

COMPUTER SCIENCE - ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER

Top Code:

0706.00

The Associate in Science in Computer Science for Transfer (AS-T) degree provides a clear pathway for transfer students applying to the California State University (CSU) system and ensures transfer students will complete the lower division general education requirements and lower division major requirements for a bachelor's degree in Computer Science prior to transferring to a CSU to pursue the completion of a baccalaureate degree, with guaranteed admission to a CSU to a similar major with junior standing, and the ability to complete their remaining requirements within 60 semester or 90 quarter units.

The degree also provides a foundation for majors in physical science, math, engineering, and computer science. It is a starting point for students who are preparing for careers in education, geoscience research, and government, where scientific and technical skills are in great demand. Earning a baccalaureate degree after transfer in either Computer Science or Computer Engineering prepares students for careers in which software development of mathematically-based skills are in great demand. Examples of such disciplines include all of the scientific and technology career fields, as well as research in medicine, education, or government.

The Associate in Science in Computer Science for Transfer Degree Requirements:

- 60 semester or 90 quarter CSU-transferable units.
- Completion of the California General Education Transfer Curriculum (Cal-GETC); OR California State University-General Education-Breadth pattern (CSU GE-Breadth), if eligible catalog rights; OR the Intersegmental General Education Transfer Curriculum (IGETC-CSU) pattern, if eligible catalog rights.
- A minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district.
- Obtainment of a minimum grade point average (GPA) of 2.0.
- All courses in the major must be completed with a grade of "C" or better, or P if the course is graded on a P/NP basis.

PLEASE NOTE: The courses that universities and colleges require for transfer vary. *When selecting courses for transfer purposes, students should consult with an Academic Counselor to determine the particular transfer requirements of specific institutions.*

Program Outcomes

- Design, develop, explain, and document programs in at least one Object Oriented Language that will solve a problem of moderate to advanced difficulty.

- Implement the most common data structures (stacks, queues, linked-lists, heaps, hashes, binary trees) and algorithms (searching and sorting) that will solve a problem of moderate to advanced difficulty.
- Analyze a real world problem and present a software solution, collaborating as a member of a software development team in an ethical and collegial fashion.

Associate in Science in Computer Science for Transfer Degree

Code	Title	Units
Required Courses		
CS 003A or CS 003B or CS 003C	FUNDAMENTALS OF COMPUTER SCIENCE II (C++) FUNDAMENTALS OF COMPUTER SCIENCE (JAVA) FUNDAMENTALS OF COMPUTER SCIENCE (PYTHON)	3
CS 008 or CS 033 or CS 034	FUNDAMENTALS OF COMPUTER SCIENCE III (C++) WITH DATA STRUCTURES ADVANCED JAVA PROGRAMMING AND ALGORITHM WITH DATA STRUCTURES ADVANCED PYTHON PROGRAMMING AND BASIC DATA STRUCTURES	3
CS 045	DISCRETE STRUCTURES WITH COMPUTER SCIENCE APPLICATIONS	4
CS 066	COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE PROGRAMMING	3
MATH 005A or MATH 005A	CALCULUS I: LATE TRANSCENDENTALS CALCULUS I: LATE TRANSCENDENTALS - HONORS	5
MATH 005B or MATH 005B	CALCULUS II: LATE TRANSCENDENTALS CALCULUS II: LATE TRANSCENDENTALS - HONORS	5
PHYS 008A	PHYSICS FOR SCIENTISTS AND ENGINEERS I: MECHANICS	5
PHYS 008B or BIOL 010A or CHEM 001A	PHYSICS FOR SCIENTISTS AND ENGINEERS II: WAVES, ELECTRICITY & MAGNETISM CELLULAR BIOLOGY, GENETICS AND EVOLUTION GENERAL CHEMISTRY AND CHEMICAL ANALYSIS I	5
Required Subtotal		33
Cal-GETC pattern		34
Transferable Electives (as needed to reach 60 transferable units)		
Degree Total		60

General Education Requirements for the Associate in Science Degree for Transfer

- General Information (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/>)
- Cal-GETC (<https://pasadena-curr.courseleaf.com/degree-certificate-requirements/#calgetctext>)
- Students with rights to the former general education patterns can complete IGETC-CSU or CSU GE in lieu of Cal-GETC. Students should consult with an Academic Counselor to determine which general education pattern to complete and may refer to an appropriate archived College Catalog (<https://pasadena->

curr.courseleaf.com/previous-catalogs/) or www.assist.org (<https://www.assist.org>) for more information.