

# COMPUTER SCIENCE (For Transfer)

## DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree in Computer Science for Transfer (AS-T)

### DESCRIPTION

Computer Science is the study of computer software design, development, and programming. Computer scientists seek to advance the fundamental understanding of how information is processed, as well as the practical design of software and hardware to accomplish specific functions.

The Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree (AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major.

### PROGRAM LEARNING OUTCOMES

1. Manage a programming project from start to finish, both individually and in teams.
2. Think critically and utilize qualitative and quantitative reasoning skills to design and implement an effective problem solution.
3. Apply algorithmic and symbolic thinking to the problem-solving process.

### ASSOCIATE DEGREE PROGRAM ( For Transfer)

The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) degree is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete 60 semester units of CSU transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated "high-unit" major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete this degree for more information on university admission and transfer requirements.



### TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree at Imperial Valley College may not be the same as those required for completing the major at a transfer institution offering a bachelor's degree. Students who plan to transfer to a four-year college or university should schedule an appointment with an IVC Counselor to develop a student education plan (SEP) before beginning their program.

#### Transfer Resources:

[www.ASSIST.org](http://www.ASSIST.org) – CSU and UC Articulation Agreements and Majors Search Engine

[www.CSUMentor.edu](http://www.CSUMentor.edu) – CSU System Information

[www.universityofcalifornia.edu/admissions/index.html](http://www.universityofcalifornia.edu/admissions/index.html) - UC System Information

[www.aiccu.edu](http://www.aiccu.edu) – California Independent Colleges and Universities, Association of

<http://wiche.edu/wue> - Western Undergraduate Exchange Programs

### CAREER OPPORTUNITIES

Of the career opportunities identified many will usually require the completion of degree requirements at 4-year colleges and universities.

- Systems Programmer
- Software Designer
- Computer Researcher
- Systems Administrator
- Security Systems Designer
- Database Programmer
- Consultant
- Educator
- Documentation/Technical Writer
- Technical Sales and Marketing Specialist
- Scientific Application Programmer
- Computer Services Coordinator
- Computer Graphics Specialist
- Computer Scientist
- Computer Systems Analyst
- Technical Representative
- Teleprocessing Coordinator
- Data Processing Application Programmer
- Programmer
- Database Administrator
- Data Processing Manager
- Information Specialist
- Programmer Analyst
- Software Engineer
- Systems Manager
- Systems Programmer
- Technical Control Specialist
- Engineer Security Specialist
- Data Mining Analyst
- Technical Product Support Personnel
- Management Information Specialist
- Computer Operations Manager
- Data Communications Manager

### FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that IVC offers a full array of financial aid programs – grants, work study, scholarships, and fee waivers (we do not participate in the federal loan programs). These programs are available to both full and part time students who are seeking a degree or certificate. For those who qualify, financial aid is available to help with tuition, fees, books and supplies, food, housing, transportation, and childcare. Please log onto our website for additional information: [www.imperial.edu/students/financial-aid-and-scholarships/](http://www.imperial.edu/students/financial-aid-and-scholarships/)

# COMPUTER SCIENCE (For Transfer)

## ASSOCIATE DEGREE PROGRAM

### COMPUTER SCIENCE

Associate in Science Degree in Computer Science for Transfer (AS-T) – 28.0 units

ALL COURSES FOR THIS MAJOR MUST BE COMPLETED WITH A MINIMUM GRADE OF "C" OR BETTER.

### REQUIREMENTS FOR THE DEGREE

- I. **Units/GPA** – Must complete 60 CSU transferable semester units with a minimum grade point average (GPA) of at least 2.0 in all CSU transferable coursework. *NOTE: While a minimum of 2.0 is required for admission, some institutions and majors may require a higher GPA. Please consult with a counselor for more information.*
- II. **General Education** – Must complete one of the following general education transfer patterns:
  - A. California State University General Education Breadth Pattern (CSU GE-B) – 39 units minimum
  - B. Intersegmental General Education Transfer Curriculum (IGETC) – 37 units minimum
- III. **Twenty-eight (28) units required for the major**

#### Required for the Major

CS	221	Introduction to Object Oriented Programming in Java	3.0
CS	231	Introduction to Data Structures	3.0
CS	240	Discrete Structures	3.0
CS	281	Assembly Language and Machine Organization	3.0
MATH	192	Analytic Geometry and Calculus I	4.0
MATH	194	Analytic Geometry and Calculus II	4.0
PHYS	200	General Physics I	4.0
PHYS	202	General Physics II	4.0
OR		or	
BIOL	182	General Biology: Principles of Organismal Biology	

Total Major Units	28.0
CSU-GE or IGETC Pattern	37.0-39.0
Electives (as needed to reach 60 CSU transferable units)	
<b>Total Maximum Units:</b>	<b>60.0</b>