

**IMPERIAL VALLEY COLLEGE DISTRICT  
REVIEW OF CAREER TECHNICAL EDUCATION TRAINING PROGRAMS  
2013**

**ELECTRICAL TECHNOLOGY (Renewable & Alternative Energies)**

**I. Program Description**

The Electrical Technology major and certificate is 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.

A. Degree

Associate in Science, Electrical Technology

B. Certificate

Certificated of Achievement, Electrical Technology

**II. Career Opportunities**

Solar technician

Alternative Fuel Technician

Power Plant Operator

Electricians

First-Line Sup/Mgrs of Construction Trades and Extraction Workers

Helpers-Electricians

Commercial Electrical Installer

**III. Industry Certification/Accreditation (to be completed by faculty)**

**Solar PV and Thermal Technician Certification; Courses in catalog application in progress**

**Alternative Energy Certificate; in progress**

**IV. Industry Recognized Credentials (IRC) (to be completed by faculty)**

**NABCEP Entry Level Exams for Solar PV and Solar heating**

**ASE-F1 Alternative Fuel for Alternative Energy Certificate**

**V. Labor Market Demand**

The Electrical Technology program at Imperial Valley College meets a documented labor market demand. Employment trends for this field are derived from a variety of sources. These are listed below:

A. Employment Trends (Employment Development Department):

| Occupation                                                        | TOP Code | SOC Code | 2008 | Average Job Openings per Year |
|-------------------------------------------------------------------|----------|----------|------|-------------------------------|
| Electronics and Electric Technology                               | 0934.00  |          |      | Not listed                    |
| Electricians                                                      | 0952.20  | 472111   | 170  | 5                             |
| First-Line Sup/Mgrs of Construction Trades and Extraction Workers | 0952.20  | 471011   | 160  | 4                             |

|                      |         |        |    |     |
|----------------------|---------|--------|----|-----|
| Helpers-Electricians | 0952.20 | 473013 | 40 | 2   |
| Total                |         |        |    | 11* |

\*Same data as 2012. No updates from State Employment Development  
Occupational Employment Projections 2008-2018  
Imperial County

<http://www.labormarketinfo.edd.ca.gov/CommColleges/>

## B. Employment Trends (Faculty Assessment):

### VI. Other Regional Programs

There are no other similar training programs in Imperial Valley.

### VII. Employment and Completion

(Based on State Core Measures Report, 2011-2012, 2012-2013 & 2013-2014)

Core 2: Completions. Measures completions for Career Technical Education student concentrators. Receipt of a certificate or degree or enrollment in a California four-year public university with or without a degree is considered a completion.

| Fiscal Year Planning | Program                             | Total Completions | IVC Completion Rate | State Avg. Completion Rate |
|----------------------|-------------------------------------|-------------------|---------------------|----------------------------|
| 2013-2014            | Electronics and Electric Technology | 0/7               | 0                   | 71.83%                     |
|                      | Electrical                          | 2/8               | 25%                 | 49.30%                     |
| 12012-2013           | Electronics and Electric Technology | 1/1               | 100%                | 100%                       |
|                      | Electrical                          | 2/6               | 33.33%              | 43.66%                     |
| 2011-2012            | Electronics and Electric Technology | 13/14             | 92.86%              | 75.13%                     |
|                      | Electrical                          | 1/10              | 10%                 | 52.22%                     |

PERKINS IV Program Performance Trend Report

Core Indicator Two – Total Completions – Certifications, Degrees and Transfer

[https://misweb.cccco.edu/perkins/Core\\_Indicator\\_Reports/Summ\\_coreIndi\\_TOPCode.aspx](https://misweb.cccco.edu/perkins/Core_Indicator_Reports/Summ_coreIndi_TOPCode.aspx)

Core 3: Persistence and Transfer. The percent of Career Technical Education student concentrators (students who have successfully completed a minimum of 12 units of related Career Technical Education coursework) who persist in education at the community college level or transfer to a two or four-year institution.

| Fiscal Year Planning | Program                             | Persistence | IVC Persistence Rate | State Avg. Persistence Rate |
|----------------------|-------------------------------------|-------------|----------------------|-----------------------------|
| 2013-2014            | Electronics and Electric Technology | 7/15        | 46.67%               | 84.66%                      |
|                      | Electrical                          | 26/38       | 68.42%               | 79.12%                      |
| 2012-2013            | Electronics and Electric Technology | 4/4         | 100%                 | 79.51%                      |
|                      | Electrical                          | 27/32       | 84.38%               | 79.95%                      |
| 2011-2012            | Electronics and Electric Technology | 11/18       | 61.11%               | 83.10%                      |
|                      | Electrical                          | 15/25       | 60%                  | 83.52%                      |

PERKINS IV Program Performance Trend Report

Core Indicator Three – Persistence and Transfer

[https://misweb.cccco.edu/perkins/Core\\_Indicator\\_Reports/Summ\\_coreIndi\\_TOPCode.aspx](https://misweb.cccco.edu/perkins/Core_Indicator_Reports/Summ_coreIndi_TOPCode.aspx)

**Core 4: Student Placement.** The percent of Career Technical Education students who have earnings the following year (as found in the unemployment insurance base wage file) or are in an apprenticeship program, or the military.

| Fiscal Year Planning | Program                             | Placements | IVC Placement Rate | State Avg. Placement Rate |
|----------------------|-------------------------------------|------------|--------------------|---------------------------|
| 2013-2014            | Electronics and Electric Technology | 8/8        | 100%               | 72.98%                    |
|                      | Electrical                          | 12/12      | 100%               | 84.85%                    |
| 2012-2013            | Electronics and Electric Technology | 0          | 0                  | 64.90%                    |
|                      | Electrical                          | 5/5        | 100%               | 83.20%                    |
| 2011-2012            | Electronics and Electric Technology | 12/12      | 100%               | 65.16%                    |
|                      | Electrical                          | 11/11      | 100%               | 84.62%                    |

PERKINS IV Program Performance Trend Report

Core Indicator Four – Employment

[https://misweb.cccco.edu/perkins/Core\\_Indicator\\_Reports/Summ\\_coreIndi\\_TOPCode.aspx](https://misweb.cccco.edu/perkins/Core_Indicator_Reports/Summ_coreIndi_TOPCode.aspx)

Pursuant to the FCMAT report, CTE programs are also being evaluated for student demand, certificate and program completion, local labor demand, and a facility utilization for CTE programs in the new CTE building.

## VIII. Enrollment Trends

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| BLDC101 | 2012-2013 | 3        | 20         | 22  | 92.31%    |
| BLDC101 | 2011-2012 | 3        | 17.6       | 19  | 91.38%    |
| BLDC101 | 2010-2011 | 2        | 16.5       | 18  | 91.67%    |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| EWIR110 | 2012-2013 | 2        | 22         | 20  | 110%      |
| EWIR110 | 2011-2012 | 2        | 18         | 20  | 90%       |
| EWIR110 | 2010-2011 | 4        | 15.8       | 20  | 78.75%    |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| EWIR115 | 2012-2013 | 1        | 19         | 20  | 95%       |
| EWIR115 | 2011-2012 | 3        | 13.33      | 20  | 66.67%    |
| EWIR115 | 2010-2011 | 1        | 27         | 20  | 135%      |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| ELTR120 | 2012-2013 | 2        | 17.5       | 22  | 80%       |
| ELTR120 | 2011-2012 | 1        | 19         | 20  | 95%       |
| ELTR120 | 2010-2011 | 1        | 14         | 20  | 70.00%    |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| ELTR140 | 2012-2013 | 2        | 12.5       | 22  | 56.86%    |
| ELTR140 | 2011-2012 | 1        | 15         | 20  | 75%       |
| ELTR140 | 2010-2011 | 1        | 19         | 20  | 95%       |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| ELTR220 | 2012-2013 | 1        | 10         | 22  | 45.45%    |
| ELTR220 | 2011-2012 | 1        | 15         | 20  | 75%       |
| ELTR220 | 2010-2011 | 1        | 13         | 20  | 65%       |

| Course  | Year      | Sections | Avg. Class | CAP | Fill Rate |
|---------|-----------|----------|------------|-----|-----------|
| ELTR240 | 2012-2013 | 1        | 6          | 22  | 27.27%    |
| ELTR240 | 2011-2012 | 1        | 7          | 20  | 35%       |
| ELTR240 | 2010-2011 | 2        | 14         | 20  | 70%       |

#### IX. Completions

|                       | 2012-2013 |              | 2011-2012 |              | 2010-2011 |              |
|-----------------------|-----------|--------------|-----------|--------------|-----------|--------------|
|                       | Degrees   | Certificates | Degrees   | Certificates | Degrees   | Certificates |
| Electrical Technology | 3         | 4            | 0         | 1            | 0         | 0            |

#### X. FTES/FTEF Analysis

| Year      | FTES  | FTEF | FTES/FTEF |
|-----------|-------|------|-----------|
| 2012-2013 | 55.21 | 7.13 | 7.74      |
| 2011-2012 | 61.68 | 8.2  | 7.52      |
| 2010-2011 | n/a   | n/a  | n/a       |

#### XI. Facility Utilization Plan (to be completed by faculty)

Part time faculty are working on streamlining certifications to be completed within three semesters. Certification programs are linked to Industry Recognized Credentials (IRC). Also Certifications are designed to fulfill employment market demand of Imperial Valley. Additional programs are in planning phase to stay current with industry demand and new technologies. The department also is planning systemic student recruitment plans and instructors professional development.

#### XII. SWOT Analysis (to be completed by faculty)

|                                                                                                                                                                                        |                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Strengths: Increasing demand for renewable energy technicians.</i>                                                                                                                  | <i>Weaknesses: Lack of budget for department development and need for full time coordinator and staff.</i>                                     |
| <i>Opportunities: Grants are available for renewable and alternative energies and fuels are available for Community College to develop programs and purchase of related equipment.</i> | <i>Threats: Absence of department budget, structure and full time faculty is creating a major threat to continuous department improvement.</i> |

#### XIII. Program Evaluation (to be completed by EWD office)

#### XIV. Recommendation (to be completed by EWD office)