

# ELECTRICAL TRADES

## DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree (A.S.)

Certificate of Achievement

### DESCRIPTION

The Electrical Trades program offers the Associate of Science degree and a Certificate of Achievement to prepare students for continued education and training in any or all of the following electrical apprenticeship programs offered through the Imperial Irrigation District (IID): Electrical, Generation Mechanic, Lineman, Meter Technician, Systems Protection Technician, ADA/Telecommunications, and Substation. The associate degree and certificate requirements are equivalent to the first four courses of related supplemental instruction (RSI) which are part of the four-year apprenticeship certificate programs for which Imperial Valley College (IVC) is the local educational agency (LEA) and the Imperial Irrigation District (IID) is the sponsoring employer. Applicants for these apprenticeship programs should be directed to the Imperial Irrigation District located at 333 East Barioni Boulevard, Imperial, California 92251 (760-482-9640).

### PROGRAM LEARNING OUTCOMES

1. Demonstrate knowledge of OSH standard safety procedures appropriate to the power utility industry. In addition, the student will use mathematical functions pertaining to percentages, fractions, decimals, weights, measurements, algebraic equations, and fundamentals of geometry applicable to electrical and electronics.
2. Describe the functions and characteristic of transmission and distribution system and their components which consist of high voltage AC power, electrical diagrams, safety in the workplace, and a section on rope, rigging and hand signals.
3. Demonstrate and understand the basic introduction to framing, setting, guying poles, installation of conductors and grounds and the laying out and constructing of an underground line system.

### 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 usually require the completion of degree requirements at 4-year colleges and universities.

- Applications Engineer
- Apprentice
- Biomedical Engineer
- Communication Engineer
- Controls Engineer
- Computer Engineer
- Design Engineer
- ADA/Telecommunications Apprentice
- Electrical Apprentice
- Electronic Engineer
- Generation Apprentice
- Mechanic Apprentice
- Lineman Apprentice
- Meter Technician Apprentice
- Project Engineer
- Systems Protection Technician Apprentice
- Product Engineer
- Product Design Engineer
- Research Engineer
- Power Engineer
- Test Engineer
- Substation Apprentice
- Systems Engineer

**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/)

# ELECTRICAL TRADES

## ASSOCIATE DEGREE PROGRAM

### ELECTRICAL TRADES MAJOR – A.S. DEGREE

Nineteen (19.0) units required for the major.

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

#### I. Required courses for the major (19.0 units)

BLDC	101	Safety Standards (Cal/OSHA) 30- Hour Card	3.0
ELTT	101	Electrical Trades I	4.0
ELTT	102	Electrical Trades II	4.0
ELTT	103	Electrical Trades III	4.0
ELTT	104	Electrical Trades IV	4.0

**Total Major Units** **19.0**

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## CERTIFICATE PROGRAM

### ELECTRICAL TRADES CERTIFICATE

Nineteen (16.0) units required for the certificate.

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

#### I. Required courses for the certificate (19.0 units)

ELTT	101	Electrical Trades I	4.0
ELTT	102	Electrical Trades II	4.0
ELTT	103	Electrical Trades III	4.0
ELTT	104	Electrical Trades IV	4.0

**Total Certificate Units** **16.0**