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Academic Year  
**2019 - 2020**

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

Business, Computer Sciences and  
Applied Technologies Division  
Bldg. L1, Room L14  
408-864-8797

Counseling and Advising Center  
Student and Community  
Services Bldg., 2nd Fl.  
408-864-5400

Please visit the Counseling and Advising Center to apply for degrees and for academic planning assistance.

## A.A.-T./A.S.-T. Associate Degree for Transfer Requirements

1. Completion of all major courses with a "C" grade or higher, or with a "Pass" if the course was taken on a Pass/No Pass (P/NP) basis and the "Pass" is equal to a "C" grade or higher (Title 5 §55063). Major courses may be used to satisfy GE requirements.

Note: Many colleges and universities require letter grades for major coursework, and/or have other P/NP transfer-limitation policies, so transfer students are advised to consult with a counselor/academic adviser before selecting the P/NP option.

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/campuses require a higher GPA. Please consult with a counselor/academic adviser.

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

## Associate in Science in Computer Science for Transfer

### A.S.-T. Degree

The Computer Science major consists of courses appropriate for an Associate in Science in Computer Science for Transfer degree, which provides a foundational understanding of the discipline, a breadth of coursework in the discipline and preparation for transfer to any CSU that accepts the Transfer Model Curriculum (TMC). It is a starting point for students who are preparing for careers in software engineering, network administration and data base management, where scientific and technical skills are in great demand. It also provides a foundation for majors in physical science, math and engineering. The Associate in Science in Computer Science for Transfer is intended for students who plan to complete a bachelor's degree in Computer Science at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that does accept this degree will be required to complete no more than 60 (semester) units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

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 requirements for transfer.
2. Complete the following.

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

### 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 pattern (52 units)	
Electives	CSU-transferable elective courses required when the major units plus transfer GE units total is less than 90	
<b>Total Units Required .....</b>		<b>90</b>