ELECTRICAL TECHNOLOGY

DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree (A.S.)
Certificate of Achievement
Specialization Certificates in Electrical Wiring, Electronics, and Solar Energy

DESCRIPTION

The Electrical Technology program offers an Associate in Science degree, Certificate of Achievement and Specialization Certificates that are designed to provide students with the comprehensive understanding and manipulative skills, technical knowledge, and related trade information required to become technicians or operators in industrial technology and energy related industries or light manufacturing equipment.

This program will allow students to comply with the necessary requirements for certification up to Grade I level. Once the student becomes a state certified operator, he or she will qualify to seek employment in the industrial technology disciplines anywhere in the State. Imperial Valley College has partial program certification from the Division of Labor Standards for Electrician Certification.

PROGRAM LEARNING OUTCOMES

1. Demonstrate knowledge of OSH safety practices required installation and repairs of electrical wiring.
2. Use written and verbal communication skills to related trade and technical information for blueprint.
3. Understand and demonstrate the necessary skills to become employed in the electrical field.

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.

- Electrical Installer
- Commercial Electrical Installer
- Electrical Maintenance Technician
- Electrician
- Industrial Maintenance Electrician
- Environmental Engineer
- Solar Engineer
- Electrical Engineer
- Environmental Scientist
- Environmental 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 – 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/**

ELECTRICAL TECHNOLOGY

ASSOCIATE DEGREE PROGRAM

ELECTRICAL TECHNOLOGY MAJOR – A.S. DEGREE
Twenty (20.0) 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 (20.0 units).

BLDC	101	Safety Standards (Cal/OSHA) 30-Hour Card	3.0
ELTR	120	Electronic Devices	4.0
ELTR	140	Electronic Circuits & Semiconductor	4.0
EWIR	110	Electrical Principles	4.0
EWIR	115	Electrical Wiring and Protection	4.0
WE	201	Employment Readiness	1.0

Total Major Units	20.0
IVC Graduation Requirements and GE Pattern:	30.0
Electives (as needed to reach 60 degree applicable units)	____
Total Maximum Units:	**60.0**

CERTIFICATE PROGRAM

ELECTRICAL TECHNOLOGY CERTIFICATE
Twenty (20.0) 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 (20.0 units).

BLDC	101	Safety Standards (Cal/OSHA) 30-Hour Card	3.0
ELTR	120	Electronic Devices	4.0
ELTR	140	Electronic Circuits & Semiconductor	4.0
EWIR	110	Electrical Principles	4.0
EWIR	115	Electrical Wiring and Protection	4.0
WE	201	Employment Readiness	1.0

Total Certificate Units	20.0
Total Maximum Units:	**20.0**

ELECTRICAL TECHNOLOGY

SPECIALIZATION CERTIFICATES
The Specialization Certificate(s) demonstrates a completion of coursework in addition to the major in Electrical Technology.

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

ELECTRICAL TECHNOLOGY: ELECTRICAL WIRING SPECIALIZATION - Major Plus 9.0 Units
Specialization Certificate in Electrical Wiring is designed to provide students and entry level operators seeking higher grade level and specific understanding and skills, technical knowledge, and related trade information on electrical installations. It will prepare students in electrical residential installations. Once the student finishes this program, he or she will qualify to seek employment in the electrical and energy sector anywhere in the State.

PROGRAM LEARNING OUTCOMES

1. Service and repair electrical appliances, overprotection devices.
2. Safety procedures to install and calculate capacities for light system, motors and transformers.
3. Internship.

I. The major plus nine (9.0) additional units in Electrical Wiring course work.

EWIR	125	Electrical Feeder Services and Circuits	4.0
EWIR	135	Electrical Equipment & Special Conditions	4.0
WE	220	Internship	1.0

Total Major Units	20.0
Electrical Technology: Electrical Wiring Specialization Units	9.0
Total Certificate Units:	**29.0**

ELECTRICAL TECHNOLOGY: ELECTRONICS SPECIALIZATION - Major Plus 7.0 Units
Specialization Certificate in Electronics is designed to provide students and entry level operators seeking higher grade level and specific understanding and skills, technical knowledge, and related trade information on electronic equipment based on semiconductor devices and microchips, including data acquisition equipment and software for virtual instrumentation.

PROGRAM LEARNING OUTCOMES

1. Assembly Electronic Devices with Instrumentation Circuits.
2. Identify logic circuits used on computer and audiovisual equipment.
3. Take internship opportunities for work experience and job placement.

I. The major plus seven (7.0) additional units in Electronics course work.

ELTR	220	Digital Instrumentation Measurements	3.0
ELTR	240	Digital Logic Circuits	3.0
WE	220	Internship	1.0

Total Major Units	20.0
Electrical Technology: Electronics Specialization Units	7.0
Total Certificate Units:	**27.0**

ELECTRICAL TECHNOLOGY: SOLAR ENERGY SPECIALIZATION - Major Plus 18 Units
Specialization Certificate in Solar Energy is designed to provide students and entry level operators seeking higher grade level and specific understanding and skills, technical knowledge, and related trade information on solar technology and installation of related equipment such as power inverters and data acquisition software.

PROGRAM LEARNING OUTCOMES

1. Identify and describe the principles of protovoltaic (solar).
2. Describe and explain the National Electrical Codes for solar electrical circuits.
3. Identify the principles of electrical alternative energy system.

I. The major plus eighteen (18.0) units in Solar Energy course work.

ELTR	220	Digital Instrumentation Measurements	3.0
ELTR	240	Digital Logic Circuits	3.0
EWIR	151	Solar Electrical Systems	4.0
RNEW	118	Alternative Energies	4.0
RNEW	150	Solar Energy Systems PV1	3.0
WE	220	Internship	1.0

Total Major Units	20.0
Electrical Technology: Electronics Specialization Units	18.0
Total Certificate Units:	**38.0**

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