Please visit your counselor to apply for certificates or degrees and for academic planning assistance.

**A.A.-T./A.S.-T. Degree for Transfer Requirements**
1. Completion of all major courses with a C grade or higher. Major courses may be used to satisfy GE requirements.
2. Completion of either the California State University General Education-Breadth pattern (CSU GE) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern in full; students transferring to CSU using IGETC must complete Area 1C.
3. Completion of a minimum of 90 CSU-transferable quarter units with a minimum overall GPA of 2.0 in all CSU-transferable units.

Note: While a minimum 2.0 GPA is required for admission to CSU, many majors and campuses require a higher GPA. Please consult with a counselor or academic adviser.

Note: A minimum of 18 degree-applicable quarter units must be earned at De Anza College.

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**Associate in Science in Computer Science for Transfer (A.S.-T.)**

**Program Learning Outcomes:** Upon completion, students will be able to
- Create, design, implement and debug solutions for computing systems of different levels of complexity using an object orientated language
- Create, design, implement and debug solutions for low-level systems using assembly language

1. Meet the A.A.-T./A.S.-T. degree for transfer requirements.
2. Complete the following.

**Required Core:** 36.5
- CIS 21JA Introduction to x86 Processor Assembly Language and Computer Architecture 4.5
- MATH 1A Calculus 5
  or MATH 1AH Calculus - HONORS 5
- MATH 1B Calculus 5
  or MATH 1BH Calculus - HONORS 5
- MATH 1C Calculus 5
  or MATH 1CH Calculus - HONORS 5
- MATH 22 Discrete Mathematics 5
  or MATH 22H Discrete Mathematics - HONORS 5
- PHYS 4A Physics for Scientists and Engineers: Mechanics 6
- PHYS 4B Physics for Scientists and Engineers: Electricity and Magnetism 6

**Required Core - Complete one option:** 9-13.5

**Option 1:**
- CIS 22A Beginning Programming Methodologies in C++ (4.5)
- CIS 22B Intermediate Programming Methodologies in C++ (4.5)
  or CIS 22BH Intermediate Programming Methodologies in C++ - HONORS (4.5)
- CIS 22C Data Abstraction and Structures (4.5)
  or CIS 22CH Data Abstraction and Structures - HONORS (4.5)

**Option 2:**
- CIS 22C Data Abstraction and Structures (4.5)
  or CIS 22CH Data Abstraction and Structures - HONORS (4.5)
- CIS 35A Java Programming (4.5)

**Major Computer Science for Transfer** 45.5-50

**Transfer GE IGETC for CSU (51-62 units)**

**Electives**

CSU-transferrable elective courses required when the major units plus transfer GE units total is less than 90 units

**Total Units Required** 90