

**IMPERIAL COMMUNITY COLLEGE DISTRICT**  
**REVIEW OF CAREER TECHNICAL EDUCATION TRAINING PROGRAMS**  
**2016**

## **AIR CONDITIONING & REFRIGERATION TECHNOLOGY**

**I. Program Description**

The Air Conditioning and Refrigeration major and certificate are designed to provide instruction in manipulative skills, technical knowledge, and related trade information, which will prepare the student for employment in the Air Conditioning and Refrigeration industry.

**A. Degree**

Associate in Science, Air Conditioning & Refrigeration Technology

**B. Certificate**

Certificated of Achievement, Air Conditioning & Refrigeration Technology

**II. Career Opportunities**

Heating, Air Conditioning and Refrigeration Mechanics and Installers

Sheet metal fabrication

Electricians

Ductwork installer

Plumbing Technician

Counter Sales

Union Jobs in the areas of HVAC and Sheet Metal Work

**III. Industry Certification/Accreditation**

The HVAC program is in the process of attaining the HVAC Excellence Accreditation; estimated to be completed this year.

**IV. Industry Recognized Credentials (IRC)**

NATE North American Technician Excellence, ESCO refrigerant recovery certification/ EPA certification. California Contractor State License C-20.

**V. Labor Market Demand**

The Air-Conditioning and Refrigeration 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**

Occupation	TOP Code	SOC Code	2012	Average Job Openings per Year
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0946.00	499021	70	4*

\*State Employment Development  
Occupational Employment Projections 20012-2022  
Imperial County  
<http://www.labormarketinfo.edd.ca.gov/CommColleges/>

**B. Employment Trends 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, 2012-2013, 2013-2014 & 2014-2015)

**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
2014-2015	Air-Conditioning and Refrigeration Technology	6/13	46.15%	68.66%
2013-2014	Air-Conditioning and Refrigeration Technology	16/23	69.57%	61.87%
2012-2013	Air-Conditioning and Refrigeration Technology	18/20	90%	54.24%

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
2014-2015	Air-Conditioning and Refrigeration Technology	26/35	74.29%	79.08%
2013-2014	Air-Conditioning and Refrigeration Technology	27/38	71.05%	79.29%
2012-2013	Air-Conditioning and Refrigeration Technology	30/42	71.43%	78.28%

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
2014-2015	Air-Conditioning and Refrigeration Technology	12/12	100%	69.56%
2013-2014	Air-Conditioning and Refrigeration Technology	22/22	100%	79.34%
2012-2013	Air-Conditioning and Refrigeration Technology	20/20	100%	74.75%

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	Fill Rate
ACR 101	2014-2015	3	21	103.33%
ACR 101	2013-2014	2	19	95%
ACR 101	2012-2013	3	17	85%
Course	Year	Sections	Avg. Class	Fill Rate
ACR 102	2014-2015	1	19	95%
ACR 102	2013-2014	1	18	90%
ACR 102	2012-2013	1	23	115%
Course	Year	Sections	Avg. Class	Fill Rate
ACR 103	2014-2015	1	33	165%
ACR 103	2013-2014	2	19	93%
ACR 103	2012-2013	1	16	80%

Course	Year	Sections	Avg. Class	Fill Rate
ACR 104	2014-2015	1	19	95%
ACR 104	2013-2014	1	18	90%
ACR 104	2012-2013	1	19	95%
Course	Year	Sections	Avg. Class	Fill Rate
ACR 105	2014-2015	1	20	100%
ACR 105	2013-2014	2	18	87.5%
ACR 105	2012-2013	2	14	70%
Course	Year	Sections	Avg. Class	Fill Rate
ACR 106	2014-2015	1	23	115%
ACR 106	2013-2014	1	22	110%
ACR 106	2012-2013	3	17	70%

### IX. Completions

	2014-2015		2013-2014		2012-2013	
	Degrees	Certificates	Degrees	Certificates	Degrees	Certificates
Air Conditioning & Refrigeration	3	0	0	0	0	8

### X. FTES/FTEF Analysis

Year	FTES	FTEF	FTES/FTEF
2014-2015	68.56	6.47	10.6
2013-2014	63.43	6.6	9.61
2012-2013	65.81	7.26	9.06

### XI. Facility Utilization Plan

The plan for the facility is to continue offering classes following our current pathway and offer classes both during day and evening schedules to attract more students to the program and continue increasing our enrollment and increase our FTE and FTES.

**XII. SWOT Analysis**

<b>Strengths</b> Faculty are all working professionals what bring practical experience to the classes.	<b>Weaknesses</b> NO dedicated facility for lab experiments.
<b>Opportunities</b> Program proposing the use of the solar lab as a water treatment lab.	<b>Threats</b> It takes more than course work to become State certified. It also requires on-the job training.

**XIII. Program Evaluation**

The HVAC program has strong participation Perkins, and fill rates. The only area of concern is the expected labor market demand.

**XIV. Recommendations**

It is recommended that the HVAC program continue at Imperial Valley College with a further analysis of labor market data.