

# BUILDING CONSTRUCTION TECHNOLOGY

## DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree (A.S.)

Certificate of Achievement

Specialization Certificates in Carpentry and Concrete Masonry



## DESCRIPTION

The Building Construction Technology Associate in Science degree along with the certificate and specializations in Carpentry and Concrete Masonry, 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
- Construction Estimator
- Civil Engineer
- General Contractor
- Technical Salesperson
- Structural Engineer
- Sub-Contractor
- Construction Consultant
- Environmental Engineer
- Project Manager
- Architect
- Construction Scheduler or Planner
- 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](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

## 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/)

# BUILDING CONSTRUCTION TECHNOLOGY

## 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)

BLDC	101	Safety Standards (Cal/OSHA) 30-Hour Card	3.0
BLDC	110	Construction Blueprints, Specifications, Measurements and Codes	3.0
BLDC	130	Carpentry Layout and Framing	4.0
BLDC	135	Residential Plumbing Applications	3.0
BLDC	140	Building Construction Methods and Materials	3.0
BLDC	145	Concrete Formwork, Layout and Setting	3.0
BLDC	170	Essentials of Efficient Green Construction	3.0
BLDC	180	Building Planning and Cost Estimation	3.0

**Total Major Units**

**25.0**

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## 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)

BLDC	101	Safety Standards (Cal/OSHA) 30-Hour Card	3.0
BLDC	110	Construction Blueprints, Specifications, Measurements & Codes	3.0
BLDC	130	Carpentry Layout & Framing	4.0
BLDC	135	Residential Plumbing Applications	3.0
BLDC	140	Building Construction Methods & Materials	3.0
BLDC	145	Concrete Formwork, Layout & Setting	3.0
BLDC	170	Essentials of Efficient Green Construction	3.0
BLDC	180	Building Planning & Cost Estimation	3.0

**Total Certificate Units**

**25.0**

# BUILDING CONSTRUCTION TECHNOLOGY

## 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	<u>3.0</u>
Total Major Units			25.0
Building Construction Technology: Carpentry Specialization Units			7.0
<b>Total Certificate Units:</b>			<b>32.0</b>

### 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  $L \times W \times D / 27 =$  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
<b>Total Certificate Units:</b>			<b>33.0</b>

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