MATHEMATICS

DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree (A.S.)

DESCRIPTION
The study of Mathematics concerns the nature and manipulation of numbers. The IVC mathematics program is designed to provide students with an appreciation of the nature, scope and power of mathematics, as well as an understanding of how mathematics is applied to business, engineering, science and daily life. The program consists of a clear sequence of courses which prepares students for transfer, a variety of fields of study, and career opportunities.

CAREER OPPORTUNITIES

- Auditor
- Actuary
- Appraiser
- Assessor
- Biology/Agriculture
- Budget Analyst
- Business/Economics
- Casualty Rater
- Chemistry
- Controller
- Education

- Engineer
- Engineering Analyst
- Finance Director
- Financial Analyst
- Industry
- Investment Analyst
- Loan Officer
- Marketing/Advertising
- Mathematician
- Mathematics
- Numerical Analyst

- Operations Analyst
- Opinion Polling
- Physical Science
- Public Health
- Sociology
- Statistician
- Systems Analyst
- Tax Collector
- Teacher
- Technical Writer

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/

Solve the equation.

\[
\frac{7}{x - 4} = 1 + \frac{9}{x + 4}
\]

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

### MATHEMATICS MAJOR – A.S. DEGREE
Twenty-seven (27.0) units required for the major.

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

### Required courses for the major (27.0 units)

#### A. Fifteen (15.0) units required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 192</td>
<td>Calculus I</td>
<td>5.0</td>
</tr>
<tr>
<td>MATH 194</td>
<td>Calculus II</td>
<td>5.0</td>
</tr>
<tr>
<td>MATH 210</td>
<td>Calculus III</td>
<td>5.0</td>
</tr>
</tbody>
</table>

#### B. Three (3.0) units selected from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220*</td>
<td>Elementary Differential Equations</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 230*</td>
<td>Introduction to Linear Algebra with Applications</td>
<td>3.0</td>
</tr>
</tbody>
</table>

#### C. Nine (9.0) units selected from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 210</td>
<td>Programming in C++</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 220</td>
<td>Introduction to Object Oriented Programming Using Java</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH 119</td>
<td>Elementary Statistics</td>
<td>4.0</td>
</tr>
<tr>
<td>MATH 220*</td>
<td>Elementary Differential Equations</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 230*</td>
<td>Introduction to Linear Algebra with Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 240</td>
<td>Discrete Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 241</td>
<td>Mathematics Software Matlab</td>
<td>1.0</td>
</tr>
<tr>
<td>PHYS 200</td>
<td>Principles of Physics I</td>
<td>5.0</td>
</tr>
<tr>
<td>PHYS 202</td>
<td>Principles of Physics II</td>
<td>5.0</td>
</tr>
<tr>
<td>PHYS 204</td>
<td>Principles of Physics III</td>
<td>5.0</td>
</tr>
</tbody>
</table>

*Courses designated with an asterisk may be counted in one area only.

Total Major Units 27.0

IVC Graduation Requirements and GE Pattern: 30.0

Electives (as needed to reach 60 degree applicable units)

Total Maximum Units: 60.0