

**APPLICATION FOR PERKINS IV FUNDS  
PROGRAM IMPROVEMENT**

095220

**Program Name:** Electrical Technology

**TOP Code:**

**Name of Person Making Proposal:** Justin Shores

**Phone Number:** 6123

**Division Dean:** Margaret Drake

**Total Amount Requested:** \$60,000.00

**1. Briefly describe the program improvement activities being proposed.**

With the economy in the state that it is, we need to provide the students with every possible tool to help them succeed. Updating the labs to coincide with today's standards will give the student the valuable training they need to compete in the marketplace.

The curriculum needs to align more with control systems being used in the industry today. The software will need to match the brand of control system.

We plan on updating our labs in both our Fundamentals of Electricity class and our Advanced Motor Control (PLC) class to improve the students hands on experience. Giving each student more exposure to a wider variety of systems.

We will be adding PLC's from Square D and Allen Bradley to help the program align with what is being used in the field.

**2. What SLOs or PLOs will this project address?**

Students will solve circuit characteristics utilizing Ohm's Law.

Students will be able to differentiate between series, parallel and combination circuits.

Students will interpret, explain, and construct motor control circuits utilizing symbols and designations located on ladder diagrams.

Students will construct labs incorporating all the knowledge and skills acquired in the classroom. Student will then evaluate and inspect their work noting any mistakes/errors that may exist, and recommend corrective action.

Students will interpret, explain, and construct motor control circuits incorporating standard control circuitry with Programmable Logic controllers.

Students will construct labs incorporating all the knowledge and skills acquired in the fundamental and advanced classes. Students will then evaluate and inspect their work noting any mistakes/errors that may exist, and recommend corrective action.

**3. Are all course outlines of records updated in accordance with the 6 year review requirements?   X   YES        NO If no, what courses are not updated and what plans are in place to correct this?**

**4. What strategies do you currently use or will you implement to improve student retention and progress through this program?**

The faculty will use student support resources: Learning center, Library, Office of Students with Disabilities, and Student Success Advisor. The faculty use an in house counseling form along with an agreement with Susan Knapp to insure students alignment in the program and their general ed requirements..

**5. What strategies do you currently use or will you implement to improve student completion rates (graduation with Certificates or Degrees)?**

The electrical program is now an approved program through the state of California, school number 155. For the students to work in the electrical field, they have to be actively enrolled in the program and apply for an Electrical Trainee number. The students have the ability to take their Journeyman's exam at the completion of the 34 hours required for the certificate in Electrical Technology.

**6. Briefly discuss the Advisory Committee membership and involvement with the program. Please attach Advisory Committee minutes for all meetings for the past year.**

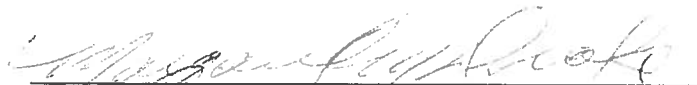
Advisory Committee members are made up of local contractors, electrical wholesale house management, maintenance managers for local where houses, local business owners, full time faculty and adjunct faculty.

**7. If funded, how will you evaluate the effectiveness of this proposal?**

Students will evaluate the additional equipment used in the Electrical field. Instructors will evaluate whether the equipment supports the course learning objectives and the course materials adequately.

Signature of Proposal Originator

Date

  
Signature of Approving Dean

5/29/11  
Date

### BUDGET WORKSHEET

Budget Category	Amount	Purpose
1000 Instructional Salaries	\$	
2000 Non Instructional Salaries	\$	
3000 Employee Benefits	\$	
4000 Supplies and Materials	\$20,000. \$40,000.	Fundamentals of electricity labs, videos, instructional aids, and meters. Specific equipment to be researched. Motor control labs and software. Square D PLC\$2500.00 each , Software \$500, motor starter \$250.00 each. Ice cube relays \$155.00 each
5000 Other Operating Expenses and Services	\$	
6000 Capital	\$	
7000 Other Outgo	\$	

**PERKINS IV ADDITIONAL REQUIREMENTS**

**THIS PAGE IS ONLY REQUIRED FOR PROJECTS RELATED TO A SPECIFIC TOP CODE. DO NOT COMPLETE THIS PAGE FOR COLLEGE-WIDE AND/OR SUPPORT SERVICES PROJECTS.**

Six Digit TOP Code 0952.20

Program Title Electrical Technology

Any vocational program receiving Perkins IV funds under the Carl D. Perkins Career and Technical Education Act of 2006 must meet **all nine requirements by the end of the funding year**. Please indicate below what activities you are currently doing or plan to do to meet these requirements. Refer to the hand out "Key Parts of Carl D. Perkins Career and Technical Education Act of 2006 and California Perkins IV State Plan" for complete wording of these nine requirements.

Column A Requirement Number	Column B - Activities (Current or Planned) Describe activities to be conducted to address Perkins IV requirements listed in Column A. 1. Under the appropriate requirement, describe activities to be funded by Perkins IV Title IC to improve or expand the identified 4- or 6-digit TOP Code career and technical education programs. 2. For each Section 135(b) requirement listed in Column A, number each activity separately (i.e., 1.1, 1.2, etc.). 3. If an activity meets more than one requirement, reference the number of the activity stated previously (i.e., same as 1.2).	Column C Core Indicator addressed by the activity listed. 1 = Tech. Skill Attainment 2 = Credential/Certificate/Degree 3 = Student Persistence or Transfer 4 = Student Placement 5 = Nontrad. Participation 6 = Nontrad. Completion	Column D Designate source of funds to be used by assigning a number as shown below: 1 = Perkins IV IC 2 = Other funds 3 = Both 4 = No funds needed	Column E Status of Activity: 1 = Planned 2 = Started 3 = Continuing 4 = Completed
1. Strengthening the academic and career and technical skills of students participating in CTE programs through the integration of academics with CTE programs.	This program consists of a sequence of courses that meets the needs of the industry as recommended by the Advisory Committee. All courses have been approved by the Academic Policies and Procedures Committee and is in compliance with SCANS. All courses have been approved through the Department of Apprenticeship Services and the curriculum is an approved training facility for Electrical Trainees.			
2. Link CTE at the secondary and the postsecondary levels, including by offering elements of not less than one program of study.	Tours of the Electrical lab are open to high school students and the community. This program routinely participates with the local high school tours and takes trips to the local high schools to further interest in the program.			
3. Provide students with strong experience in and understanding of all aspects of an industry, which may include work-based learning experiences.	The program will include computer simulations, programmable logic controllers, and other examples of technology related to the electrical field.			

Column A	Column B	Column C	Column D	Column E
<p>4. Develop, improve, or expand the use of technology in CTE, which may include training to use technology, providing students with the skills needed to enter technology fields, and encouraging schools to collaborate with technology industries to offer internships and mentoring programs.</p>	<p>Students will be given the chance to work with multiple types of electrical gear in a controlled environment, giving them the experience they will need to excel in the electrical field.</p>			
<p>5. Provide in-service and pre-service professional development programs to faculty, administrators, and career guidance and academic counselors involved in integrated CTE programs, on topics including effective integration of academics and CTE, effective teaching skills based on research, effective practices to improve parental and community involvement, effective use of scientifically based research and data to improve instruction. Professional development should also ensure that faculty and personnel stay current with all aspects of an industry; involve internship programs that provide relevant business experience; and train faculty in the effective use and application of technology.</p>	<p>All faculty members take part in professional development, including workshops, conferences and flex activities.</p>			
<p>6. Develop and implement evaluations of the CTE programs carried out with Perkins IV funds, including an assessment of how the needs of special populations are being met.</p>	<p>Instructor evaluations Student evaluation Graduate surveys Advisory meetings will be held in the lab for members to evaluate purchases</p>			

Column A	Column B	Column C	Column D	Column E
<p>7. Initiate, improve, expand and modernize quality CTE programs, including relevant technology.</p>	<p>New software, PLC's, meters, fundamental labs and DVD's will be purchased and used throughout the program. Students will be trained with different types of software, giving them a broader knowledge of the control system in the field.</p>			
<p>8. Provide services and activities that are of sufficient size, scope and quality to be effective.</p>	<p>All meters, labs, and software will be available to all students in the program.</p>			
<p>9. Provide activities to prepare special populations, including single parents and displaced homemakers enrolled in CTE programs, for high-skill, high-wage or high-demand occupations that will lead to self-sufficiency.</p>	<p>The Electrical Program is marketed to high school seniors and all individuals interested in the electrical field. This program prepares the students for entry into the electrical field.</p>			

**AVC Electrical Department  
Advisory Council Meeting**

Subject: Symbiotic Relationship with Electrical Companies

Date: February 3, 2011

Facilitator: Justin Shores

Time: 12:00 pm

Location: AVC, Building TE-7, Rm 123

Attendees:

Kirk Sennett - Instructor

Carl Cron – Water District Representative

Sam Jensen- US Breakers Inc.

Joe Sonner – Sonner Electric

Rick Sawyer- Consolidated Electrical Distributors

James Cippolone – Instructor

Eric Young – Instructor

**Key Points Discussed**

**Topic: Solar/Wind**

**Highlights:** AVC is gearing up for class room participation by offering new facilities with a change in class room structure. Possibly a three classroom, multiple labs which will triple the size requirements. Reference to Barrel Springs? A Mr. Fox. We are currently limited to a 24 student max per classroom. Justin mentioned to defer some of the cost the possibility of involving the public is on the table. The general conversation led to Sacramento's directive to do away with full-time faculty and hire more part-time employees to save cost. This will effect AVC only at this time.

**Topic: Motors**

**Highlights:** Carl talked about the infancy of the motor control program to the current one now. VTEA funding is still on the table but need advisory council established at least two per year. VTEA funding will also be used to update the labs. Carl further discussed our current dilemma with trying to cover code along with motor controls if we are tasked with a full blown motor lab.

**Topic: OSHA**

**Highlights:** New OSHA standards out but state is slow to update trainee and journeyman test to meet the new standards. Grant with Kern County Community College did not work out. Importance to provide formal training students need to comply with OSHA standards. Possible missile test and other programs based on our student and community needs. Kirk mentioned contractor hire is not improving. Rick mentioned out-of-state vs local employees to meet his company needs. Mainly out-of-state employees are hired.

**Topic: NEC**

**Highlights:** Justin explained the process for each electrical trainee and the importance of having the appropriate insurance. Justin mentioned a weekend type program to get the employee trained or certified with limited impact on the employer. Justin mentioned the difficulty in older electricians trying to pass the NEC tests. Also problems with student drops and obtaining books. This is where AVC can help them tremendously. To remind students to keep all books. NEC update for classes pertaining to the contractor. Carl mentioned the importance of having the students retake the test instead of the retreat by defeat mentality. More general discussion led to the possible seminar type class over a weekend to help meet requirements. Part of the OSHA requirement is the 75 hrs training which could be met by non-electrical courses exp. Forklift, crane, and confined spaces courses. Justin gave Joe, Susan Knapp information for student issues.

**Action Items:** To meet twice a year. Our next advisory meeting is slated for sometime in the summer.

**Owner:** Justin Shores

Meeting adjourned at 13:05 pm