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.

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
- Database Administrator
- Data Processing Manager

- Information Specialist
- Programmer Specialist
- Software Engineer
- Systems Manager
- Systems Programmer
- Technical Control Specialist
- Engineer Security Specialist
- Data Mining Analyst

Gainful Employment: Federal regulations require institutions to provide students with Gainful Employment information for specific certificate programs offered at IVC. Please click on our Programs of Study link to view the information for each certificate program: http://www.imperial.edu/courses-and-programs/programs-of-study/

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 – CSU and UC Articulation Agreements and Majors Search Engine
www.CSUMentor.edu - CSU System Information
www.universityofcalifornia.edu/admissions/index.html - UC System Information
www.aiccu.edu – California Independent Colleges and Universities, Association of
http://wiche.edu/wue - Western Undergraduate Exchange Programs

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/
## 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 221</td>
<td>Introduction to Object Oriented Programming in Java</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 231</td>
<td>Introduction to Data Structures</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 240</td>
<td>Discrete Structures</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 281</td>
<td>Assembly Language and Machine Organization</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 192</td>
<td>Analytic Geometry and Calculus I</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH 194</td>
<td>Analytic Geometry and Calculus II</td>
<td>4.0</td>
</tr>
<tr>
<td>PHYS 200</td>
<td>General Physics I</td>
<td>4.0</td>
</tr>
<tr>
<td>PHYS 202</td>
<td>General Physics II</td>
<td>4.0</td>
</tr>
<tr>
<td>OR BIOL 182</td>
<td>General Biology: Principles of Organismal Biology</td>
<td>4.0</td>
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Total Major Units 28.0

CSU-GE or IGETC Pattern 37.0-39.0

Electives (as needed to reach 60 CSU transferable units)

Total Maximum Units: 60.0