BUILDING CONSTRUCTION TECHNOLOGY

DEGREES, CERTIFICATES AND AWARDS
Associate in Science Degree (A.S.)
Certificate of Achievement
Specialization Certificates in Carpentry, Concrete Masonry, and Project Management

DESCRIPTION
The Building Construction Technology Associate in Science degree along with the certificate and specializations in Carpentry, Concrete Masonry, and Project Management are designed to provide instruction in manipulative skills, technical knowledge, and related trade information, which will prepare the student for employment in the building construction industry. The course work for the associate degree also emphasizes subject areas that are significant to the construction worker such as engineering fundamentals, construction management, business administration, humanities and social sciences, and the development of analytical and communication skills through the general education requirements.

PROGRAM LEARNING OUTCOMES
1. Measure and understand linear dimensions on plans using an architect scale to be able to interpret the actual measurement according to the scale being used.
2. Perform cost estimates for a construction projects using a local index.
3. Understand the relationship between tensile strength and compressive strength to understand how they interact under pressure.

ASSOCIATE DEGREE AND CERTIFICATE OF ACHIEVEMENT PROGRAMS
The Associate in Arts (AA) or the Associate in Science (AS) Degree involves satisfactory completion of a minimum of 60 semester units with a C average or higher, including grades of C in all courses required for the major, and fulfillment of all IVC district requirements for the associate's degree along with all general education requirements. The degree provides a sound basis for transfer to upper division institutions for additional degrees or for higher vocational preparation. To be eligible to receive an Associate Degree the student must complete the requirements for the major, the District requirements for an Associate Degree, and the General Education requirements. In addition students must maintain a minimum grade point average and meet the minimum grade requirements of their program. Detailed information is available in the college catalog. The Certificate of Achievement program is designed for students with personal or occupational goals who wish early employment. To qualify for the Certificate, a student must satisfy the following requirements: (1) complete all courses listed for a particular certificate; (2) achieve a “C” average (2.0 GPA) for all courses used to complete the certificate; and, (3) file a Certificate Application form with Admissions and Records by the appropriate deadline(s) identified on the application.

CAREER OPPORTUNITIES
Of the career opportunities identified some will require the completion of degree requirements at 4-year colleges and universities.
- Construction Manager
- General Contractor
- Sub-Contractor
- Project Manager
- Construction Scheduler or Planner
- Construction Estimator
- Technical Salesperson
- Construction Consultant
- Architect
- Civil Engineer
- Structural Engineer
- Environmental Engineer
- Forensic Construction Specialist

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.org – 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

BUILDING CONSTRUCTION TECHNOLOGY MAJOR – A.S. DEGREE
Twenty-five (25.0) units required for the major.

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

I. Required for the major (25.0 units)

<table>
<thead>
<tr>
<th>Course</th>
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<th>Units</th>
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<tbody>
<tr>
<td>BLDC 101</td>
<td>Safety Standards (Cal/OSHA) 30-Hour Card</td>
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<tr>
<td>BLDC 110</td>
<td>Construction Blueprints, Specifications, Measurements and Codes</td>
<td>3.0</td>
</tr>
<tr>
<td>BLDC 130</td>
<td>Carpentry Layout and Framing</td>
<td>4.0</td>
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<td>BLDC 135</td>
<td>Residential Plumbing Applications</td>
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<tr>
<td>BLDC 140</td>
<td>Building Construction Methods and Materials</td>
<td>3.0</td>
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<tr>
<td>BLDC 145</td>
<td>Concrete Formwork, Layout and Setting</td>
<td>3.0</td>
</tr>
<tr>
<td>BLDC 170</td>
<td>Essentials of Efficient Green Construction</td>
<td>3.0</td>
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<tr>
<td>BLDC 180</td>
<td>Building Planning and Cost Estimation</td>
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Total Major Units: 25.0

IVC Graduation Requirements and GE Pattern: 30.0

Electives (as needed to reach 60 degree applicable units)

Total Maximum Units: 60.0

CERTIFICATE PROGRAM

BUILDING CONSTRUCTION TECHNOLOGY CERTIFICATE
Twenty-five (25.0) units required for the certificate.

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

I. Required for the certificate (25.0 units)

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Total Certificate Units: 25.0

Total Maximum Units: 25.0
SPECIALIZATION CERTIFICATES
The Specialization Certificate(s) demonstrates a completion of coursework in addition to the major in Building Construction Technology.

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

BUILDING CONSTRUCTION TECHNOLOGY: CARPENTRY SPECIALIZATION - Major Plus 7.0 Units
The Carpentry Specialization is designed to provide instruction in manipulative skills, technical knowledge, and related trade information, which will prepare the student for employment in the Building Construction Industry.

PROGRAM LEARNING OUTCOMES
1. Identify four blueprint symbols and learn their meaning and usage in blueprints; compare the identified symbols to symbols used in other countries in order to understand symbol standardization in the world; measure a linear dimension using an architect scale to be able to interpret the actual measurement according to the scale being used.
2. Create a reliable cost estimate for a construction project in our county based on square footage and compare the same estimate based on labor and material quantities.
3. Students will create a layout and analyze it and test it to make sure it is perfectly square.

I. The major plus seven (7.0) additional units in Carpentry course work.
   BLDC 150 Carpentry Methods, Materials & Tools 4.0
   BLDC 190 Carpentry Trim & Detail Work 3.0

Total Major Units 25.0
Building Construction Technology: Carpentry Specialization Units 7.0
Total Certificate Units: 32.0

BUILDING CONSTRUCTION TECHNOLOGY: CONCRETE MASONRY SPECIALIZATION - Major Plus 8.0 Units
The Concrete Masonry Specialization is designed to provide instruction in manipulative skills, technical knowledge, and related trade information, which will prepare the student for employment in the Building Construction Masonry Industry.

PROGRAM LEARNING OUTCOMES
1. Calculate the quantities in cubic yards using the following formula LxWxD/27 = cubic yards, to be able to estimate actual quantities and place actual orders.
2. Create a reliable cost estimate for a foundation project in our county based on square footage and compare the same estimate based on labor and material quantities.
3. Students will create a layout and analyze it and test it to make sure it is perfectly square.

I. The major plus eight (8.0) additional units in Concrete Masonry course work.
   BLDC 165 Concrete Materials, Methods & Tools 4.0
   BLDC 185 Concrete Footings, Flatwork & Detail Work 4.0

Total Major Units 25.0
Building Construction Technology: Concrete Masonry Specialization Units 8.0
Total Certificate Units: 33.0

BUILDING CONSTRUCTION TECHNOLOGY: PROJECT MANAGEMENT SPECIALIZATION – Major Plus 9.0 Units
The Project Management Specialization is designed to provide instruction in manipulative skills, technical knowledge, and related trade information, which will prepare the student for employment in the Building Construction Industry.

PROGRAM LEARNING OUTCOMES
1. Create a flow chart of the planning and scheduling process and identify their importance in the construction phase.
2. Identify three types of contractual arrangements and explain the function of each contract.
3. Create a reliable cost estimate for a construction project in our county based on square footage and compare the same estimate based on labor and material quantities.

I. The major plus nine (9.0) units in Project Management course work.
   BLDC 160 Construction Technical & Contract Documents 3.0
   BLDC 201 Construction Planning & Management 3.0
   BLDC 210 Construction Management & Organization 3.0

Total Major Units 25.0
Building Construction Technology: Project Management Specialization Units 9.0
Total Certificate Units: 34.0