

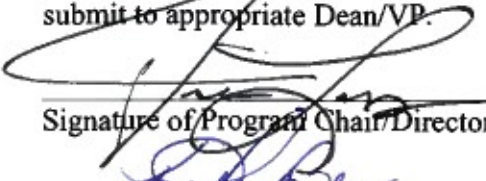
**IMPERIAL VALLEY COLLEGE
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES**

PROGRAM/DEPARTMENT Industrial Technology Department- Electrical Technology ACADEMIC YR. 2013

Comprehensive Program Review Annual Assessment Request for Resources (check all that apply)

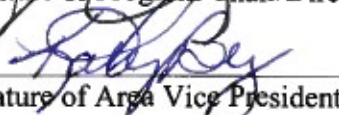
Please analyze your Program Review data as well as your SLO/SAO assessment findings in order to update to your Comprehensive Program Review report as needed. All changes to area needs and subsequent requests for additional resources must be reported at this time.

If your program is scheduled for a Comprehensive Program Review all forms are to be completed and submitted to the appropriate Dean/VP. If you are completing the annual Program Review Assessment only and have no changes to area needs, sign below and submit this form to appropriate Dean/VP. If your needs have changed as a result of your annual assessment of program review data, please complete the appropriate Request for Resources form(s) and submit to appropriate Dean/VP.



Signature of Program Chair/Director 2/19/2013
Date

Signature of Area Dean Date



Signature of Area Vice President 3/4/2013
Date

Please attach the following documents to this Program Review Compliance form if you are requesting additional resources:

- ✓ Comprehensive Program Review
- ✓ Data Analysis Form
- ✓ SLO/SAO Assessments
- ✓ Request for Resources Forms

Academic Program Evaluation – ELECTRICAL TECHNOLOGY
Division – EWD
Department - ITEC

ASSOCIATE DEGREE:

Required Courses: BLDC 101, EWIR 110, 115, ELTR 120, 140, WE 201

CERTIFICATE PROGRAM:

Required Courses: BLDC 101, EWIR 110, 115, ELTR 120, 140, WE 201

SPECIALIZATION CERTIFICATES:

Electrical technology – Electrical Wiring Specialization – Major plus 9 units: EWIR 125, 135, WE 220

Electrical Technology – Electronics Specialization – Major plus 7 units: ELTR 220, 240, WE 220

Electrical Technology – Solar Energy Specialization – Major plus 18 units: ELTR 220, 240, EWIR 150, 151, 160, WE 220

PROGRAM COMPLETION

Number of certificates completed Between Fall 2009 and Spring 2012	Number of Associate Degrees Completed Between Fall 2009 and Spring 2012
3	

ELECTRICAL TECHNOLOGY - ENROLLMENT, FILL RATES & WAIT LISTS

COURSES	Course Cap	Enrollment - # Sections						Fill Rate						Wait Lists		
		F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	S 12	F 12	S 13
BLDC 101	20			17 - 1	16 - 1	19 - 1	34 - 2			94.44%	88.89%	105.56%	85%			
EWIR 110	20	45 - 2	19 - 1	29 - 2	35 - 2	36 - 2		112.50%	95%	72.50%	85%	90%				
EWIR 115	20	23 - 1	19 - 1		27 - 1	17 - 1	23 - 2	115%	95%		135%	85%	57.50%			
EWIR 125	20	14 - 1	21 - 1	12 - 1		13 - 1		70%	105%	60%		65%				
EWIR 135	20		10 - 1	23 - 1	12 - 1		17 - 1		50%	115%	60%		85%			
EWIR 150	20	44 - 2	42 - 2	28 - 2	16 - 1	17 - 1	11 - 1	110%	105%	70%	80%	85%	55%			
EWIR 151	20				25 - 1	9 - 1	10 - 1				125%	45%	50%			
EWIR 160	20				31 - 1	18 - 1	10 - 1				155%	90%	50%			
ELTR 120	20	17 - 1	13 - 1	14 - 1		19 - 1		85%	65%	70%		95%				
ELTR 140	20	10 - 1			19 - 1		15 - 1	50%			95%		75%			
ELTR 220	20			13 - 1		15 - 1				65%		75%				
ELTR 240	20	19 - 1	16 - 1	12 - 1	16 - 1		7 - 1	95%	80%	60%	80%		35%			
WE 201	30		29 - 1	23 - 1	30 - 1	33 - 1	28 - 1		96.67%	76.67%	100%	110%	93.33%		3	
WE 220	30		22 - 1	15 - 1	18 - 1	25 - 1	18 - 4		73.33%	50%	60%	83.33%	60%			

ELECTRICAL TECHNOLOGY - PRODUCTIVITY

COURSE	FTES						FTEF						PRODUCTIVITY					
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12
BLDC 101			1.75	1.65	1.95	3.5			0.2	0.2	0.2	0.4			8.75	8.25	9.75	8.75
EWIR 110	12.35	5.21	7.95	9.33	9.88		0.54	0.27	0.54	0.54	0.54		22.87	19.30	14.72	17.28	18.30	
EWIR 115	6.31	5.21		7.41	4.66	6.31	0.27	0.27		0.27	0.27	0.54	23.37	19.30		27.44	17.26	11.69
EWIR 125	3.84	5.76	3.29		3.57		0.27	0.27	0.27		0.27		14.22	21.33	12.19		13.22	
EWIR 135		2.74	6.31	3.29		4.69		0.27	0.27	0.27		0.27		10.15	23.37	12.19		17.37
EWIR 150	7.55	7.2	4.8	2.74	2.91	1.89	0.4	0.4	0.4	0.2	0.2	0.2	18.88	18.00	12.00	13.70	14.55	9.45
EWIR 151				3.43	1.23	1.37				0.27	0.27	0.27				12.70	4.56	5.07
EWIR 160				4.25	2.47	1.37				0.27	0.27	0.27				15.74	9.15	5.07
ELTR 120	3.50	2.67	2.88		3.91		0.27	0.27	0.27		0.27		12.96	9.89	10.67		14.48	
ELTR 140	2.06			3.91		3.09	0.27			0.27		0.27	7.63			14.48		11.44
ELTR 220			2.23		2.57				0.20		0.2				11.15		12.85	
ELTR 240	3.26	2.74	2.06	2.74		1.2	0.20	0.20	0.20	0.20		0.2	16.30	13.70	10.30	13.70		6.00
WE 201		0.99	0.79	1.03	1.13	0.96		0.07	0.07	0.07	0.07	0.07		14.14	11.29	14.71	16.14	13.71
WE 220		2.64	1.80	2.16	3	2.16		0.07	0.07	0.07	0.07	0.28		37.71	25.71	30.86	42.86	7.71

ELECTRICAL TECHNOLOGY - COMPLETION & SUCCESS RATES

COURSE	Completion Rate						Success Rate					
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12
BLDC 101			100%	88%	89%	97%			59%	50%	74%	79%
EWIR 110	78%	74%	90%	68%	75%	91%	76%	68%	69%	56%	72%	78%
EWIR 115	87%	89%		89%	82%		87%	89%		67%	82%	
EWIR 125	86%	86%	100%		77%		79%	86%	100%		77%	
EWIR 135		80%	78%	83%		100%		80%	78%	83%		88%
EWIR 150	86%	93%	93%	94%	100%	91%	66%	81%	82%	63%	88%	91%
EWIR 151				92%	89%	100%				80%	78%	100%
EWIR 160				97%	89%	100%				94%	67%	90%
ELTR 120	94%	85%	79%		100%		88%	85%	79%		79%	
ELTR 140	100%			89%		100%	90%			74%		80%
ELTR 220			85%		93%				85%		80%	
ELTR 240	68%	94%	92%	69%		100%	68%	75%	92%	63%		100%
WE 201		97%	91%	83%	85%	82%		90%	83%	70%	64%	79%
WE 220		95%	93%	67%	92%	89%		95%	93%	67%	84%	89%

Recent Enrollment Demand: High _____ Medium X _____ Low _____

Projection for Future Demand : Growing X _____ Stable _____ Declining _____

Summary of Program "Health" Evaluation: (Including consideration of size, score, productivity and quality of outcomes)

The health of the Electrical Technology Program has an average of 50% - 85% and success rate of 77% -96% with a completion rate of 75% - 98% with an enrollment of 18 students per class.

There are 20 units for an Associate Degree (A.S.) and Certificate.

Most of these courses are teaching during the spring and fall semesters with four (4) part-time instructors.

Most of the courses are taught every two semesters with four (4) part-time instructors.

This program allows students to comply with requirements for certification up to grade level.

Once the student becomes a State certified operator, he or she will qualify to seek employment in industrial technology discipline anywhere in the state.

Job opportunities

- **Electrician Install and maintain electrical systems in homes, business, and factories.**
- **Electricians work indoor, and out, in nearly every type of facility. Almost all electricians work full time, which may include evenings and weekends.**
- **The median annual wage of electricians was \$ 48,250 in May 2010.**

Job Outlook

- **Employment of electricians is projected to grow 23 % from 2010, faster than the average for all occupations.**
- **Home and business require more wiring than ever before, and electricians will be needed to install the necessary components.**

Similar Occupations and Opportunities

- **Computer, ATM, and office machine repairers.**
- **Construction laborers and helpers.**
- **Drafters.**
- **Electrical and electronic technicians.**
- **Electrical and electronic installers and repairers.**
- **Elevator installers and repairers.**
- **Heating air conditioning, and refrigeration, mechanics and installers.**
- **Home entertainment equipment, installers and repairers.**
- **Line installers and repairers.**

Student Learning Outcomes Assessment-completion

<u>Course</u>	<u>SLO's Cycle</u>	<u>Assessment Completed</u>	<u>ISLO Linked To</u>
BLDC 101	<ol style="list-style-type: none">1. Understand the appropriate use of personal protective equipment depending on job to be performed.2. Understand the purpose of lockout and tag out of equipment.3. Analyze and understand the purpose of keeping an MSDS at the jobsite.	Identified	<ol style="list-style-type: none">1. ILO12. ILO1,ILO23. ILO1,ILO2,ILO5

<p>EWIR 110</p>	<ol style="list-style-type: none"> 1. Recognize the different conductor systems used in residential and light commercial wiring in accordance with the codes and authorities for Installation. 2. Use the NEC to adjust conductor capacity based on ambient temperature and number of conductors of raceway systems. 3. Explain the causes of overcurrent conditions and describe electrical circuit overcurrent protective devices (OCPDs). 4. List the components of the service entrance, service drop clearances specified in the NEC, and eight basic guidelines when locating a residential service entrance. 	<p style="text-align: center;">Identified</p>	<ol style="list-style-type: none"> 1. ILO2,ILO3,ILO4 2. ILO1,ILO2,ILO3,ILO4,ILO 3. ILO1, ILO2, ILO3, ILO4, ILO5 4. ILO2, ILO4, ILO5
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<p>ELTR 115</p>	<ol style="list-style-type: none"> 1. Recognize the different conductor systems used in residential and light commercial wiring in accordance with the codes and authorities for installation. 2. Use the NEC to adjust conductor capacity based on ambient temperature and number of conductors of raceway systems. 3. Explain the causes of overcurrent conditions and describe electrical circuit overcurrent protective devices (OCPDs). (ILO1, ILO2, ILO3, ILO4, ILO5) 4. List the components of the service entrance, service drop clearances specified in the NEC, and eight basic guidelines when locating a residential service entrance. (ILO2, ILO4, ILO5) 	<p style="text-align: center;">Identified</p>	<ol style="list-style-type: none"> 1. ILO 1, ILO2, ILO3, ILO4 2. ILO2, ILO4 3. ILO1, ILO2, ILO3, ILO4, ILO5 4. ILO2, ILO4, ILO5
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ELTR 120	<p>1. Familiarize with Resistive AC circuits and their basic formulas.</p> <p>2. Describe the function of Inductors in DC and AC circuits using their voltage and current equations. (ILO2, ILO4)</p> <p>3. Analyze series RL circuits and obtain their respective behavior equations.</p> <p>4. Construct, test and troubleshoot various series circuits using Resistors, Inductors, and Capacitors.</p>	Identified	<p>1. ILO2, ILO4</p> <p>2. ILO2, ILO4</p> <p>3. ILO2, ILO4, ILO5</p> <p>4. ILO2, ILO4, ILO5</p>
ELTR 140	<p>1. Analyze AC circuits. (ILO2, ILO4)</p> <p>2. Describe the functions of Capacitors and Inductors. (ILO2, ILO4)</p> <p>3. Analyze RC, RI, and RLC circuits and obtain their respective equations. (ILO2, ILO4)</p> <p>4. Construct, Test, and troubleshoot various RC, RL, and RLC circuits. (ILO2, ILO4)</p>	Identified	<p>1. ILO2, , ILO4</p> <p>2. ILO2, , ILO4</p> <p>3. ILO2, ILO4</p> <p>4. ILO2, ILO4</p>

WE 201	1. Identify and accomplish four on-the-job learning objectives for new or expanded learning.	Identified	1. ILO1, ILO2, ILO3, ILO4
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Student Learning Outcomes and Program Learning Outcomes

Student Learning Outcomes Assessment –completion

Assessment will be completed during the Fall of 2013

Program Learning Outcomes Assessment

Assessment will be completed during the Spring of 2013

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

Success Rate of Student Learning Outcomes

Students learn the principle of operation, construction, and testing procedures of various systems and components to enhance their trouble shooting skills and knowledge. Students are tested and must demonstrate their competence in each of the ISLOs, all areas are touch in the course but some are brief and not assessed.

Success Rate of Program Learning Outcomes

Success rate from program learning outcomes are in process of assessment

Future Goals of Program

1. Establish the program in the new CTE building by the Fall of 2014.
2. Certify the program according to the State Standards.
3. Hire full time instructors to teach a full curriculum.
4. Create a new Advisory Committee for electrical trade.
5. Integrate the program, with local and State electrical companies.
6. Develop workshops and work-station for student activities.
7. Develop or create a flexible class schedule, so the students can take classes during the morning, afternoon and evenings.
8. Develop or create an assessment program and job placement with local business.
9. New modern electrical/electronic equipment needed for new technology.
10. Develop a work-experience program with local business.

Resource requests from annual program review

1. Smart features and trainers for classroom and laboratory.
2. Similar and for electrical projects.
3. Computer lab and software.
4. Technical library for electrical/activities.