**Executive Summary**

The department is pleased with the results of the CLO assessments which generally fall in the high 80% range. In our discussions we identified a few areas that we feel can be improved. Two of the three PLOs matched the CLOs fairly well, however, the second PLO will require clarification to more accurately reflect our teaching goals. The department is very concerned about the loss of lab and classroom space which occurred during the move from East campus to the West Campus Sierra Hall Facility, especially in light of the fact that some of our sections have increased in size by 30%. We need to replace lost classroom and lab space as well as updating and increasing the equipment necessary to provide a safe and effective learning environment for our students.

**Faculty Included in the Preparation and Sharing of this Report:**

Adrian DeAngelis, Jim Howen, Jon Kropp, Tim Vaughan

**Please provide a brief and cogent narrative in response to each of the following questions.**

1. Provide a quantitative analysis for each PLO your CLOs inform. Provide the total number of students who passed/total number of students assessed in each PLO column *and* the corresponding PLO passing rate as an aggregated percentage*.*

**AWARD (and corresponding PLO) Students Passed/Assessed TOTAL RATE**

A.S. Degree: Industrial Electronics

1. *Work successfully in the power utility, building trades, and/or manufacturing industry. 320/370 86%*
2. *Demonstrate compliance with current engineering and electrical safety and environmental 235/265 89%*

*standards.*

1. *Perform basic troubleshooting and electrical-oriented repairs and installations in accordance 320/370 86%*

*with industry standards.*

Certificate of Achievement: Industrial Electronics

1. *Work successfully in the power utility, building trades, and/or manufacturing industry. 286/327 87%*
2. *Demonstrate compliance with current engineering and electrical safety and environmental 235/265 89%*

*standards.*

1. *Perform basic troubleshooting and electrical-oriented repairs and installations in accordance 286/327 87%*

*with industry standards.*

The percentages show a consistent outcome between the students pursuing an associate degree and those who are pursuing a certificate of achievement. After discussing the results the department is pleased with the high level of student achievement.

1. Reflect on, consider and analyze the data you have. ***What does your CLO data tell you about how your students are achieving PLOs?*** *Be detailed, descriptive and analytical* in this qualitative assessment of each PLO in relation to your CLO data. **Are your results satisfactory?**

PLO #1 should be modified to more concisely describe fundamental preparation for entry level employment as opposed to “work successfully.”

The department keeps high standards of safety in all lab courses and activities; the 89% reflected in PLO #2 is based on written assessments for safety knowledge. We propose to re-write the PLO to more accurately represent our departmental safety goals.

We believe that PLO #3 reflects the nature of our classes in which students are building circuits and receiving exposure to common practical situations where troubleshooting and repairs are required.

1. Your department and the college should be making improvements based on student learning outcomes assessment, and we need to continue to document and share the improvements and progress you have already made. Did you make any changes in your CLO or PLO statements or analysis during the last cycle or recently? Did you receive funding for resources requests that were aimed to improve assessment results? Did you make any improvements in the areas of teaching and instruction processes, your courses, or your program? *Please explain your accomplishments and provide details about your efforts.*

We have not made any changes to our CLOs or PLOs at this time. However this cycle will be used to make a few adjustments.

1. **Action Plan.** Based on the assessments and analysis you have provided, please consider what changes or improvements you would like to make, which might include updating your CLO statements, modifying course outlines, rethinking instruction efforts, using different assessment instruments, asking for additional resources to improve assessment results, etc. ***Based on the analysis, provide an action plan for improvement that draws on your assessment results and efforts.***

We have identified significant issues with student preparedness. For example students in ELTEC 226 – Motors and Controls, who are not fluent enough in control language and symbols, or students in ELTEC 232 - Programmable Logic Controllers, who lack fundamental understanding of number systems and logic functions. Through discussions around our CLOs and PLOs we have decided to further codify the critical path to maximize student learning. We will put additional information into the online schedule to discourage entry level students from accidentally enrolling into advanced classes.

While our class sizes are slowly but steadily increasing, there are distinct bottlenecks caused by lack of sufficient lab equipment. For example ELTEC 229 – Commercial and Industrial Wiring students are required to bend conduit for motor installation. As there are insufficient conduit bending workstations some student workgroups must be directed into parallel tasks until the equipment becomes available. ELTEC 221 – Instrumentation students are required to conduct lab activities on one single trainer, crammed into the corner of an already crowded laboratory while another class is receiving instruction in the same room! In addition to the inherent safety issues of room overcrowding, more lab space and updated instrumentation sensors and controls are required. We feel that relieving the “bottlenecks” in these areas will afford students a greater opportunity for success.