46A�or CS46AX�(with a grade of "C-" or better). (If CS46A was not in Java, then CS46AW also required.) Math Enrollment Category M-I or M-II and satisfactory score on the Precalculus Proficiency Assessment (70 or higher), or MATH 19�with a C- or better, or MATH 18A�and MATH 18B�with C- or better; Allowed Majors: Computer Science, Data Science, Stats, Applied/Computational Math, Software Engineering or Forensic Science: Digital Evidence.

Letter Graded

* Classroom Protocols

- Students may be dropped from the class by the instructor for either one of the following reasons:
 - absence for 1st day of class without informing you before 2nd day of class
 - lack of prerequisites.erg st

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

⊙ Course Goals

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Intermediate concepts of Java: Classes, Inheritance, Polymorphism, Memory management, Exceptions

Introductory concepts of Data Structures: Stacks and queues, recursion, lists, dynamic arrays, binary search trees. Iteration over collections. Hashing. Searching, elementary sorting. Big-O notation. Standard collection classes. Weekly hands-on activity.

... Course Learning Outcomes (CLOs)

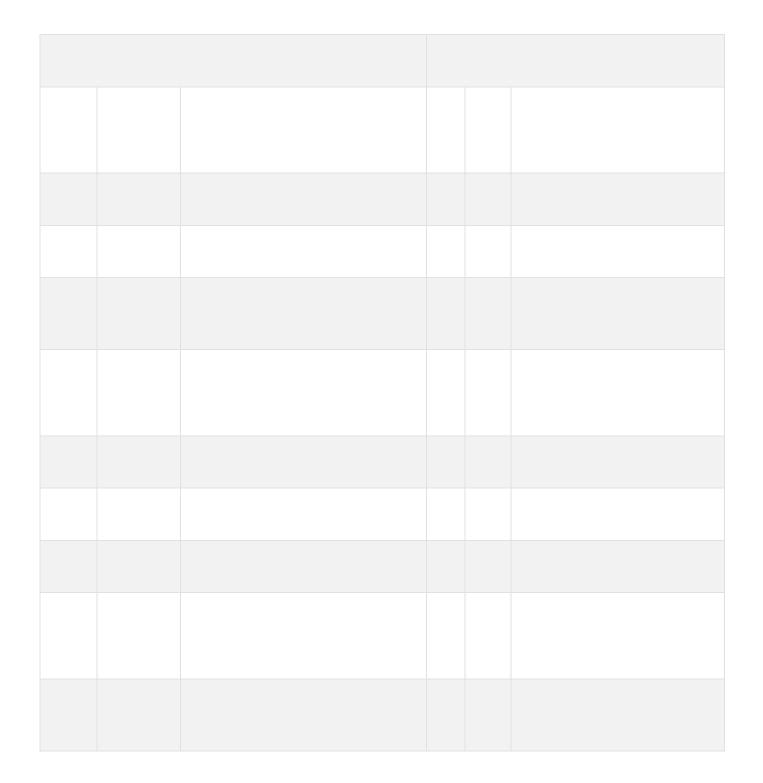
Upon successful completion of this course, students will be able to:

- 1. Use and work with basic structures such as linked lists, stacks, queues, binary search trees, and iterators.
- 2. Implement Java classes that embody data structures.
- 3. Use pre-existing implementations such as the Java Collections framework.
- 4. Make relative estimates of the running times of alternative algorithms using Big-O analysis.
- 5. Formulate and test for pre-and post-conditions.
- 6. Distinguish between different types of program defects and understand how testing and debugging are used to correct them.
- $7.\ \mbox{Implement simple sorting algorithms such as Insertion Sort and Selection Sort$
- Stelen Stelen emt thee Stesiopre Initial Search and Binary Search algorithms.
- 9. Implement simple recursive algorithms such as binary tree traversal.
- 10. Work competently with commonly used tools for software development.
- 11. Create custom data structures when appropriate pre-existing classes are not available

🚍 Course Materials

Big Java: Early Objects, 7e

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