INSTRUCTIONAL COMPREHENSIVE PROGRAM PLANNING AND REVIEW (CPPR) FOR 2017-2018

Only to be completed by those programs scheduled for the year according to the institutional comprehensive planning cycle for instructional programs (i.e., every four years for CTE programs and five years for all other instructional programs), which is produced by the Office of Academic Affairs. Faculty should meet with their dean prior to this process. Training is available to support faculty completing this work.

Cluster: Workforce Development **Program:** Electrical & Electronics Tech. (EET)
Current Academic Year: 2017 -2018

Last Academic Year CPPR Completed: 2013 **Current Date:** 2-2017

NARRATIVE: INSTRUCTIONAL CPPR

Please use the following narrative outline:

I. GENERAL PROGRAM INFORMATION

A. Program mission (optional)

The EET program is a department dedicated to support all interested students in achieving their Electrical/Electronic/Nuclear Technology educational and career goals and assist with job placement. With respect for student confidentiality and ethics we also seek to assist our students in areas of personal growth.

We proactively seek to emphasize the importance of soft skills, character growth, and integrity through instructional case studies, industry guest speakers, and "real-life" examples of individuals who excel professionally and personally - and why.

B. Brief history of the program

As of the last program review the Electronics and Electrical Technology (EET) program has undergone several changes and improvements which are listed in detail in the next section, "C". These modifications have been necessary to primarily meet the needs of new, re-entry, and continuing education students at Cuesta in the EET department. Prior to 2013 the Certificate of Achievement (CA) in "Electronics and State Electrician" required students to complete approximately 1280 hours. As described below and in section "C", several courses were deactivated and a new course (EET-119, State Electrician Trainee Topics) which was piloted as a 2-unit survey course in order to reduce the total CA (certificate) hourly requirement.

These multiple changes to the CA reduced the total number of hours from approximately 1280 hours to approximately 930 hours. Subsequent delivery of the new EET-119 course for 2 semesters, it was determined that this new survey course was an over-correction. There was insufficient student – instructor contact time to adequately cover the state-mandated topics in the crosswalk/contractual agreement by and between the Division of Labor Enforcement (DLE), Electrician Certification Unit, and Cuesta's EET Department. It was determined that in-order to remain in full compliance with the competency requirements for the DLE's General Electrician Trainee Certification it was necessary to modify the electrician trainee survey course (EET-119) from a 2-unit lab/lecture format to a 4-unit hybrid format.

From a unit perspective, the historical impact on the CA (Electronics and State Electrician) is summarized as follows: During 2008-2009 the CA had 47 units. It was reduced to 38 units in 2013-2014. As previously described this was found to be an over-correction and the state mandated material was unable to be covered. The new configuration brings the overall hours (as measured by the state electrical board to 990 hours)

EET-119 was added to the CA resulting in a 2-unit overall increase. EET-119 was removed from the AS in Electrical Technology resulting in a two unit decrease for the Electrical Technology Track.

Additionally, the AS in Electrical Technology has historically been a single track degree pattern focusing on various aspects of electrical technology designed to prepare students for career opportunities, transfer, and/or the state general electrician examination as well as the residential electrician examination, both administered by the state of California.

As described in the next section "C", the AS in Electrical Technology has been modified to a 2-track degree pattern. Track 1 is designed to prepare students for various employment and/or transfer opportunities in electrical technology; track 2 is designed to prepare students for various employment and/or transfer opportunities in nuclear technology.

Additional summary of historical program modifications:

Prior to the "program modification" process at Cuesta the EET staff, Engineering & Technology Division Chair, Dean, and the EET Industry Advisory Committee began to analyze the EET AS and Certificate program offerings. Through this analysis it became clear that there was a significant overlap between specific courses required for most degree patterns.

In consultation with members of the EET Advisory Committee, a presentation was constructed to identify where courses overlapped degrees and certificates. Shortly after the last IPPR, the EET Advisory Committee met in Cuesta's Power Electronics Laboratory

(4501-D) when the pros and cons of maintaining or modifying the (then) existing programs of instruction were discussed. Using power point, course requirements were superimposed over degree/certification requirements.

The unanimous conclusion was that there was not a significant difference between several degree and certificate requirements at the time. As such, the committee voted to maintain the following patterns: A.S. in Electrical Technology, C.A. in Electrical Technology (subsequently changed to C.A. Electronics and State Electrician), and the C.S. in Power and Instrumentation.

AS degrees and certificates that fell into the "overlap" category were slated for deactivation without objection. This was partly due to the fact that our system at Cuesta allows for the reinstatement of any deactivated course or degree/certificate pattern within three (3) years. This 3-year window allowed the EET program, EET students, and employers to test these significant changes and confirm if they constituted viable improvements to the EET program.

C. Include significant changes/improvements since the last Program Review

1. All EET degrees and certificates were deactivated with the exception of the following:
    a. AS in Electrical Technology
    b. CA in Electronics and State Electrician
    c. CS in Instrumentation and Control
2. During the past 6 months the AS in Electrical Technology has been modified into a dual track Associates Degree.
    a. Track 1 is the Electrical Technology AS option and is identical to the former Electrical Technology degree with the exception of a 2-unit reduction. EET-119 (State Electrician Trainee Topics) was removed from the degree pattern reducing the degree by 2 units. Tract 1 requires 31 units of CTE courses in addition to general education courses.
    Complete CTE degree pattern shown below, tract 1 and 2.
    b. Track 2 is the Nuclear Technology option. This option requires 3 core electrical technology courses (Electronics Fundamentals, 6 units - Industrial Electronics, 4 units - Power Systems and Rotating Electrical Machinery, 4 units). Additionally, 4 nuclear courses and 2 elective electrical technology courses are required. Tract 2 requires 36 units of CTE courses in addition to general education courses.
    Complete CTE degree pattern shown below, tract 1 and 2.

Electrical Technology A.S. (Dual Tract – Electrical or Nuclear)

Required Courses (14 credits)		Units
EET 213	ELECTRONICS FUNDAMENTALS	6
EET 224	INDUSTRIAL ELECTRONICS	4
EET 267	POWER SYSTEMS AND ROTATING ELECTRICAL MACHINERY	4

Choose one of the following tracks :

Electrical Technology Track (17 credits)		Units
CTCH 163	CONSTRUCTION MANAGEMENT	3
EET 169	RESIDENTIAL WIRING	3
EET 181	NATIONAL ELECTRICAL CODE	3
EET 183	COMMERCIAL AND INDUSTRIAL WIRING SYSTEMS	4
EET 228	PLC AUTOMATION AND SOLAR MONITORING	4

Nuclear Maintenance Track (22 credits)		Units
EET 227	FLUID AND PNEUMATIC TECHNOLOGY	4
EET 257	COMPUTER INSTRUMENTATION AND CONTROL	4
EET 270	NUCLEAR POWER PROCESSES FOR TECHNICIANS	3
EET 271	NUCLEAR POWER FUNDAMENTALS	3
EET 272	NUCLEAR SYSTEMS MAINTENANCE I	4
EET 273	NUCLEAR SYSTEMS MAINTENANCE II	4

Total Units	**31 - 36**

It should be noted that the dual tract associate degree is designated as an AS in Electrical Technology regardless of the specific tract a student pursues. This was decided by mutual agreement between the Electronic and Electrical Technology (EET) Department, the Dean, and the Curriculum Committee.

ELECTRONICS AND STATE ELECTRICIAN Certificate of Achievement

This certification program presents a broad range of topics that will enable students to gain the skills and knowledge necessary to install, maintain and troubleshoot a variety of electrical and electronic control systems. These include residential wiring, commercial/industrial wiring and cabling, national electric code, troubleshooting and maintenance, motor controls and programmable logic controllers. The National Science Foundation (NSF) and local industry awarded significant grants and resources to construct three (3) separate Cuesta laboratories: a state-of-the-art polyphase power and control laboratory, a computer and network cabling laboratory, and a large all purpose wiring laboratory. The program provides students with theory and "hands-on" practical experience related to all aspects of electrical, transformer, and controls technology. Prior knowledge of electronics and the electrical trade is not required: however, successful students will master the skills required for success in the electrical trades and related electrical and electronic industries listed under "career opportunities".

CALIFORNIA STATE APPROVED ELECTRICIAN PROGRAM:

California law requires that any individual working for an Electrical (C-10) Contractor be certified as an "Electrician Trainee", "Residential Electrician" or "General Electrician" by the California Division of Labor Standards Enforcement (per. 108-108.5 CLC). The Electrician Trainee Program in Cuesta's Electronic and Electrical Technology (EET) Department is the only fully certified non-union program within over a 100 mile radius of our main campus. Upon enrollment in one or more of the program courses, students will be able to immediately apply for their Electrician Trainee Certification number/card and legally work for contractors. After completion of the certificate, students will be eligible to take the California "General Electrician" and /or "Residential Electrician" Exam(s).

Career Opportunities in Electronics & Electrical Tech

Electrical Engineering Technologist, Industrial Electrician, Commercial Electrician, Utility Line Worker, Electronics Engineering Technologist, Electro-mechanical Technician, Electrical Inspector, Electrical Maintenance Technician, Quality Assurance Specialist (Electro-mechanical and/or Electronics), Solar Technician, Solar Installer, Utility Emergency Service Technician, Utility Line-Worker, Power Plant Electrician, Power Plant Control Room Operator, Environmental Engineer, Cathodic Protection Technician, Utility Electrical Mechanic, Electrical Crew Foreman, Utility Power Plant Superintendent, Electrical (C-10) Contractor

Required Courses (40 credits)

CTCH 163	CONSTRUCTION MANAGEMENT	3
EET 169	RESIDENTIAL WIRING	3
EET 181	NATIONAL ELECTRICAL CODE	3
EET 183	COMMERCIAL AND INDUSTRIAL WIRING SYSTEMS	4
EET 213	ELECTRONICS FUNDAMENTALS	6
EET 224	INDUSTRIAL ELECTRONICS	4
EET 228	PLC AUTOMATION AND SOLAR MONITORING	4
EET 267	POWER SYSTEMS AND ROTATING ELECTRICAL MACHINERY	4
EET 119	STATE ELECTRICIAN TRAINEE TOPICS	4
MATH 127	INTERMEDIATE ALGEBRA	5
Total Units		**40**

POWER AND INSTRUMENTATION CERTIFICATE Certificate of Specialization

This certification program was developed at the request of the Electronics and Electrical Technology (EET) Industry Advisory Committee. The specific coursework allows working professionals the opportunity to gain new or expanded expertise in their field for promotions, transfers, or alternate employment. Additionally, this certification provides more advanced coursework options for entry level EET students once they complete their basic coursework. Students pursuing their Associate in Science degree in Electrical Technology or the State Electrician Certification, typically find they have completed all or most of the requirements for this Certificate of Specialization.

Most of the courses in this program are offered at night on Cuesta's main campus to allow students to complete the program without adjustments to their daily work schedule. Additionally, we find that students and employers are pleasantly surprised to find the level of quality and sophistication in Cuesta's state-of-the-art power/control and wiring laboratories. These laboratories were primarily funded by significant grants from the National Science Foundation (NSF) and create a true "hands-on" learning environment.

Career Opportunities in Electronics & Electrical Tech

Electrical Engineering Technologist, Industrial Electrician, Commercial Electrician, Utility Line Worker, Electronics Engineering Technologist, Electro-mechanical Technician, Electrical Inspector, Electrical Maintenance Technician, Quality Assurance Specialist (Electro-mechanical and/or Electronics), Solar Technician, Solar Installer, Utility Emergency Service Technician, Utility Line-Worker, Power Plant Electrician, Power Plant Control Room Operator, Environmental Engineer, Cathodic Protection Technician, Utility Electrical Mechanic, Electrical Crew Foreman, Utility Power Plant Superintendent, Electrical (C-10) Contractor

Required Courses (16 credits)

EET 227	FLUID AND PNEUMATIC TECHNOLOGY	4
EET 228	PLC AUTOMATION AND SOLAR MONITORING	4
EET 257	COMPUTER INSTRUMENTATION AND CONTROL	4
EET 267	POWER SYSTEMS AND ROTATING ELECTRICAL MACHINERY	4
Total Units		**16**

NUCLEAR ENERGY SYSTEMS Certificate of Specialization

This PG&E sponsored nuclear energy training program is based on guidelines set forth by the Nuclear Training Institute's (NEI) Nuclear Uniform Curriculum Program (NUCP). The two key goals of the program are to develop a pool of trained nuclear energy technicians, and to provide a career pathway for students and technicians to gain employment at PG&E or any nuclear power plant nation-wide.

In addition, students are introduced to the basic concepts, technology, and processes associated with the production of electrical power by general steam driven turbine systems.

Career Opportunities in Electronics & Electrical Tech

PG&E anticipates that during the next ten years, approximately 50% of their workforce at the Diablo Canyon Power Plant will retire. As RCNET (see below) points out, due to an aging workforce, international competition, and natural attrition, the nuclear industry in the United States is experiencing unprecedented workforce demands. Over the next two decades, nuclear workforce needs will exceed the current pool of trained personnel. Current training platforms are not scaled to meet this need which puts both the industry and our nation at risk. By 2030 the industry will need 41,000 trained nuclear power plant technicians nationwide. The Regional Center for Nuclear Education & Training (RCNET) is a National Science Foundation (NSF), Advanced Technology Education (ATE) program established to ensure that the demand for skilled nuclear technicians is met in a standardized and systematic way. It also provides career pathways for students and technicians and is a central point of contact for career assistance.

Required Courses (16 credits)

EET 213	ELECTRONICS FUNDAMENTALS	6
EET 267	POWER SYSTEMS AND ROTATING ELECTRICAL MACHINERY	4
EET 270	NUCLEAR POWER PROCESSES FOR TECHNICIANS	3
EET 271	NUCLEAR POWER FUNDAMENTALS	3
Total Units		**16**

D. List current and/or new faculty, including part-time faculty

Current Staff and Qualifications:

Name	Education	Occupation/Specialization
Bret Allen	BSEE	Lead Faculty / EET-Specialization: Power / Electrical Contracting Technology/ Instrumentation & Electrical - Electronic Controls, Criminal Justice Department Faculty – Captain (Ret, s/r) LASD
Chris Akelian	MSEE	Full-Time Faculty / EET- Specialization: Programmable Logic Controllers. Computer and Network Technology Department (Lead Faculty)
Alen Ross	Ph.D EE	Full-Time Faculty / ETT– Specialization: Electrical Technology A.S. Nuclear Technology Track, Engineering Department Faculty
Richard Goldsmith	BSME	Adjunct Faculty / Senior Engineer – Trust Automation, Inc. /ETT– Specialization: Industrial Electronics
Mike Fontes	BSET	Full-Time Faculty (Tenure Track) / EET-Specialization: Fluid and Pneumatics, Basic Electronics Laboratory. SLO County Deputy Welding Inspector, Welding Department Faculty
Randy Canaday	BA	Adjunct Faculty / ETT– Specialization: Electrical Contracting Technology (Residential, etal) - Paso Robles High School, CTE Faculty - Credentialed

D. Describe how the Program Review was conducted and who was involved

Bret Allen (Lead Faculty, EET Department) did the first pass on the review. Data was collected and analyzed from various sources including online searches of State workforce websites, Cuesta Matriculation data, data collected from our division wide survey, CurricuNET, etc. The EET Advisory Committee was also involved in the Program Review via meeting and follow-up telephone discussions. Subsequently, Chris Akelian, Alan Ross, Mike Fontes and Randy Canaday were solicited for input and assessed the program review for input.

II. PROGRAM SUPPORT OF DISTRICT'S MISSION STATEMENT, INSTITUTIONAL GOALS, OBJECTIVES, AND/OR INSTITUTIONAL LEARNING OUTCOMES

A. Identify how your program addresses or helps to achieve the District's Mission Statement.

The EET program consistently strives to improve meeting the needs of our students and community. We are committed to be an inclusive department to meet the needs of new students, re-entry students, minority students, DSPS students, working students, and veterans.

The department predominantly offers courses in the late afternoon and evenings to accommodate the educational needs of the vast majority of students pursuing their state electrician certification and other electrical/electronic technology educational and placement goals. Although the majority of our student base secure placement in industry prior to or upon degree/certificate completion, we integrate the necessary core competencies into our curriculum for students seeking transfer to an electronic/ electrical technology or related four–year institution.

Through feedback from the community, local industry, and our advisory committee we are consistently reminded of the importance of fostering both technical competency as well as soft skills through our curriculum and instruction.

Our department faculty focus to establish and improve foundational skills, character building, cultural awareness, self respect and respect for others. We emphasize the value and importance of completing and earning certificates and degrees in light of the fact that many of our students find placement opportunities prior to completing requirements for certificates and/or degrees.

Through face-to-face laboratories, oral quizzes, group experiments and other opportunities for one-on-one, instructor – student interface our faculty strive to emphasize the importance of personal and professional growth to expand our students opportunities in the workplace and to become conscientious members of society beyond technical competency.

Our department positively encourages students to participate in on and off campus programs such as SkillsUSA, habitat for humanity, student governance, etc. to better position themselves for success and growth in the workplace and community.

As one tangible example of our departments commitment to the foregoing; the EET Department successfully recruited 11 students to participate in the SkillsUSA regional competition during Spring-2017. We were advised that this is the highest level of regional participation from a single CTE department in the history of Cuesta thus far.

Over 9 of the mentioned students are advancing to the state competition in San Diego.

B. Identify how your program addresses or helps to achieve the District's Institutional Goals and Objectives, and/or operational planning initiatives.

The EET program is designed to train re-entry students as well as all other types of students interested in seeking employment, promotion, or lateral transfer in the electronics or electrical field. Our primary function in supporting institutional goals, objectives, and/or operational planning initiatives is in placing community members into jobs. The specific jobs we train students for are entry level, intermediate, and high technology jobs, which require extensive safety training. As such, the vast majority of employment is found in "career oriented" jobs. These typically are high paying, high benefit, and ongoing training positions.

Additionally, the EET program is the only state certified electrician trainee entity within over 100 miles of the San Luis Obispo campus. Students who enter our program become immediately eligible for their Electrician Trainee Certification through the California's Division of Labor Enforcement (DLE). Under California labor code section 800 – 800.5, individuals working for electrical (C-10) contractors or other companies who regularly install electrical infrastructures subject to building and safety inspection must possessing a valid Electrician Trainee Certification card to legally work in California unless they are a licensed electrical (C-10) contractor or possess a full Journey-Person certification through the DAS. Journey-Person certification requires successful completion of a DAS certified trainee program, passing the state electrician examination, and 5000 hours of OJT experience for residential work, or 8000 hours of OJT experience for commercial/industrial electrical work.

Most of our students eventually find substantial companies where they can develop their careers. This includes AS graduates., certificate awardees, and in most cases our students are employed before they complete their program of instruction. This trend results in less degrees and certificates awarded than the EET Department, advisory committee, or institution believe are in our students long-term best interests. Later in this report this trend and corresponding data is discussed in detail in addition to strategies that are currently being implemented with the goal of awarding more degrees and certificates to our students who are eligible for them.

This is how in-demand these positions are, even with only intermediate training in some cases.

C. Identify how your program helps students achieve Institutional Learning Outcomes.

San Luis Obispo County Community College District Institutional Learning Outcomes

ILO 1. Personal, Academic, and Professional Development

Through our faculty and support staff's efforts to maintain a robust state certified electrical and electronic technology program, our department enjoys the distinction of being the only entity in the county which is certified as a general electrician trainee institution. The general electrician trainee status is the highest level of non-union electrical certification possible in the state of California.

Through our department wide pedagogy we offer practical robust curriculum that promote academic and professional development for all of our students. Our faculty continually seek innovative methods to assist our students in recognizing and demonstrating the skills and behaviors that promote academic competency, excellence, and professional development.

Through weekly lectures, laboratories, and online learning opportunities we focus on demonstrating the professional skills that are necessary for placement with career oriented employers. Through extracurricular educational options such as SkillsUSA, we emphasize the value and importance of “going the extra mile” to promote trade and academic excellence. We emphasize the importance of soft skills to employers and the importance of personal health and mental well-being in order for our students to reach their full potential.

ILO 2. Critical Thinking and Communication

Our department faculty continually emphasize that in order for our students to best prepare themselves for trade and/or academic excellence they should strive to be able to explain what they have learned in a clear and concise manner. This requires students to assess and evaluate their thinking and problem solving processes as well as those of other individuals they interact with.

Proficiency in electrical and/or electronics technology requires the ability to analyze and communicate relatively complex subject matter (electricity) in a clear and logical way. We also work to emphasize the importance of character, integrity, and teamwork to satisfy the highest expectations of current or future employers.

ILO 3. Scientific and Environmental Understanding

Our faculty emphasize that understanding electrical and/or electronic technology is largely based on familiarity with the scientific method, the ability to predict electrical phenomenon which can then be demonstrated and observed during laboratory experiments.

We also continually emphasize that electrical/electronic technology inherently requires the ability to analyze technical information and communicate with team members with a practical but formal symbolic set of skills. We also heavily emphasize the uncompromising need to understand and utilize safe work practices. Students quickly learn that in order to practice their trade successfully, it is essential to assess and manage their actions and the need to clearly communicate with others in order to be in control of their work environments.

Electrical technology is inherently tied to physics, the scientific method, and the ability to interpret and analyze technical information. In our program we emphasize the importance of mastering basic technical theories and industry standards in order to be successful in this field.

The more diverse and technically fluent a student can strive to become, the more value they will have to offer current or future employers. Additionally, many electrical technology trades and employment opportunities require that students become knowledgeable and proficient with equipment, computers, and software.

ILO 6. Technical and Informational Fluency

In our program, we emphasize that becoming fluent with a wide variety of practical PC software will enable them to better report and communicate their work and projects to and with their employers. We also emphasize the importance of diverse written communication. Industry guest speakers very typically emphasize that and inability to fluently communicate verbally and in writing may limit their promotability.

III. PROGRAM DATA ANALYSIS AND PROGRAM-SPECIFIC MEASUREMENTS

Program data is available on the SLOCCCD Institutional Research and Assessment Program Review Data Dashboard site. The Dashboard components are hyperlinked below; just click on "enrollment" or other category below.

General Enrollment (Insert Aggregated Data Chart)
Disaggregated Enrollment Data (review analytically to determine if different populations are impacted)

- List the previous year's projection and current year's projection for enrollment *(i.e. increase, decrease, remain the same)*.

For 2014 - 2015 the EET department was 0.83% below the college average and 46.94% above the EET Department average. This increase for the 2014 – 2015 academic year for the department is attributed to more uniform compliance with non-union licensed electrical contractors (C-10's) to labor code sections (800 - 800.5) requiring that licensed electrical contractors hire only individuals with electrician certification through the California Division of Labor Enforcement (DAS).

Several contractors within San Luis Obispo County have received fines from surety bonding companies as well as other enforcement entities. This has resulted in electrical contractors predominantly hiring DAS Certified Electrician Trainees. Due to the fact that Cuesta College has the only DAS certified program for Electrician Trainees within over 100 miles of our main campus, the EET program continues to attract new students seeking certification and other electrical and electronic training opportunities. Hence, the 46.94% increase in enrollments for the 2014 – 2015 academic year.

For 2015 - 2016 the EET department was 1.88% above the college average and 13.43% below the EET Department average.. This decrease for the 2015 – 2016 academic year for the department is 27.21% above the 2013 – 2014 average. We primarily attribute 13.43% decrease for the 2015 – 2016 academic year to the electrical construction industry and the recruitment of many students (who had been issued their DAS electrician trainee certifications) by area contractors. Numerous students who were taking intermediat and/or advanced EET courses during 2013 – 2014 accepted full-time employment with area electrical contractors and suspended or reduced their course loads during 2015 – 2016 while working full time and in the probationary phase of their new employment.

Enrollment is projected to increase in the Electrical Technology program (projection ~ 10%+) through DAS and labor code requirements, SkllsUSA, word-of-mouth advertising, program improvements and industry networking.

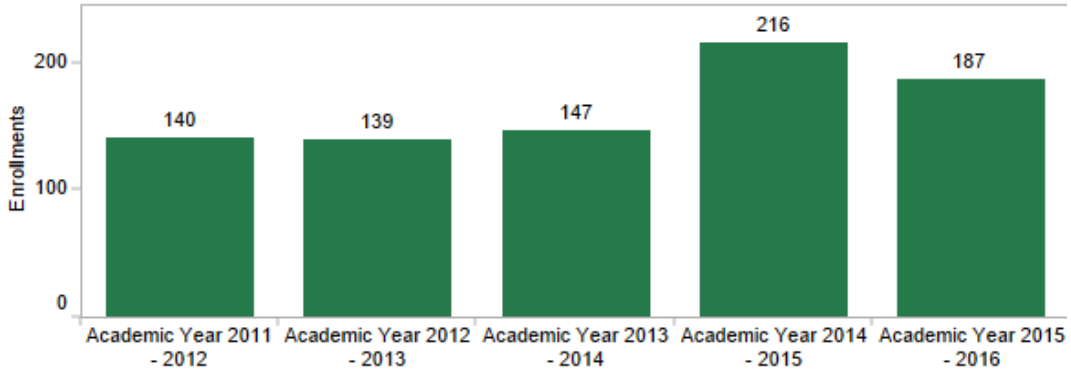
Refer to the bar graphs on the following page.

SLOCCCD Program Review Data - Enrollment

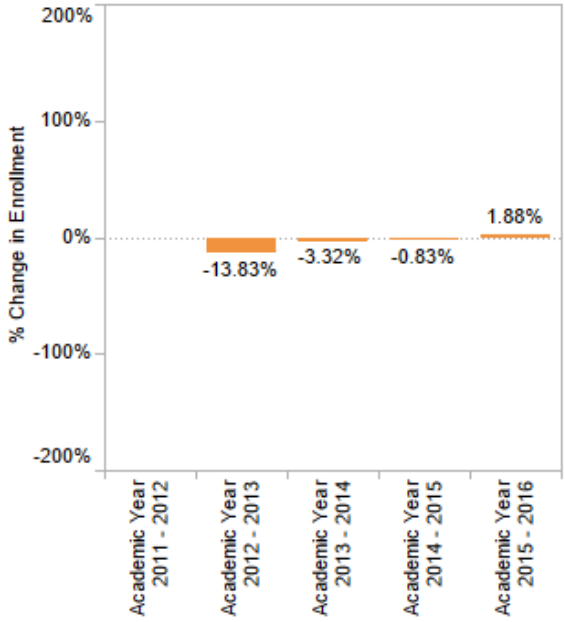
Department: Electronics & Electrical Tech

Course: Multiple values

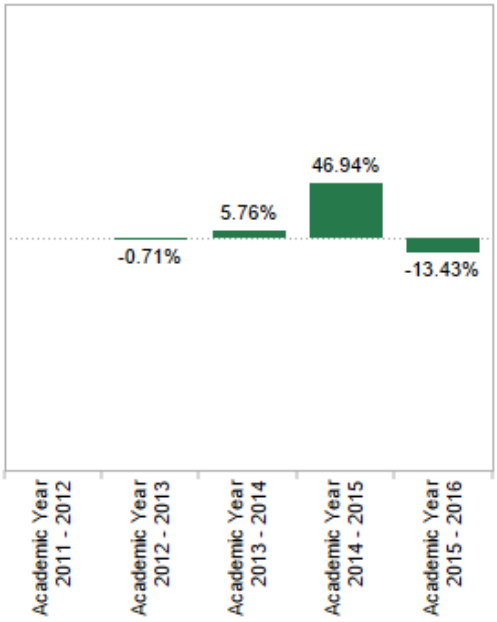
Electronics & Electrical Tech Enrollments



% Change - Overall College Enrollments



% Change - Electronics & Electrical Tech



Enrollment: Duplicated count of students who completed greater than 0 units in positive attendance courses or were present on census for all other accounting methods.

- List the trend (*i.e. increasing, decreasing, same).*

As with the pattern across the campus, fill rates have been decreasing due to the school's need to maximize FTE's. Fill rates in EET have remained relatively steady since 2012 - 2013. We mainly attribute this to the DAS Electrician Trainee certification program as well as the states requirement for continuing education for journey level electricians who have attained their full general and/or residential certification(s).

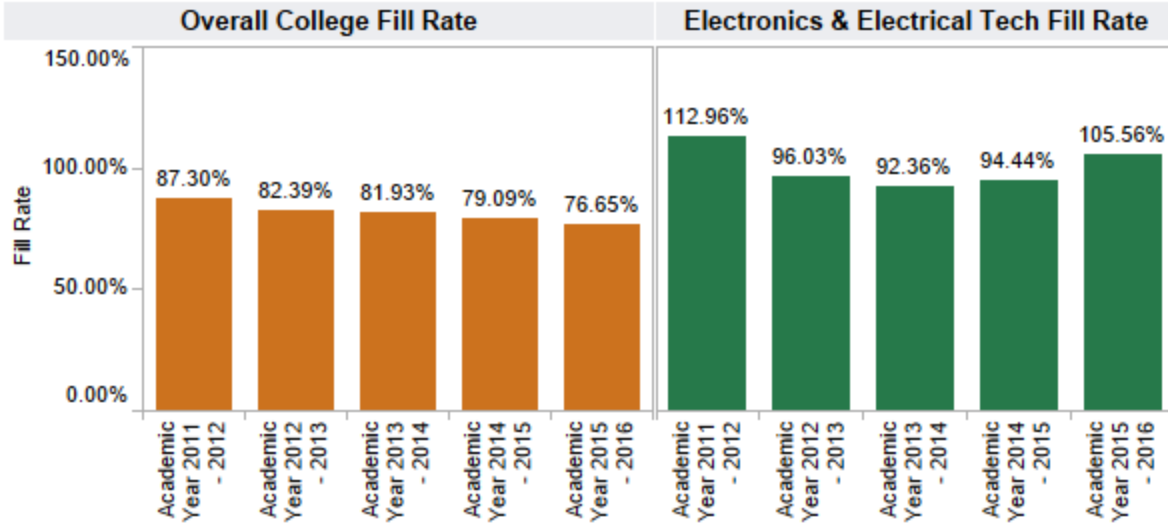
This has resulted in relatively full sections of most EET courses since the 2002 – 2003 academic year. During the 2015 – 2016 academic year the EET student demand (fill rate) increased to 115.56% the highest sense 2011 – 2012.

Refer to the bar graphs on the following page.

SLOCCCD Program Review Data - Student Demand (Fill Rate)

Department:
Electronics & Electrical Tech

Course:
Multiple values



Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately. Also, courses with zero class limits are excluded from this measure.

- List contributing factors to the trend.

  During the past 5 academic years the average EET Fill Rate has been 102.25%. In comparison, the overall college fill rate during the past five academic years is 81.47%. The primary contributing factors to this trend appears to clearly be the demand for state certified electrician trainees, the fact that Cuesta's EET program is the only state certified program in the San Luis Obispo County and within over 100 miles of our main campus. Additionally, the demand for certified applicants and the corresponding shortage of qualified personnel has resulted in entry-level pay averaging $15-$18 per hour.

  Typically, certified electrician trainees are averaging in excess of $20 per hour after approximately 14 months of experience with local electrical contractors and other area employers seeking the skill sets that the vast majority of our students possess and/or are developing. Some of the larger area employers (e.g. PG&E) hire qualified entry-level employees at over $29 per hour. Most area employers who recruit our students offer overtime hours to new employees who have successfully completed their probationary period.

- Are different demographic groups underrepresented in your enrollment figures? What might be causing this? How can it be addressed?

  The electrical contracting trade as well as area employers seeking the skill sets embedded in the EET program have historically been dominated by males (including minority males) due to the nature of typical day-to-day work tasks as well as an industry cultural tradition.

  Over the past several years, we have seen a marginal increase in female students interested in electrical and electronic technology. Female students seem to be less drawn to electrical technology due to a pseudo-stereotyping that women cannot perform day-to-day tasks at the same rate as their male counterparts. Additionally, many females who have inquired to department faculty about the academic technical demands of the program and have expressed some reluctance to pursue a career in electrical/electronic career opportunities.

  This is currently being proactively addressed by encouraging female students enrolled in the EET program to participate in various campus and industry outreach programs directed at encouraging females to pursue rewarding careers in electrical/electronic technology. As the lead EET instructor I regularly discuss the distinct advantages for females who pursue education and employment in electrical/electronic technology. I work to encourage female students by informing them that (as a group) they tend to be in the top 10% of the program courses academically. Additionally, I informed them that in general, they possess a distinct advantage over their male counterparts with employers due to equal opportunity employment laws and the fact that they tend to perform at a higher academic level than the majority of their male counterparts if they simply commit to learning the material, regular attendance, and seeking faculty assistance whenever needed. I also informed them that in general, employers tend to be very enthusiastic when they find that a female has completed EET coursework and is interested in placement with their organization.

- What strategies will be employed to meet the current year's projection?

  Strategies that will be employed to meet the current year's projection include more aggressive outreach to encourage more students to compete and participate in the skills USA competition, implementing innovative strategies to better advertise and market the EET program to the community.

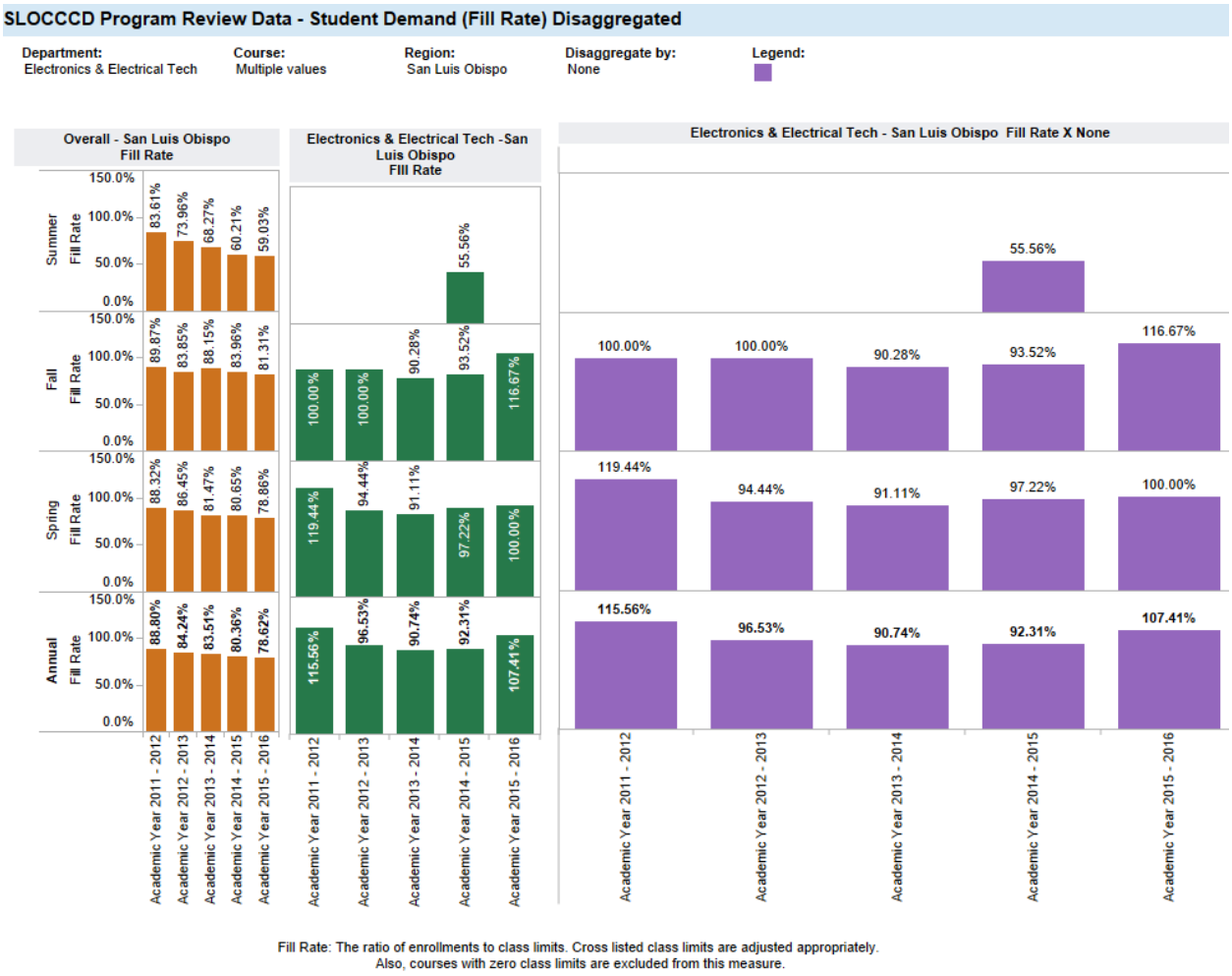
  We will be working to aquire grant resources and industry donations to aquire a used commercial truck and trailor which will be set-up with electrical tools and equipment for both on campus instruction, and off-campus pro bono (pre-approved) instructional work within the community. The truck will potentially serve as a "driving advertisement" for the EET program and Electrician Trainee Certification at Cuesta with professional graphics over the doors, quarter panels, and trailor. The plan is to work in conjunction with the Autobody Department to minimize cost and provide a valueable project for autobody students (all pending administrative approval). Additionally EET labs. will be enhanced with equipment wall displays analogous to the set-up at the local IBEW training center.

  Other strategies will be discussed between EET faculty, the EET Advisory Committee, E&T Division Chair, and CTE Dean.

General Student Demand (Fill Rate) (Insert Aggregated Data Chart)
Disaggregated Student Demand Data (review analytically to determine if different types of courses are impacted)

- List the trend (i.e. increasing, decreasing, same)

The following graph depicts disaggregated student demand/fill rate however is broken down by individual semesters and includes five academic years beginning 2010 – 2011 through and including 2015 – 2016. The trend is very similar to the aggregated data described above with the exception of the summer session for 2014 – 2015. The only course offered during the eight week summer session is the Electronics Fundamentals course (EET-213). Student demand/fill rate data is only shown for the 2014 – 2015 eight-week summer session and is 55.86% for EET as compared to 59.03% for the overall college. The condensed format of the 8-week summer session is obviously significantly more time demanding resulting in the decreased statistics college wide. the trend of all other daggregated student demand data remains similar to the aggregated data as depicted in the bar graph below.



Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately.
Also, courses with zero class limits are excluded from this measure.

- List contributing factors to the trend.

  Factors contributing to the trend are virtually identical to the factors described for the aggregated data above. although exact percentages differ, the trend is analogous.

- List which courses have the highest student demand and which courses have the lowest student demand.

  The courses with the highest student demand are Electronics Fundamentals (EET-213), State Electrician Trainee Topics (EET-119), Power Systems and Rotating Electrical Machinery (EET-267), as well as Commercial and Industrial Wiring (EET-183).

- The courses with the lowest student demand are Fluids in Pneumatics (EET-227), and Computer

  Instrumentation and Control (EET-257). These courses our both electives for the electrical technology track and required courses for the newly created nuclear technology track. These courses are by no means candidates for deactivation as the nuclear technology track which was just approved by the curriculum committee in February – 2017. Additionally, these mentioned

lower demand courses are very popular with local industry, strongly supported by the advisory committee, and typically fill within a small margin of cap.

What strategies do you plan on implement?

We have concluded that the strategy described above as well as growth in the newly created nuclear track will enhance enrollments in the lower enrolled courses (2).

General Efficiency (FTES/FTEF) (Insert Aggregated Data Chart)
Disaggregated Efficiency Data (review analytically to determine if different types of courses are impacted)

The EET Departments overall efficiency (FTES/FTEF) increased from 12.48 (2012 – 2013) to 13.65 (2013 – 2014), our overall efficiency for 2014 – 2015 decreased to 11.69, then 11.52 for 2015 - 2016. **In discussions with our accreditation consultant (hired by Dr. Stork)** and upon review of student demand and retention by the Lead EET Instructor (Bret Allen), there appeared to be inconsistencies between Department data and institutional data for the only EET course taught in the D.E./Hybrid Modality, Electronic Fundamentals (EET-213, 6.0 units). As per the Program Review Data – Department Level Successful Course Completion section of this report shows, the successful course completion for the only online course taught in the EET Department was 77.19% in Fall-2011 then sharply dropped to below 42.86% for Fall and Spring of 2012. Then in 2015 successful course completion under the D.E./Hybrid Modality sharply jumped to 92.13%. There is no reported data for successful course completion under the D.E./Hybrid Modality for 2013 or 2014 and the D.E. data for fall-2011 appears to be in error.

Institutional data shows successful course completion for face-to-face courses in 2013 at 87.21% then 90.91% for 2014. Note: There should be DE modality for 2013 and 2014. EET-213 was offered during the fall and spring for 2013 and 2014.

Beginning in the summer of 2013 we began offering the 6.0 unit Electronic Fundamentals course over the 8-week summer sessions. Although attrition during the summer is higher than attrition during the Fall or Spring semesters the course has been popular and clearly meets the needs of students who are unable to manage a 6-unit hybrid course which includes a 1 unit face-to-face lab during the Fall or Spring. The higher attrition of students in the 8-week summer session of EET-213 had some impact in the Department Efficiency dropping to 11.52 during 2014 – 2015.

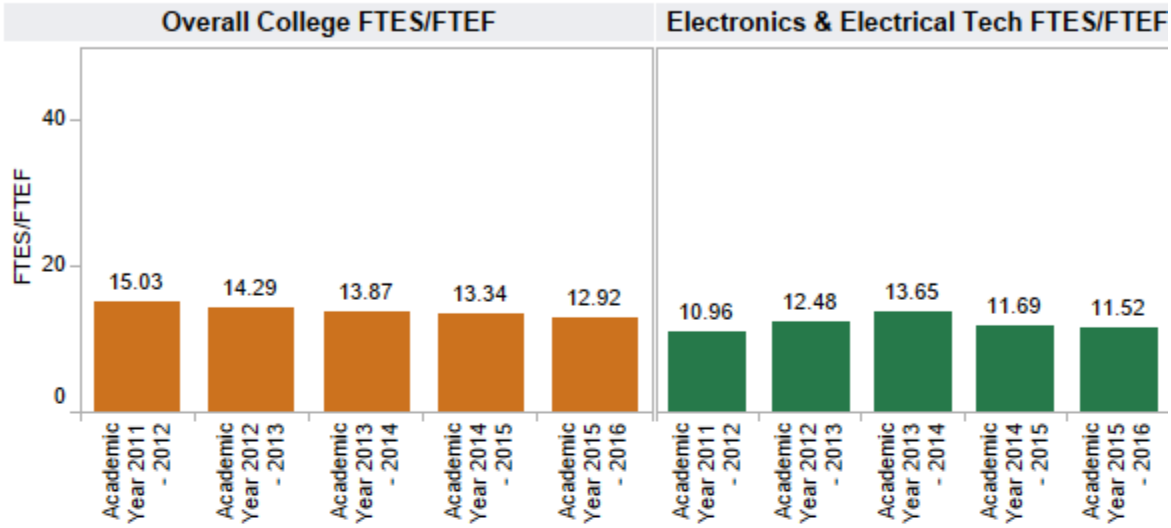
Some clarification on the institutional data for the single online course (EET-213) four 2013, 2014, and 2015 may yield a slightly higher efficiency than the 11.52 shown above for the academic year 2014 – 2015. Evidently, the coding (or other) error has been corrected moving forward.

Refer to bar chart on the following page.

SLOCCCD Program Review Data - Efficiency (FTES/FTEF)

Department:
Electronics & Electrical Tech

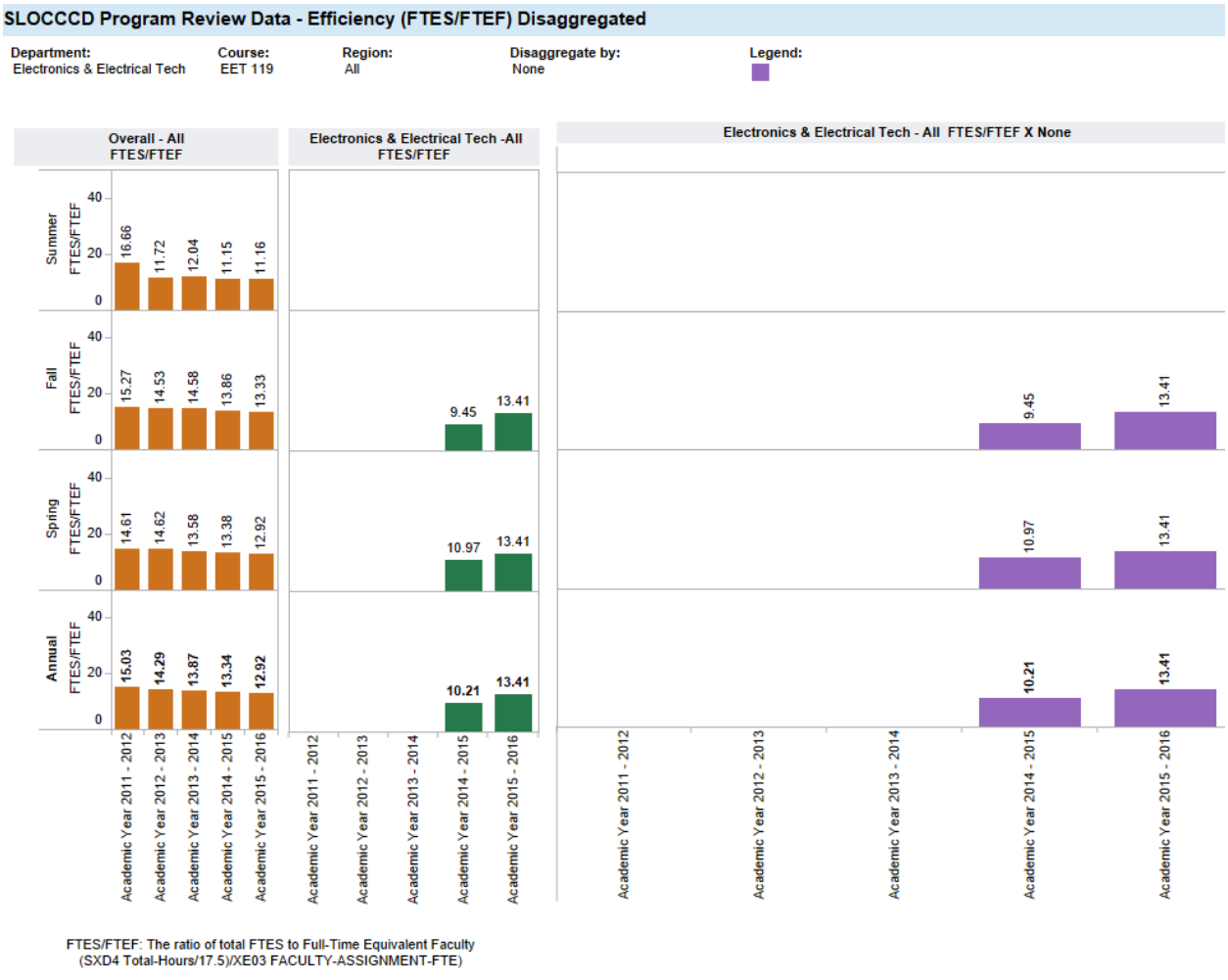
Course:
Multiple values

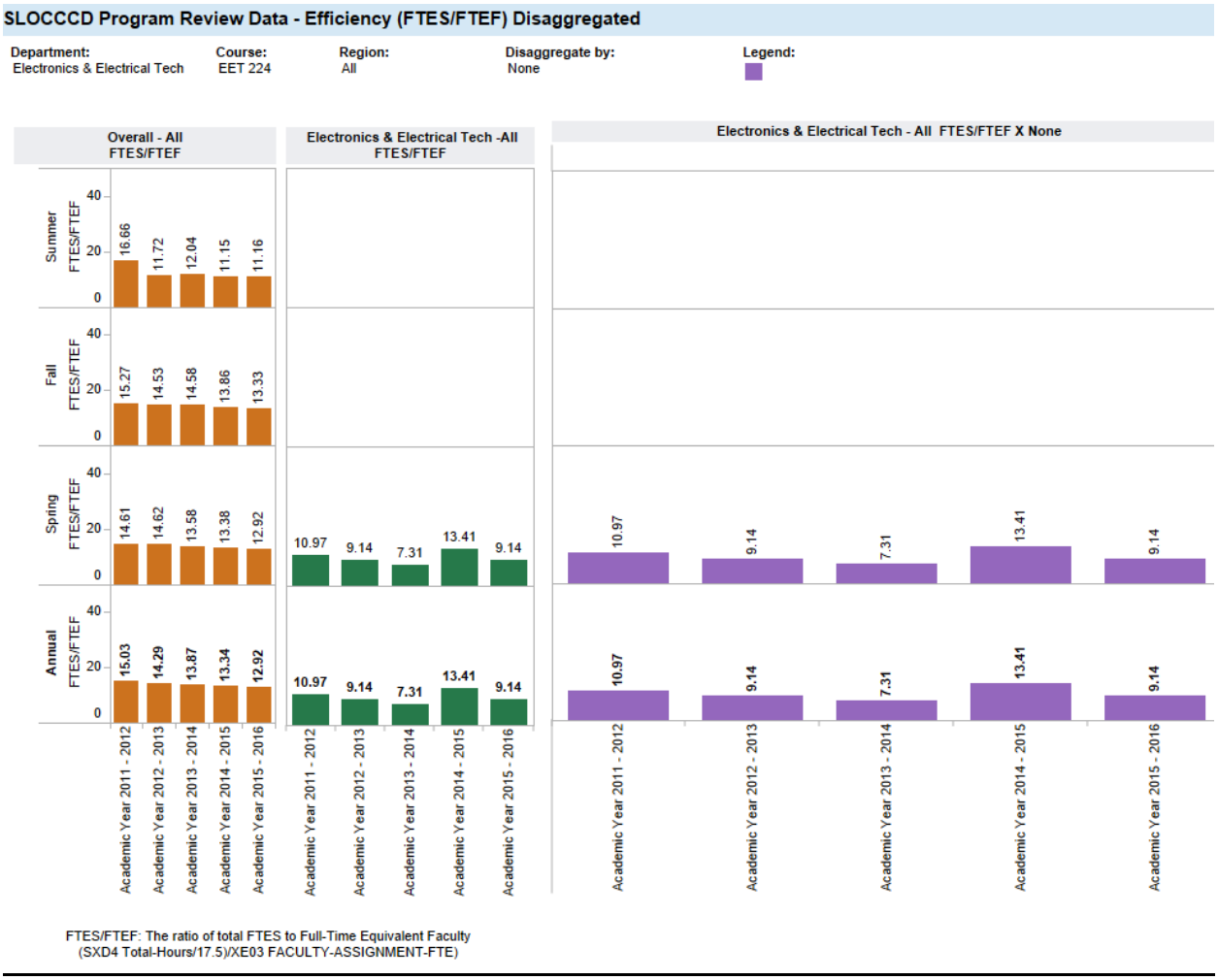


FTES/FTEF: The ratio of total FTES to Full-Time Equivalent Faculty
(SXD4 Total-Hours/17.5)/XE03 FACULTY-ASSIGNMENT-FTE)

The chart below reflects the disaggregated efficiency of EET-119 (State Electrician Trainee Topics). The annual efficiency for fall and spring of 2014 – 2015 was 10.21 where the overall college efficiency during that same time interval was 13.34. The annual efficiency for fall and spring of 2015 – 2016 increased to 13.41 where the overall college efficiency during that same time interval was 13.34. The this is a relatively new survey course that was designed to decrease the total hourly and unit requirement for students to complete their certificate of achievement and become eligible to sit for the state electrician certification examination. The course is becoming better known and understood by EET students.

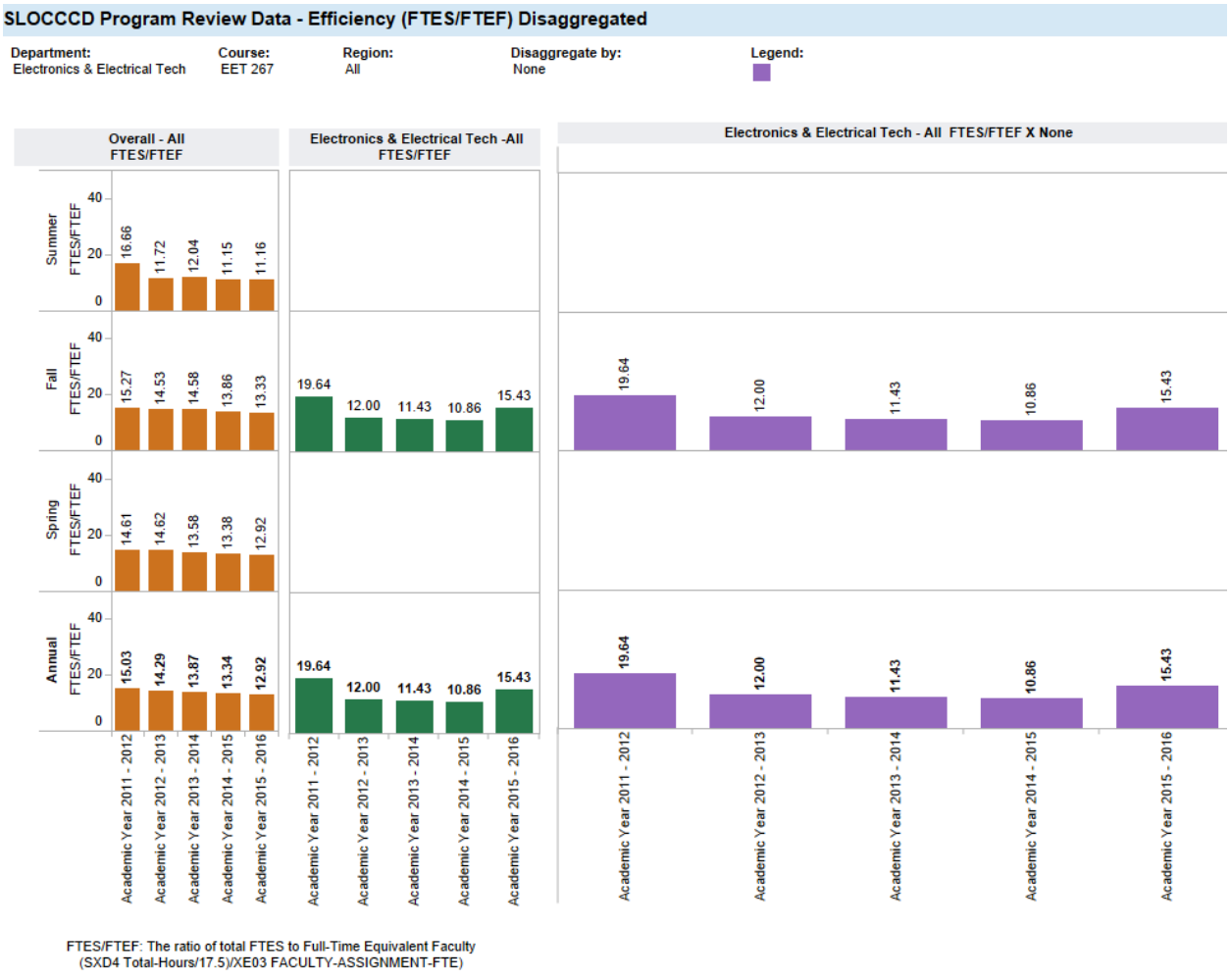
We attribute this efficiency increase to both the "familiarity"issue as well as corse scheduling time changes to better accommodate working students in the program.





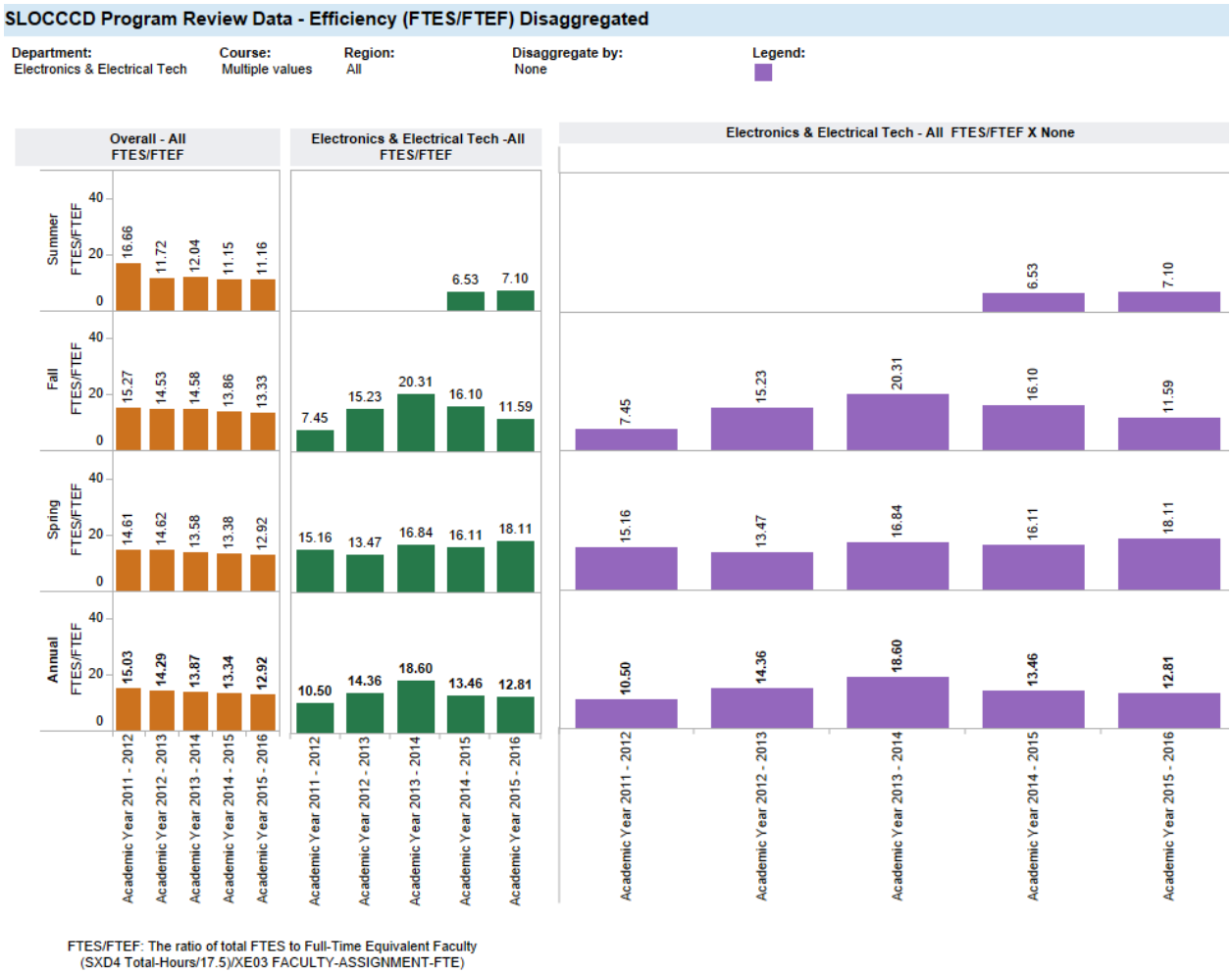
The bar chart above reflects the the disaggregated efficiencies for the course: Industrial Electronics (EET-224). The course is only offered in the spring and the efficiency for the 2014 – 2015 academic year was 13.14 compared to the overall college efficiency at 13.38. In the spring of 2015 – 2016 the course efficiency dropped to 9.1 While the overall college average for that same semester only dropped to 12.92. We attribute the decreased efficiency to the fact that several other courses conflicted with the time and day EET-224 was being offered during the spring of 2015 – 2016 and several students elected to postpone taking the course until the following academic year.

One challenge we face is the fact that the vast majority of students in the EET program work during the day and as such we are forced to schedule the vast majority of courses for the very late afternoon and into the evening. Another issue we face is the fact that all of the electrical programs that were previously listed under Construction Technology have now moved to the EET program (e.g. Residential Wiring, National Electric Code, Commercial and Industrial Wiring). We are in the process of creating a part-time pool of instructors to reduce overlapping courses and work to eliminate course/time conflicts for students. Realistically, it will be very difficult to maintain the very late afternoon/evening program that students and industry demand and simultaneously eliminate any possible overlap. One strategy that has been discussed with department faculty, students, the advisory committee, and others is to offer one or more courses on Saturdays. This option is not very popular due to the fact that many students are working full-time and attending one or more courses during the weekday evenings. Saturday courses could be an option to pilot however, Saturday course efficiencies are anticipated to be unacceptably low and likely not a popular option.



The chart above reflects the disaggregated efficiency of EET-276 (Power Systems and Rotating Electrical Machinery) which is offered every fall semester. This course is popular amongst EET students and will be popular with students in the nuclear technology track as it is a core requirement. Additionally, it is not uncommon for industry professionals seeking CTE credits for re-certification or licensure renewal to take the course. We have also identified other working professionals seeking lateral transfers, promotions, or refresher training for new industry certifications to be enrolled in the course.
The annual efficiency for fall of 2014 – 2015 was 10.86 where the overall college efficiency during that same time interval was 13.34. The annual efficiency for fall of 2015 – 2016 **increased to 15.43** where the overall college efficiency during that same time interval was 12.92.

The course typically fills quickly and we have had discussions with Dean Cascamo about expanding the power laboratory infrastructure to accommodate 2 additional workstations. One of the challenges here in is simply cost as the existing power electronics laboratory was originally funded through the National Science Foundation Regional Consortium and in–kind, equipment, and monetary contributions from PG&E. To the best of our knowledge, the power electronics laboratory is the only polyphase power and controls laboratory of its kind within the California community college system. Some aspects of the laboratory truly rival Cal Poly's power electronics laboratory.



- List the previous year's projection and current year's projection for enrollment *(i.e. increase, decrease, remain the same).*

  During the 2014 – 2015 academic year EET program enrollment was at 216 students. During the 2015 – 2016 academic year enrollments decreased to 187 students. Where are anticipating a marginal increase in enrollments.

- List the trend (*i.e. increasing, decreasing, same).*

  The trend has clearly been a 7.2% decrease between 2014 – 2015 and 2015 – 2016. We are anticipating a 5% increase or better.

- List contributing factors to the trend.

  Contributing factors related to the projection are based on the new nuclear technology tract as well as input from local industry including the advisory committee indicating a growing need for certified electrician trainees and other individuals with the skill sets that generally result from completion of either the certificate of achievement or the Associates of science in electrical technology.

- What strategies will be employed to meet the current year's projection?

  Strategies that will be employed to meet the current year's projection include more aggressive outreach to encourage more students to compete and participate in the skills USA competition, implementing innovative strategies to better advertise and market the EET program to the community.

  As discussed previously, we will be working to aquire grant resources and industry donations to aquire a used commercial truck and trailor which will be set-up with electrical tools and equipment for both on campus instruction, and off-campus pro bono (pre-approved) instructional work within the community. The truck will potentially serve as a "driving advertisement" for the EET program and Electrician Trainee Certification at Cuesta with professional graphics over the doors, quarter panels, and trailor. The plan is to work in conjunction with the Autobody Department to minimize cost and provide a valueable project for autobody students (all pending administrative approval). Additionally EET labs. will be enhanced with equipment wall displays analogous to the set-up at the local IBEW training center.

General Student Success – Course Completion (Insert Aggregated Data Chart)
Disaggregated Success and Completion Data (review analytically to determine if different populations are impacted)

General student success – course completion (overall) for the 2014 – 2015 academic year was 90.91% as compared to the overall college success rate of 78.70%. Over the past five academic years the average course completion rate is 87.71% as compared to the overall college success rate over the past five academic years of 73.44%.

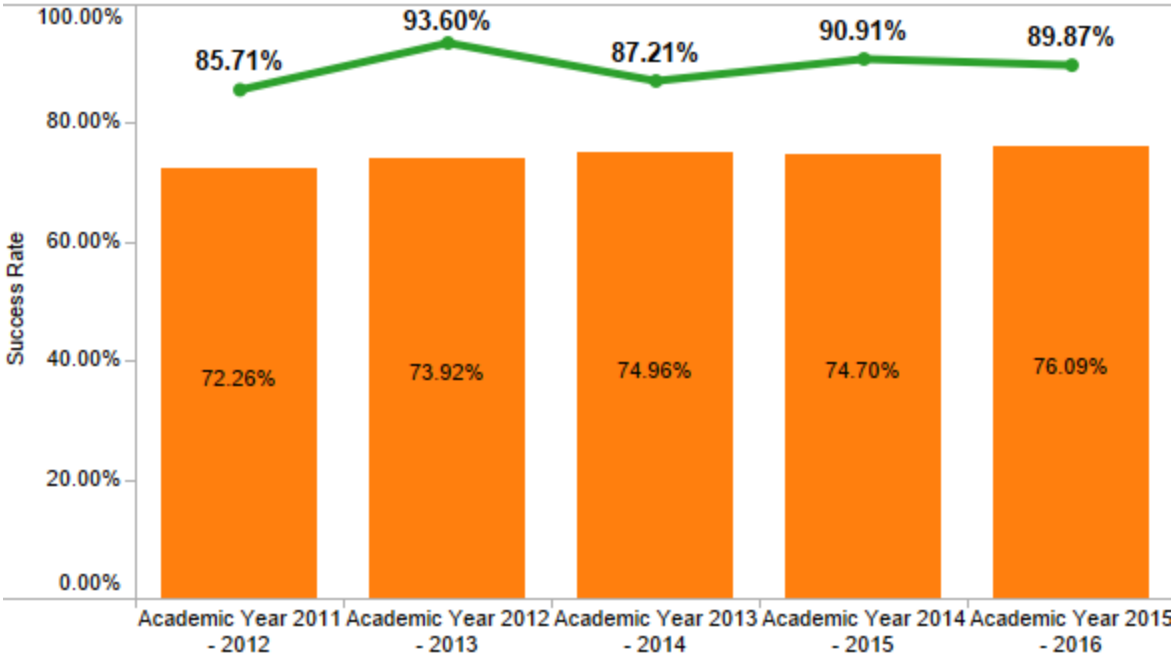
SLOCCCD Program Review Data: Successful Course Completion

Select Department:
Electronics & Electrical Tech

COURSE
All

Legend:
Department Success Rate
Overall College Success Rate

Successful Course Completion - Electronics & Electrical Tech

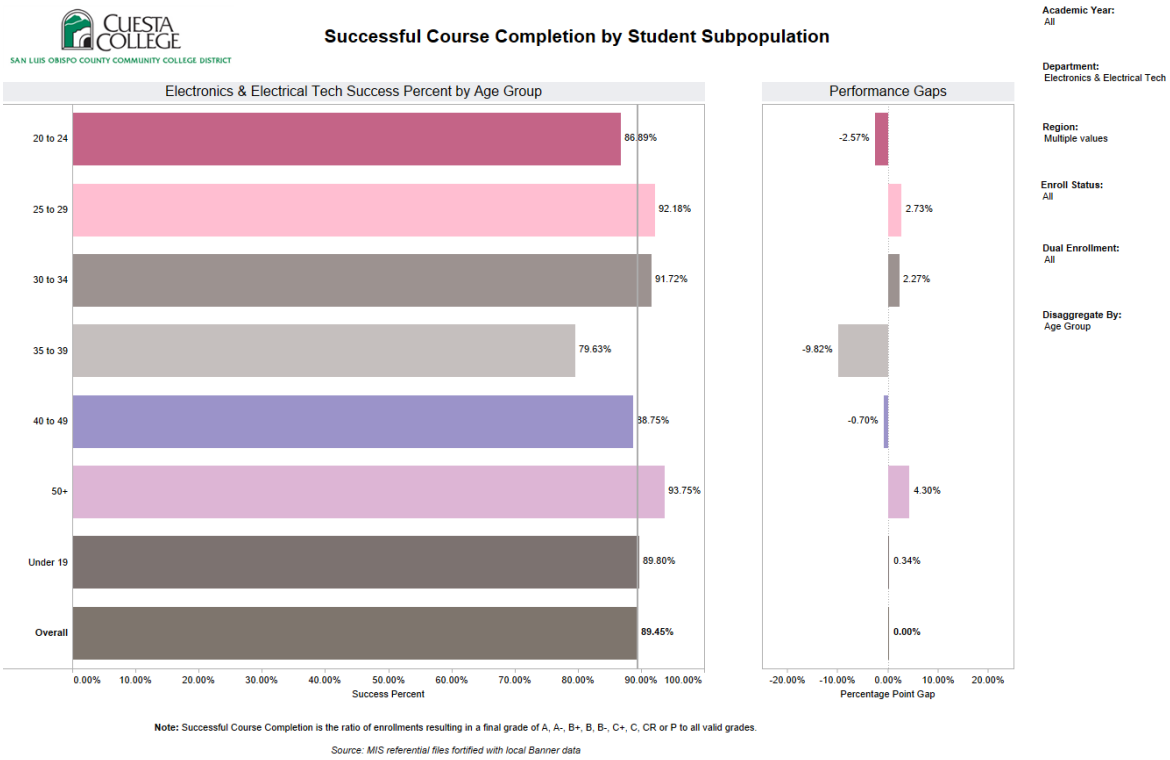


Electronics & Electrical Tech Success Rate Table

	Academic Year 2011 - 2012	Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016
Department Success..	85.71%	93.60%	87.21%	90.91%	89.87%
Total Enrollments	203	172	172	231	227

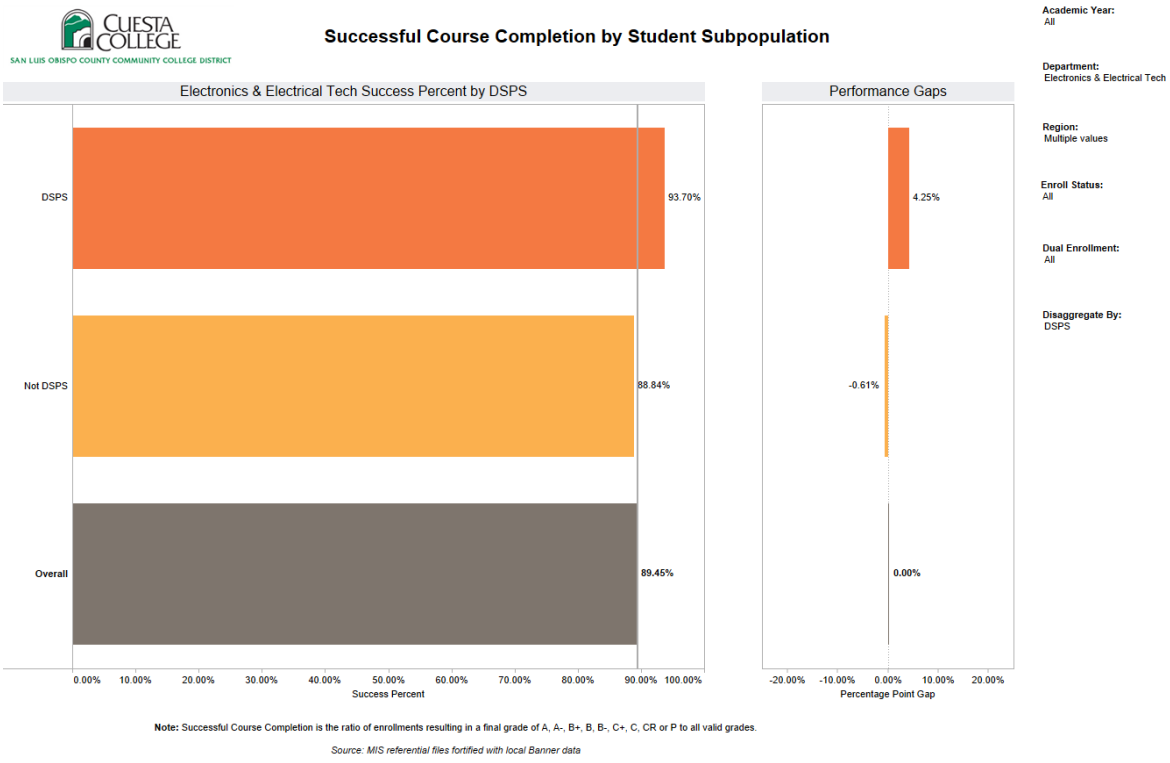
Success: The Percentage of student enrollments resulting in a final grade of "C" or better

By students subpopulation, the only notable performance gap applies to students between students age 35 – 39. this is likely due to this age group being less likely to pursue training for a significant change in the area of work they are currently employed. the other student subpopulation performance gaps depicted in the graph below are relatively negligible.



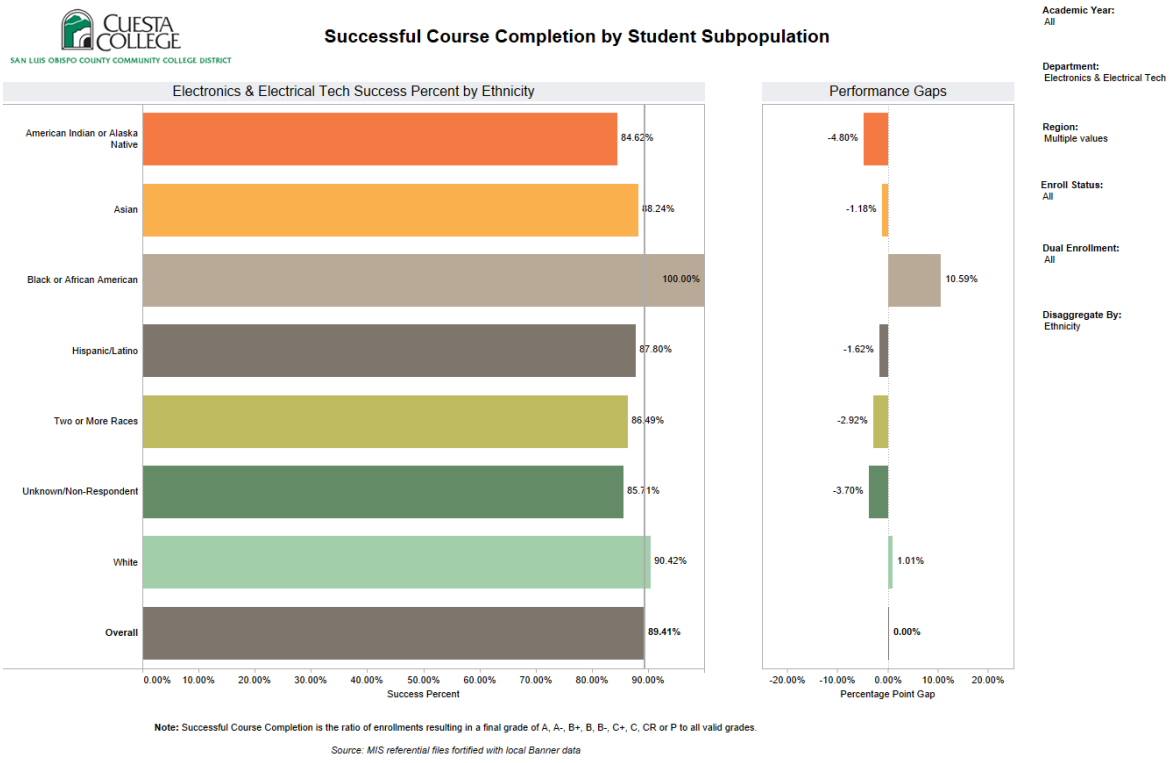
The graph below depicts performance gaps for DSPS versus non-DSPS students. The only noticeable performance gap applies to DSPS students at + 4.25%. Our department faculty focus to be very DSPS accommodating and supportive. We work to identify and assist students with any need(s) for accommodations.

The other student subpopulation performance the gaps our relatively negligible as depicted in the graph below.



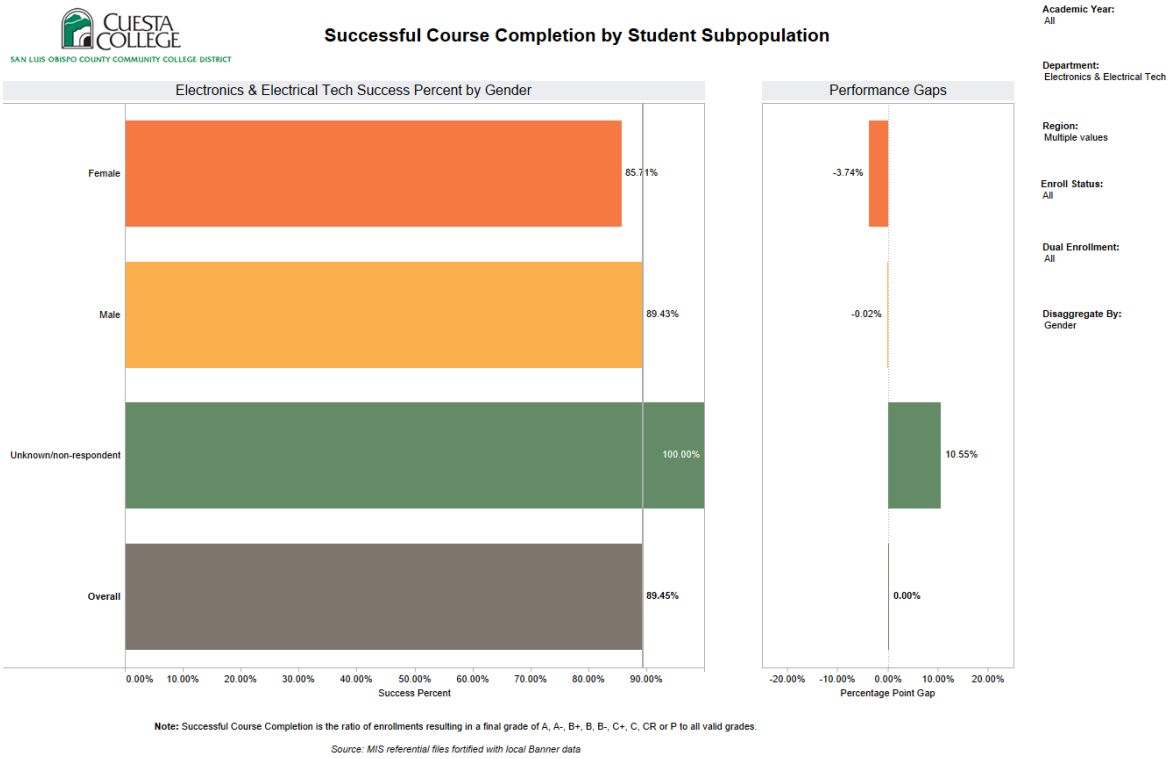
Additional assessment of successful course completion by student population indicates a positive 10.59% performance gap with African-American students. The graph below indicates a - 8.49% performance gap for American Indian or Alaska Native students.

The remainder of the performance gaps depicted in the graph below are relatively negligible. The data does not seem to indicate any significant lack of students are success tied to ethnicity.



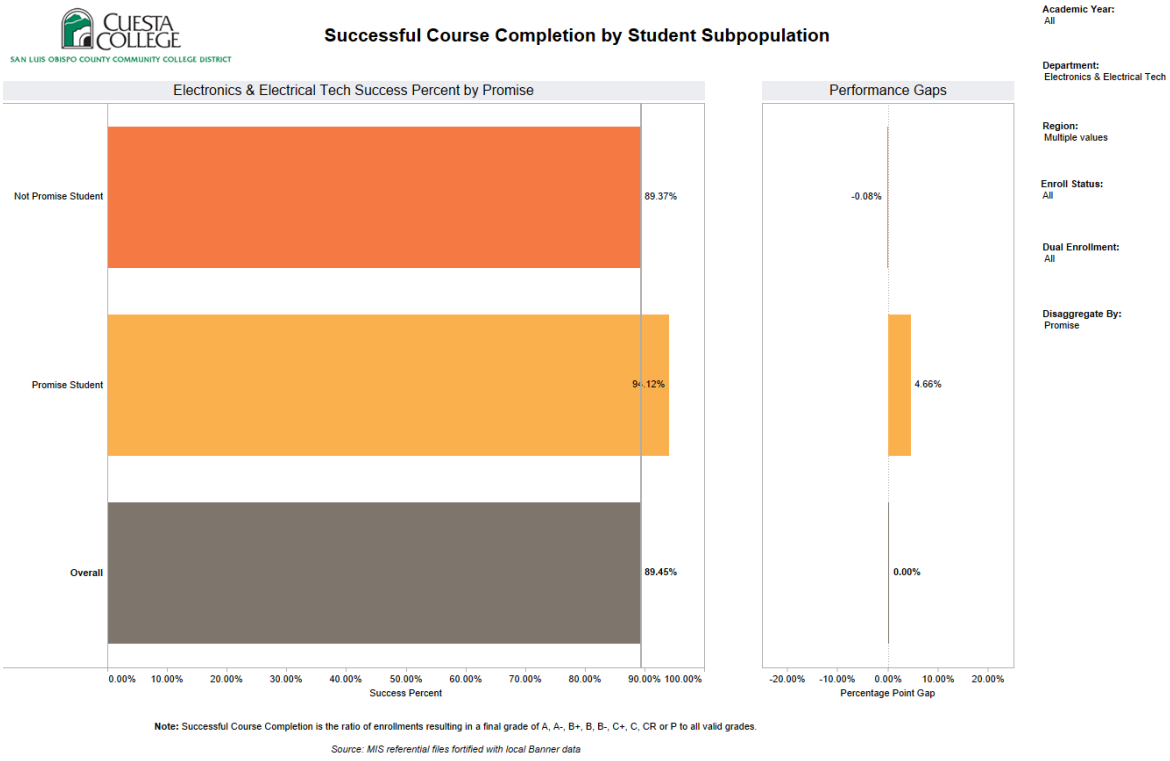
The graph and data below depict student success by gender. The only identifiable student success tied to gender applies to female students at a -3.74% performance gap. As described previously in this report the electrical contracting trade and other electrical/electronic technology positions in industry tend to be dominated by males.

In a previous section this issue is identified and proactive strategies to increase minority and female enrollment are described in detail.



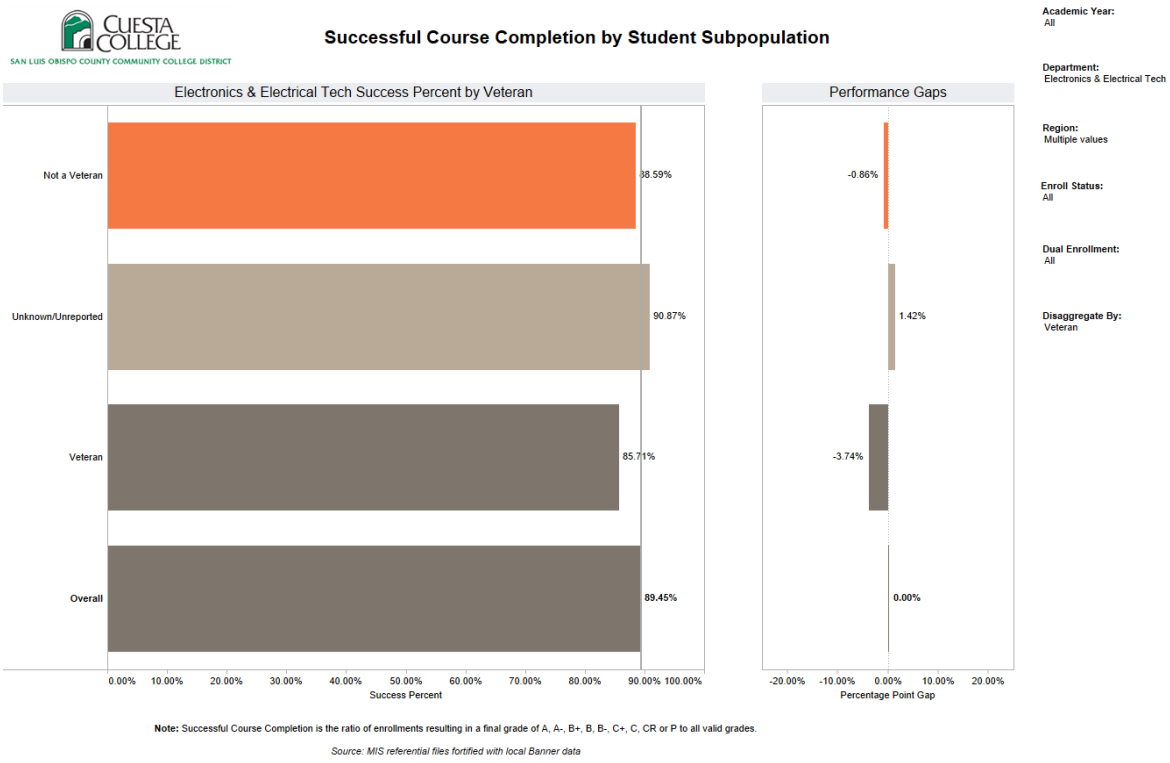
The graphics and data below tying successful course completion to students who enter the program under the “Cuesta Promise” opportunity for incoming freshman who qualify. There is a + 4.66% performance gap associated with promise students which tends to indicate that students in our department who apply and qualify for support under the promise program are serious about their success and marginally stand out from other students in light of our overall high success rate.

This data provides evidence that the promise program is being utilized and working for students in our department.



The graph and data below indicate a – 3.74 performance gap for veteran students in our department. This is not viewed as statistically significant. As with any other subpopulation of students in our department veterans are very successful in general.

It should also be noted that all or most department faculty make a point of personally thanking veterans for their service to our country if they publicly identify themselves as veterans in the classroom setting or confidentially to department faculty.



- Are different demographic groups underrepresented in your success figures? What might be causing this? How can it be addressed?

  The only demographic group that is significantly underrepresented in our department are women. Over the past several years, we have seen a marginal increase in female students interested in electrical and electronic technology. Female students seem to be less drawn to electrical technology due to a pseudo-stereotyping that women cannot perform day-to-day tasks at the same rate as their male counterparts and general interest is typically lower. Additionally, many females who have inquired to department faculty about the academic technical demands of the program and have expressed some reluctance to pursue a career in electrical/electronic career opportunities.

This is currently being proactively addressed by encouraging female students enrolled in the EET program to participate in various campus and industry outreach programs directed at encouraging females to pursue rewarding careers in electrical/electronic technology. As the lead EET instructor I regularly discuss the distinct advantages for females who pursue education and employment in electrical/electronic technology. I work to encourage female students by informing them that (as a group) they tend to be in the top 10% of the program courses academically. Additionally, I informed them that in general, they possess a distinct advantage over their male counterparts with employers due to equal opportunity employment laws and the fact that they tend to perform at a higher academic level than the majority of their male counterparts if they simply commit to learning the material, regular attendance, and seeking faculty assistance whenever needed. I also informed them that in general, employers tend to be very enthusiastic when they find that a female has completed EET coursework and is interested in placement with their organization.

- List strategies used during the last year in which data was reported to increase student success.

  Specific strategies are identified and described in the preceding section as well as under the foregoing bullet point "Based upon the trend, what strategies do you plan on implementing?" These strategies are not listed here to avoid unnecessary duplication.

- Did your strategies effect change?

  Yes, we are seeing an increase in interest and enrollment with female students.

- List the trend (*i.e. increasing, decreasing, same).*

  We are seeing a trend of increasing female enrollment and success in the department.

- Based upon the trend, what strategies do you plan on implementing?

  As mentioned above this is currently being proactively addressed by encouraging female students enrolled in the EET program to participate in various campus and industry outreach programs directed at encouraging females to pursue rewarding careers in electrical/electronic technology. As the lead EET instructor I regularly discuss the distinct advantages for females who pursue education and employment in electrical/electronic technology. I work to encourage female students by informing them that (as a group) they tend to be in the top 10% of the program courses academically. Additionally, I informed them that in general, they possess a distinct advantage over their male counterparts with employers due to equal opportunity employment laws and the fact that they tend to perform at a higher academic level than the majority of their male counterparts if they simply commit to learning the material, regular attendance, and seeking faculty assistance whenever needed. I also informed them that in general, employers tend to be very enthusiastic when they find that a female has completed EET coursework and is interested in placement with their organization.

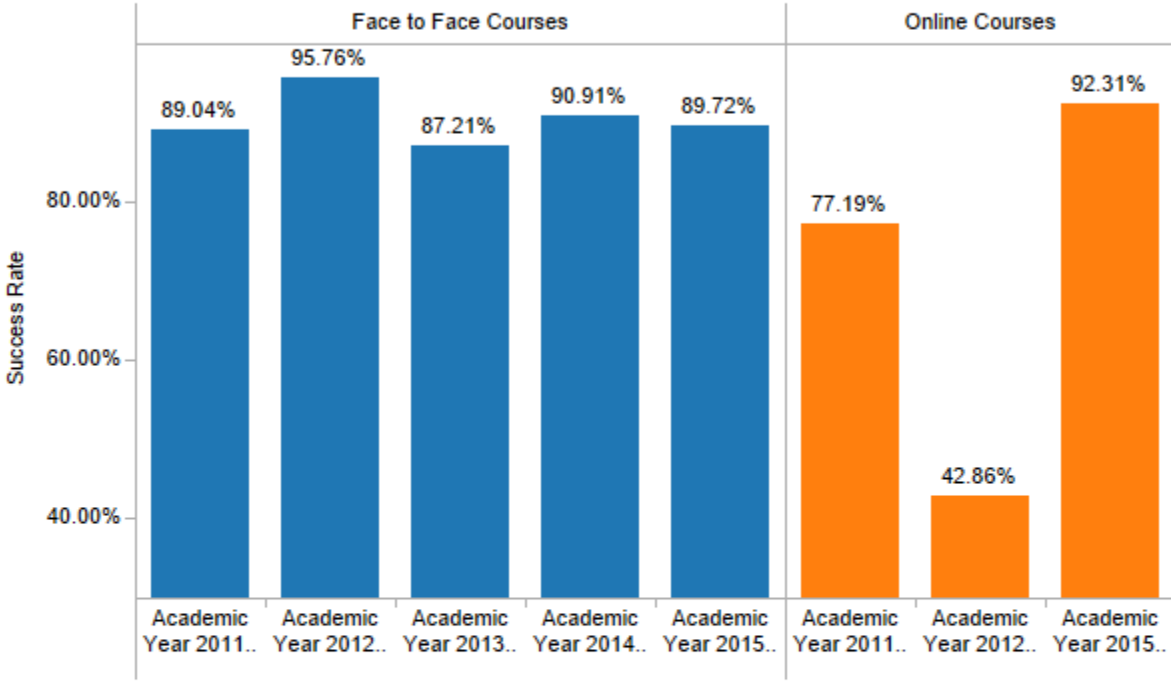
Student Success—Course Modality (Insert Data Chart)

SLOCCCD Program Review Data: Successful Course Completion

Select Department:
Electronics & Electrical Tech

Legend:
Face to Face Courses
Online Courses

Successful Course Competion by Modality -Electronics & Electrical Tech



Successful Course Competion by Modality Table - Electronics & Electrical Tech

		Academic Year 2011 - 2012	Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016
Face to Face Courses	Department Success Rate	89.04%	95.76%	87.21%	90.91%	89.72%
	Total Department Enrollments	146.0	165.0	172.0	231.0	214.0
Online Courses	Department Success Rate	77.19%	42.86%			92.31%
	Total Department Enrollments	57.0	7.0			13.0

- List strategies used during the last year in which data was reported to increase student success.

Based on the bar chart and data in the graph above, successful course completion for face-to-face instructional modality decreased very slightly. There is no institutional data for 2014 – 2015 related to D. E./Hybrid success modality. The data shown for 2012 – 2013 vs 2015 – 2016 shows a significant increase in successful course completion. As described below, the D. E./Hybrid modality data has been determined to be in error however, has been corrected moving forward.

Strategies implemented last year to increase student success include an increased awareness of the existence of, and need for, electrical contractors and some area employers to require all applicants to be certified electrician trainees through the state DLE and Cuesta EET program in order to be in compliance with state law (CLC 800 -800.5). Some area contractors have incurred substantial fines for lack of compliance with state law related to electrical workers who are not certified. This requirement has continued to be discussed extensively with the EET advisory committe and other area employers resulting in the certification becoming a virtual prerequisite for most new employees well as continued employment.

This increased awareness of the need to have active employees and applicants enrolled in a state certified program has increase the importance of having “non-journey level” personal successfully complete program courses to meeet the minimum academic annual hourly requirement. This has resulted in ongoing and increased interest and successful course completion within the department. the request of program is the only state certified program in the county and within over 100 miles of the main campus.

Additionally, the law requiring certification has increased wages for entry-level employees by approximately $3.50 per hour (ave. $14-$16/hr.) and individuals with approximately 15 months of experience are typically earning in excess of $20 per hour. Individuals with approximately three years of experience are earning in excess of $27 per hour. Both word-of-mouth advertising and direct advertising of these typical earning statistics continue to increase the popularity of the EET program and interest in various electrical technology employment opportunities resulting in sustained and projected increases and successful course completion.

The implementation of canvas as well as other improvements to curriculum delivery within the department have increase the practicality of instructional methodologies which have increase the popularity of several department courses and resulted in sustained breath given diagram wall live's option

As previously mentioned,'s The EET Departments overall efficiency (FTES/FTEF) increased from 12.48 (2012 – 2013) to 13.65 (2013 – 2014), our overall efficiency for 2014 – 2015 decreased to 11.69, then 11.52 for 2015 - 2016. In discussions with our accreditation consultant (hired by Dr. Stork) and upon review of student demand and retention by the Lead EET Instructor (Bret Allen), there appeared to be inconsistencies between Department

data and institutional data for the only EET course taught in the D.E./Hybrid Modality, Electronic Fundamentals (EET-213, 6.0 units). As per the Program Review Data – Department Level Successful Course Completion section of this report shows, the successful course completion for the only online course taught in the EET Department was 77.19% in Fall-2011 then sharply dropped to below 42.86% for Fall and Spring of 2012. Then in 2015 successful course completion under the D.E./Hybrid Modality sharply jumped to 92.13%. There is no reported data for successful course completion under the D.E./Hybrid Modality for 2013 or 2014 and the D.E. data for fall-2011 appears to be in error.
Institutional data shows successful course completion for face-to-face courses in 2013 at 87.21% then 90.91% for 2014. Note: There should be DE modality for 2013 and 2014. EET-213 was offered during the fall and spring for 2013 and 2014.

Beginning in the summer of 2013 we began offering the 6.0 unit Electronic Fundamentals course over the 8-week summer sessions. Although attrition during the summer is higher than attrition during the Fall or Spring semesters the course has been popular and clearly meets the needs of students who are unable to manage a 6-unit hybrid course which includes a 1 unit face-to-face lab during the Fall or Spring. The higher attrition of students in the 8-week summer session of EET-213 had some impact in the Department Efficiency dropping to 11.52 during 2014 – 2015.

Some clarification on the institutional data for the single online course (EET-213) four 2013, 2014, and 2015 may yield a slightly higher efficiency than the 11.52 shown above for the academic year 2014 – 2015. Evidently, the coding (or other) error has been corrected moving forward.

- Did your strategies effect change?

  The strategies described above have measurably resulted in change. For example, the implementation of canvas has resulted in students remaining caught up with course scheduling. As a result, students have been better prepared for checks for understanding, quizzes, laboratories, and exams. Student performance and understanding has noticeably improved. Exam scores, laboratory understanding and average course grades have increased since students generally come to class better prepared for scheduled activities.

  In terms of course completion, the data indicates an average of approximately 90% over the past five academic years and is expected to marginally increase this academic year and into the future.

- List the trend (*i.e. increasing, decreasing, same).*

  Successful course completion has remained relatively stable over the past five academic years with a low of 87.2% for 2013 - 2014 (face-to-face), a high of 95.76 for 2012 -2013'(face-to-face), and the most recent institutional data indicating 89.72% (face-to-face) and 92.31% (online) for 2015 – 2016.

- Based upon the trend, what strategies do you plan on implementing?

  Based upon the trend of successful course completion averaging approximately 90% over the past 5 academic years we will continue to implement the strategies described above in addition to increased promation and participation in SkillsUSA, expanding the advisory committee, improved tracking and assistance with student placement with local industry, in addition to promoting the new necular track.

  Additionally, the expanded use of the canvas for D.E./hybridity courses as well as traditional lecture lab courses due to the success we are observing this academic year in assisting students to remain more current with scheduled assingments, supplemental whiteboard video lectures, online checks-for-understanding, and preparation for laboratories.

<u>Degrees and Certificates Awarded (Insert Data Chart)</u>

- List the previous year's projection and current year's projection for degrees and certificates awarded *(i.e. increase, decrease, remain the same)*.

As depicted by the graph and data below, the number of EET who applied for and wee awarded certificates and degrees is unacceptably low. During 2015 – 2016 there were only 2 Associate of Science degrees awarded, an increase of 1 from the 2014 – 2015 academic year.

During 2014 – 2015 there were only 2 certificates awarded and no certificates awarded during the 2015 – 2016 academic year.

We attribute this situation with degrees and certificates to be associated with the fact that the vast majority of students in the program obtain their electrician trainee certifications during their first or second semester of study then begin or continue to work full or part time in the electrical contracting or related electrical technology industry.

Our industry advisory committee is highly supportive in offering internships as well as part-time/full-time employment opportunities to a large percentage of the students once they have completed the introductory courses in the program. By the time many students have progressed to intermediate or advanced courses in the program many area employers are seeking full-time employment commitments from our students due to the fact that most have obtained their state electrician trainee certifications and/or sufficient technical knowledge and hands-on capabilities to be productive team members.

By the time many students have completed the minimum requirements to be eligible to sit for the state general electrician certification they are working full time (many overtime as well) and are focused on final preparations to sit for the state exam(s). Most area employers do not provide an immediate financial incentive for students to show evidence that they were awarded degrees or certificates.

This pattern has remained virtually unchanged over the past five academic years.

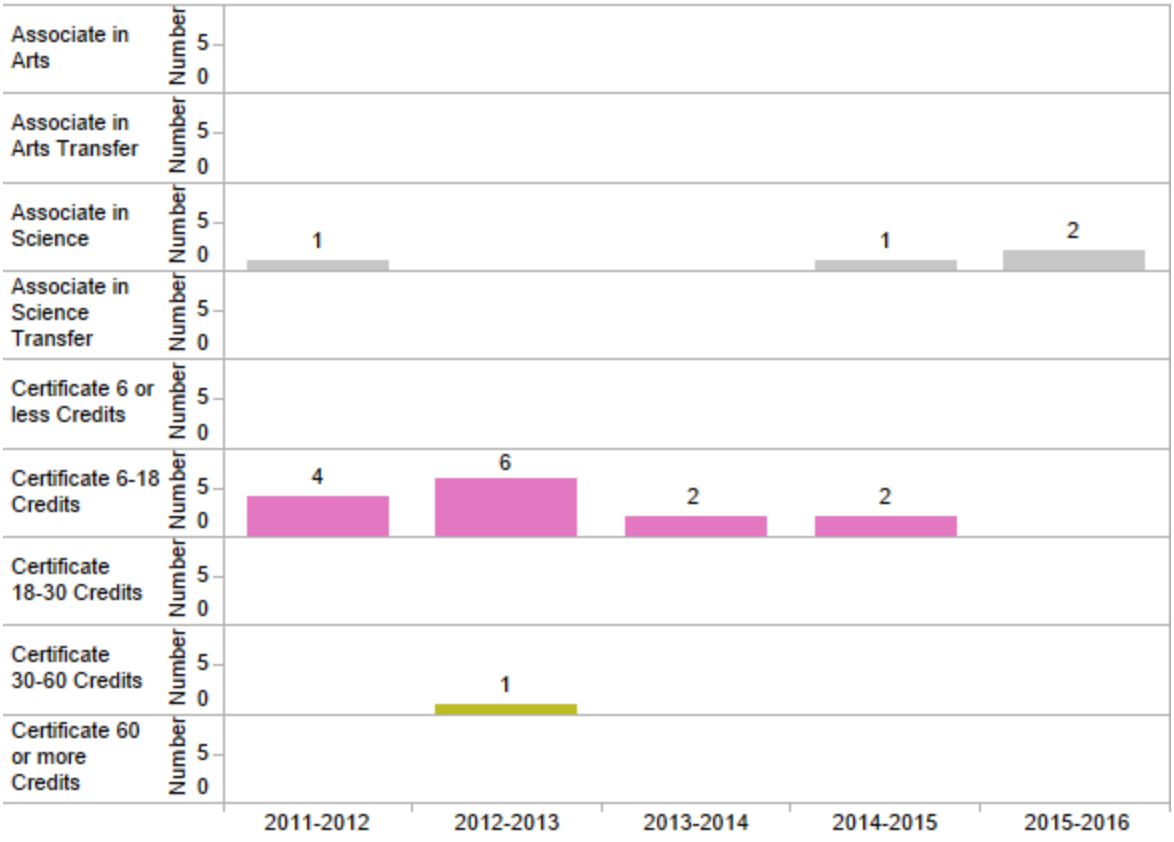
SLOCCCD Program Review Data: Degrees and Certificates Awarded

Program: Electronics & Electric Tech

Award Type: All

Program Awards

Top Code Description(s): Electronics & Electric Tech
Award(s): All



Program Awards Table

Award T..	Award	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Associate in Science	Electronics Technology (AS)	1			1	2
	Total	1			1	2
Certificate 6-18 Credits	Power & Instrumentatn Crt (C..	4	6	2	2	
	Total	4	6	2	2	
Certificate 30-60	Electronics Technology (CA)		1			

Program Awards: The number of degress and certificates awarded by program type

- List the trend (*i.e. increasing, decreasing, same).*

  The number of EET who applied for and were awarded certificates and degrees is unacceptably low. During 2015 – 2016 there were only 2 Associate of Science degrees awarded, an increase of 1 from the 2014 – 2015 academic year.

During 2014 – 2015 there were only 2 certificates awarded and no certificates awarded during the 2015 – 2016 academic year.

- List contributing factors to the trend.

  Contributing factors to this trend: As described above, we attribute this situation with degrees and certificates to be associated with the fact that the vast majority of students in the program obtain their electrician trainee certifications during their first or second semester of study then begin or continue to work full or part time in the electrical contracting or related electrical technology industry.

  Our industry advisory committee is highly supportive in offering internships as well as part-time/full-time employment opportunities to a large percentage of the students once they have completed the introductory courses in the program. By the time many students have progressed to intermediate or advanced courses in the program many area employers are seeking full-time employment commitments from our students due to the fact that most have obtained their state electrician trainee certifications and/or sufficient technical knowledge and hands-on capabilities to be productive team members.

  By the time many students have completed the minimum requirements to be eligible to sit for the state general electrician certification they are working full time (many overtime as well) and are focused on final preparations to sit for the state exam(s). Most area employers do not provide an immediate financial incentive for students to show evidence that they were awarded degrees or certificates.

- What strategies will be employed to meet the current year's projection?

  Regarding the current year's projection, we this trend as unacceptable from a departmental, divisional, and institutional perspective. We have grappled with strategies to convince our students of the importance of securing degrees and/or certificates they are eligible for by taking 1 or 2 additional technical courses for a certificate then the general education requirements necessary to be eligible for their Associate of Science degree.

  Many of our re-entry students allready have BA or BS degrees and some even Masters Degrees and entered the program for the purpose of changing professions or gaining new sill skill sets, not necessarily an AS degree. In most cases it is difficult to convince younger students of the benefits associated with obtaining their certificate or degree early on, as opposed to, a later date when they may be seeking promotional opportunities as leads, supervisors, foreman, etc.

  This year we will be inviting additional industry guest speakers to emphasize the importance of earned certificates and/or degrees for raises and promotional opportunities in their future. We are also scheduled for field trips where industry partners have agreed to allocate time to emphasize the value of certificates and/or degrees early on.

Additionally, we are coordinating with counseling to make presentations to our students to emphasize much of the same. We will also be integrating some checks for understanding into canvas to require students to conduct research on promotional opportunities and wages as they relate to certificates and/or degrees awarded early-on as opposed to months prior to applying for promotional opportunities or seeking alternate employment.

This is recognized as a very important area for improvement.

Other Relevant Program Data (optional)

Relevant general program information and data:

During the last three academic years, several EET department students (e.g. Armando Minctar, John Creedon, Colby Mathe, Daniel Caldwell, Daniel MacFarlane, Jose Flores, et al) have won awards in the Skills USA technical and leadership competition. Specifically, one student took fourth place in the nation at Skill USA in Louisville, Kentucky in Related Technical Math. Additionally, one student took first place at the California state Skills USA competition in San Diego for electrical wiring, out performing every other competitor from the state of California. EET faculty spent in excess of 80 hours preparing our Cuesta teams from Fall 2014 through the Fall 2016 for the regional, state, and national

This year the EET department has successfully recruited 11 students who competed in the regional SkillsUSA competition who competed at Paso Robles high school during February – 2017. We are advised that this is the largest number of competitors from any single CTE program in the history of post secondary regional competition from Cuesta.

As a result of the regional competition, 8 EET students will be advancing to the state SkillsUSA competition in San Diego during April-2017. EET students will be competing in the following competitions: residential wiring, electronics, related technical math, and Occupational Health & Safety (OSHA).

We are optimistic that 1 or more of our students will advance to the national competition in Kentucky during the summer of 2017. Department faculty be will be working with our students as advisors in assisting them with preparation for upcoming competitions.

This extracurricular activity has proven to be highly beneficial to students who choose to participate. Students grow in both their technical and saw skills through participation and employers are generally highly impressed with students you make this financially uncompensated commitment to advance in their field of study.

IV. CURRICULUM REVIEW

A. List all courses that have been created, updated, modified, or eliminated (and approved by the Curriculum Committee) since the last CPPR. See the Curriculum Review Template for guidance.

B. Provide evidence that the curriculum (including course delivery modalities) has been carefully reviewed during the past five years for currency in teaching practices, compliance with current policies, standards, regulations, and advisory committee input. Include evidence that the following entries on the course outline of record (CurricUNET format) are appropriate and complete:

Note: The foregoing includes all program courses which have undergone major or minor modifications through CurricuNET and the Curriculum Committee sine the last major program review. All information was extracted from CurricuNet and was reviewed for currency in teaching practices, compliance with current policies, standards, and regulations through the department, curriculum committee - their standardize review process, CTE Dean, E&T Division Chair, Division Curriculum Representative, Curriculum Chair, Curriculum Specialist, etc. (some additional approvals are still pending due to the process timing). The department Advisory Committee has also reviewed these curriculum modifications, is in majority agreement with all and in some cases recommended them.

- Course descriptions

EET-113 (Electronics for Computer Technicians, 3-Unit D.E. Course):
Introduces a broad range of topics in electricity and electronics. Fundamentals of Direct Current (DC) and Alternating Current (AC) circuits as well as applications are presented. Additionally, industry best practices are covered. This course is designed for computer or networking technicians and related disciplines. This course is not intended for electricians or electrician trainee certification. Advisory: MATH 123 with a minimum grade of C or better.

EET-119 (State Electrician Trainee Topics, 4-Unit Hybrid Course):
Presents topics related to job-site safety, OSHA requirements for safely working on energized circuits, reading blueprints, schematics, wiring & ladder diagrams. Network cabling topics including high bandwidth cable theory, applications and testing. Low voltage alarm system topics. Introduction to HVAC operational theory, general system testing and troubleshooting.

EET-169 (Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)
Introduces basic residential wiring skills. Includes basic electrical theory, installation techniques, basic plan reading, estimating and wiring methods.

EET-181 (National Electric Code, 3-unit lab/lecture - formerly CTCH-181)
Introduces the use of the National Electrical Code. Promotes an understanding of the electrical code necessary to the installation of such systems and the need to safeguard the public through uniformity and safety in building laws.

EET-183 (Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)
Presents planning, construction, and testing of a typical commercial electrical installation including: plans and specifications, applicable codes, load calculations, wire sizing, conduit fill analysis and bending, branch circuits, feeders, grounding practices, transient surge suppression, uninterpretable power supply selection and installation techniques. Additionally studies the responsibilities and knowledge required for professional industrial and commercial electricians working under current state certification requirements including: industrial electrical service power and lighting, feeder bus systems, panel boards, hazardous locations, power factor, ballasts, transformers, switching systems, grounding and bonding, installation techniques, and applying code requirements to all aspects of commercial and industrial wiring systems. Course developed in conjunction with the California Apprenticeship Council's standards for the State Electrical Certification Examination.

- Student learning outcomes

EET-113: (Electronics for Computer Technicians, 3-Unit D.E. Course):

Student Learning Outcomes

Page Last Saved on Tuesday, Oct 18, 2016 at 11:50 PM
By Bret Allen

Done

The student will be able to:
1. Describe the fundamental properties of electricity.
2. Analyze the function of voltage, current, and resistance in a simple circuit.
3. Solve for voltage, current, resistance, and power using laws of electricity.
4. Apply the concept of alternating current to series and parallel circuits.
5. Calculate inductive and capacitive reactance to assess voltage and current values in an AC circuit.
6. Apply the concept of direct current to series, parallel, and combination circuits.

EET-119 **(State Electrician Trainee Topics, 4-Unit Hybrid Course):**

Student Learning Outcomes

Page Last Saved on Tuesday, Oct 18, 2016 at 11:50 PM
By Bret Allen

Done

The student will be able to:
1. Describe the fundamental properties of electricity.
2. Analyze the function of voltage, current, and resistance in a simple circuit.
3. Solve for voltage, current, resistance, and power using laws of electricity.
4. Apply the concept of alternating current to series and parallel circuits.
5. Calculate inductive and capacitive reactance to assess voltage and current values in an AC circuit.
6. Apply the concept of direct current to series, parallel, and combination circuits.

EET-169 **(Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)**

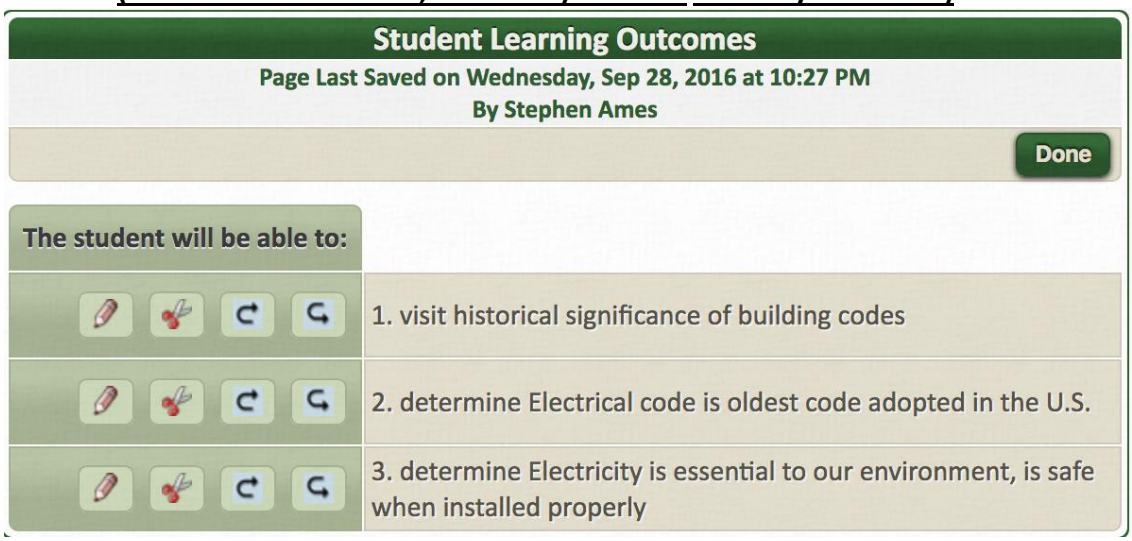
Student Learning Outcomes

Page Last Saved on Wednesday, Sep 28, 2016 at 10:18 PM
By Stephen Ames

Done

The student will be able to:
1. Understand and communicate the Power Grid, Energy Costs, Electrical Math and Formulas related to power use in the design of residential circuits.
2. Demonstrate the proper tools and techniques to install all common circuits, grounding systems and meter service found in residential homes.
3. Apply electrical theory, residential electrical code understanding, and installation by designing all circuits needed in a residential home on plans given as a final project at the end of the semester

EET-181 **(National Electric Code, 3-unit lab/lecture - formerly CTCH-181)**



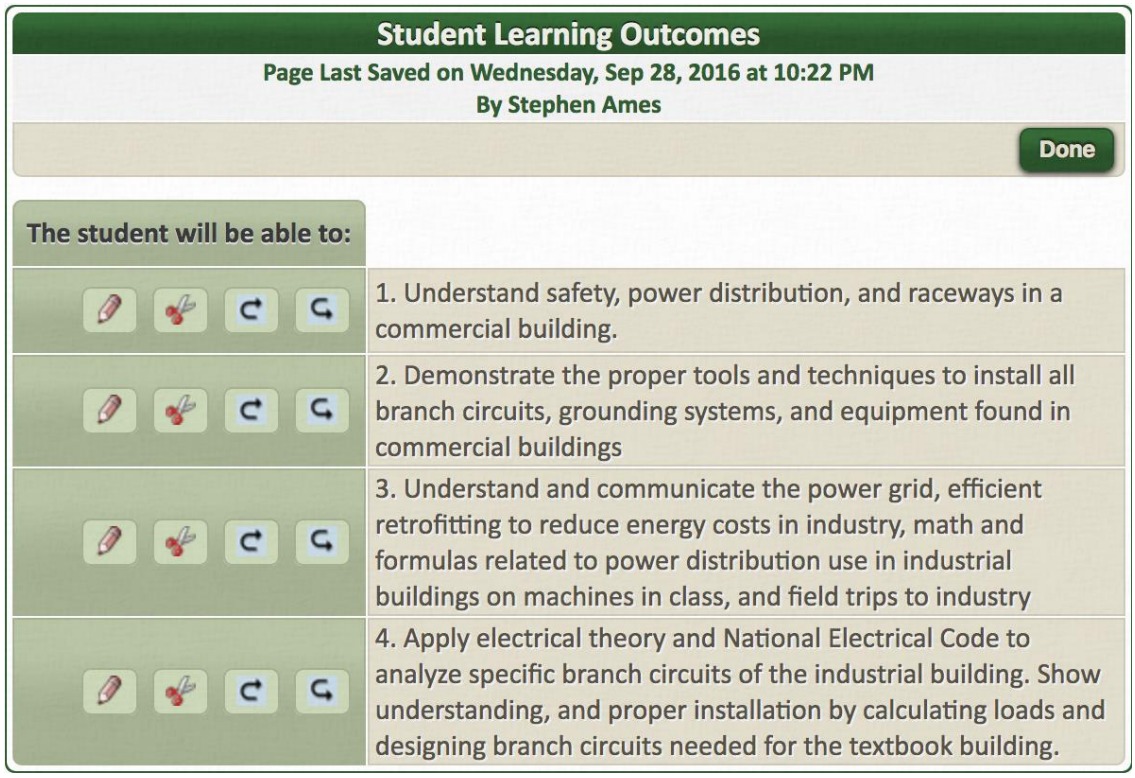
Student Learning Outcomes

Page Last Saved on Wednesday, Sep 28, 2016 at 10:27 PM
By Stephen Ames

Done

The student will be able to:	
	1. visit historical significance of building codes
	2. determine Electrical code is oldest code adopted in the U.S.
	3. determine Electricity is essential to our environment, is safe when installed properly

EET-183 **(Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)**



Student Learning Outcomes

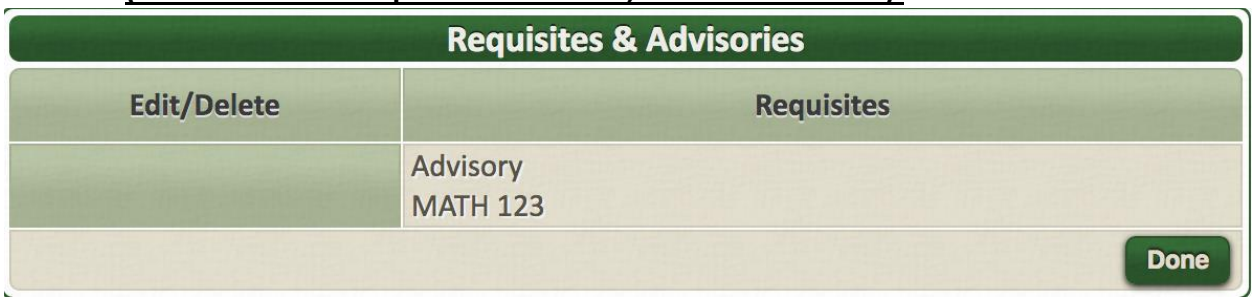
Page Last Saved on Wednesday, Sep 28, 2016 at 10:22 PM
By Stephen Ames

Done

The student will be able to:	
	1. Understand safety, power distribution, and raceways in a commercial building.
	2. Demonstrate the proper tools and techniques to install all branch circuits, grounding systems, and equipment found in commercial buildings
	3. Understand and communicate the power grid, efficient retrofitting to reduce energy costs in industry, math and formulas related to power distribution use in industrial buildings on machines in class, and field trips to industry
	4. Apply electrical theory and National Electrical Code to analyze specific branch circuits of the industrial building. Show understanding, and proper installation by calculating loads and designing branch circuits needed for the textbook building.

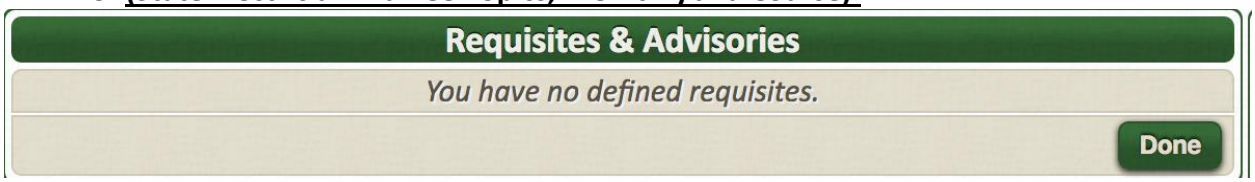
- Pre-requisites/co-requisites

EET-113: **(Electronics for Computer Technicians, 3-Unit D.E. Course):**



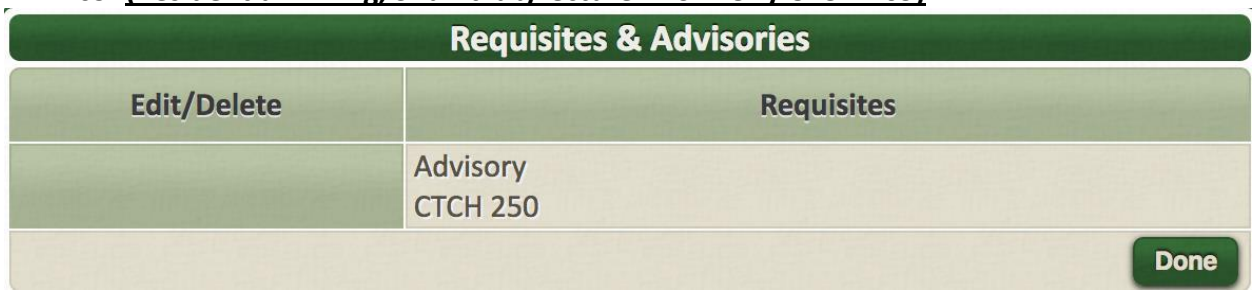
Requisites & Advisories	
Edit/Delete	Requisites
	Advisory MATH 123
	Done

EET-119: **(State Electrician Trainee Topics, 4-Unit Hybrid Course):**



Requisites & Advisories
You have no defined requisites.
Done

EET-169: **(Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)**



Requisites & Advisories	
Edit/Delete	Requisites
	Advisory CTCH 250
	Done

EET-181: **(National Electric Code, 3-unit lab/lecture - formerly CTCH-181)**

Requisites & Advisories	
Edit/Delete	Requisites
	Advisory EET 169 and
	Advisory ENGL 156
	Done

EET-183: **(Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)**

Requisites & Advisories	
Edit/Delete	**Requisites**
	Advisory CTCH 169
	Advisory EET 213

Done

Topics and scope – EET-113 (Electronics for Computer Technicians, 3-Unit D.E. Course):

Detailed Topical Outline

Page Last Saved on Wednesday, Nov 16, 2016 at 3:56 AM
By Bret Allen

1.
Properties of electricity for circuit analysis to determine compliance with industry standards

- Identify fundamental properties of electricity.
- Determine the function of voltage, current and resistance in a simple circuit.
- Solve for voltage, current, resistance, and power using laws of electricity.
- Examine OSHA regulations.

2.

Understanding voltage, current and resistance to assess main panel loading

- Determine the function of voltage, current and resistance in a simple circuit.
- Utilize schematic diagrams, block diagrams, and wiring diagrams to visualize electrical circuits.
- Calculate power using voltage, current, and resistance.
- Analyze series and parallel circuits for voltage, current, and power values.

3.

Utilization of heat transfer to predict component failures in electrical systems

- Use resistor color codes to read resistor values.
- Interpret Ohms Law to calculate voltage, current, and resistance.
- Analyze series and parallel circuits for voltage, current, and power values.
- Assess component failures in series and parallel circuits.

4.

Apply resistor color codes to troubleshoot electronic controls

- Use resistor color codes to read resistor values.
- Utilize schematic diagrams, block diagrams, and wiring diagrams to visualize electrical circuits.
- Interpret Ohms Law to calculate voltage, current, and resistance.

- Analyze series and parallel circuits for voltage, current, and power values.

5.
Use Ohms Law to predict component voltages

- Interpret Ohms Law to calculate voltage, current, and resistance.
- Calculate power using voltage, current, and resistance.
- Analyze series and parallel circuits for voltage, current, and power values.

6.
Use electrical power ratings to size conductors

- Calculate power using voltage, current, and resistance.
- Analyze series and parallel circuits for voltage, current, and power values.
- Apply Kirchoff's voltage and current laws to circuit analysis.

7.
Analysis of series and parallel circuits four voltage distribution

- Analyze series and parallel circuits for voltage, current, and power values.
- Apply Kirchoff's voltage and current laws to circuit analysis.
- Apply the concept of alternating current to series and parallel circuits.
- Calculate RMS values of voltage and current.

8.
Component failure analysis for troubleshooting circuits

- Assess component failures in series and parallel circuits.
- Apply Kirchoff's voltage and current laws to circuit analysis.
- Use Thevenin's, Norton's, and Superposition network theorems to simplify circuits.
- Apply the concept of alternating current to series and parallel circuits.

9.

Use of Kirchhoff’s Voltage and Current Laws to analyze AC circuits

- Apply Kirchoff's voltage and current laws to circuit analysis.
- Interpret the concept of Capacitance and Inductance, and their application as electronic circuit components.
- Analyze Capacitance and Inductance in terms of energy storage, circuit phase shift of voltage and current, and reactance.
- Apply concept of reactance to calculate voltage and current values in an AC circuit.

10.
Utilization of RC and RL Time Constants and designing time delay controls

- Apply the concept of alternating current to series and parallel circuits.
- Interpret the concept of Capacitance and Inductance, and their application as electronic circuit components.
- Analyze Capacitance and Inductance in terms of energy storage, circuit phase shift of voltage and current, and reactance.
- Apply concept of reactance to calculate voltage and current values in an AC circuit.

11.
Networking and Field Research

- Network with local electronic or electrical EET advisory contacts to examine applications of renewable and reactive power to improve efficiency

Topics and scope – EET-119 (State Electrician Trainee Topics, 4-Unit Hybrid Course):

Detailed Topical Outline Page Last Saved on Tuesday, Nov 15, 2016 at 11:55 PM By Bret Allen

1.
Electrical and ocupational safety practices and regulations in commercial buildings

- Explain dangers of electrical shock.
- Discuss OSHA regulations.

2.
Understanding electrical wiring diagrams, schematics, and their components in commercial and industrial buildings

- Interpret electrical schematics
- Construct circuits and build breadboard circuits.
- Describe applications for series electric circuits in commercial buildings.
- Describe applications for combination electric circuits in commercial buildings.
- Identify categories of electric power and their applications.

3.
Utilization of electrical test equipment to assess proper system functionality

- Utilize test equipment.
- Identify types of test equipment.
- Describe safe operation of various test equipment.
- Demonstrate use of multimeters to measure current, voltage and resistance.
- Demonstrate oscilloscope to measure voltage and frequency.
- Identify categories of electric power and their applications.

4.
Use of electronic breadboards to simulate circuit modifications and designs

- Interpret electrical schematics
- Construct circuits and build breadboard circuits.

5.
Use of soldering methods for permanent electrical connections

- Demonstrate soldering of electrical connections.

6.

Fire alarm installations and wiring methods

- Describe functions, operations and characteristics of various types of fire alarm systems and components.
- Explain appropriate wiring methods and devices configurations (Fire Alarms)

7.
Methods of electrical connections and terminations - Industry best practice

- Interpret electrical schematics
- Construct circuits and build breadboard circuits.
- Demonstrate soldering of electrical connections.
- Demonstrate standard punch-down networking terminations

8.
Security alarm installations and wiring methods

- Explain code requirements and use code to answer specific questions for security systems.
- Utilize proper manuals and techniques for system maintenance and troubleshooting security alarms.

9.
Heating, ventilating, air conditioning, and refrigeration fundamentals

- Describe the function, operation and characteristics of heating, air conditioning and refrigeration systems (HVAC).

10.
Networking cable types, applications, and installations

- Demonstrate standard punch-down networking terminations
- Explain the standard types on network cabling used for commercial applications

11.
Electronic and electrical fundamentals, grounding-bonding, and testing

- Explain dangers of electrical shock.
- Discuss OSHA regulations.
- Interpret electrical schematics
- Utilize test equipment.
- Define units of electrical measurements.
- Describe safe operation of various test equipment.
- Demonstrate use of multimeters to measure current, voltage and resistance.
- Demonstrate oscilloscope to measure voltage and frequency.
- Construct circuits and build breadboard circuits.
- Demonstrate soldering of electrical connections.

Topics and scope – EET-169 (Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)

Detailed Topical Outline

Page Last Saved on Wednesday, Sep 28, 2016 at 10:18 PM
By Stephen Ames

1. 1. Basic electrical theory
2. Electrical codes and standards
3. Blueprint reading
4. Wiring non metallic sheathed cable
5. Wiring metal clad armored flexible cable
6. Switching circuits
7. Electrical connections
8. Appliance wiring
9. Service equipment
10. Safety
11. Conduit wiring
12. Estimating

Topics and scope – EET-181 (National Electric Code, 3-unit lab/lecture - formerly CTCH-181)

Detailed Topical Outline

Page Last Saved on Wednesday, Sep 28, 2016 at 10:27 PM
By Stephen Ames

1. 1. Definitions
2. Requirements
3. Wiring Design
4. Wiring Methods and Materials
5. Equipment for General Use
6. Special Occupancies
7. Special Equipment
8. Special Conditions
9. Communications Systems
10. Tables

Topics and scope – EET-183 (Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)

Detailed Topical Outline

Page Last Saved on Tuesday, Jan 14, 2014 at 3:36 PM
By Bret Allen

1.
Industrial building plans and specifications

- Analyze and understand industrial building plans and specifications.

2.
Commercial loads

- Analyze commercial loads.

3.
Industrial loads

- Analyze industrial loads.

4.
Industrial substations

- Examine an industrial unit substation.

5.
Feeder bus systems

- Analyze industrial feeder bus systems.

6.
Programmable Logic Contrillers (PLC's)

- Analyze Programmable Logic Controllers.

7.
Electrical harmonic mitigation

- Analyze harmonics and techniques to reduce harmonics.

8.
Branch circuit installations

- Examine branch-circuit installation requirements.

9.
Distribution feeders and electric motors

- Analyze feeders and motor installations.

10.
Conduit layouts and selection criteria

- Examine conduit infrastructure requirements.

11.
General circuit protection and commercial lighting

- Analyze over-current protection systems as well as commercial lighting systems.

12.
Transformers for non-linear loads

- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

- **Course objectives EET-113 (Electronics for Computer Technicians, 3-Unit D.E. Course):**

Objectives
Page Last Saved on Wednesday, Nov 16, 2016 at 1:54 AM By Bret Allen

1. Identify fundamental properties of electricity.

- Quizzes/Exams

2. Determine the function of voltage, current and resistance in a simple circuit.

- Quizzes/Exams

3. Solve for voltage, current, resistance, and power using laws of electricity.

- Quizzes/Exams

4. Translate electrical units using scientific and engineering notation.

- Quizzes/Exams

5. Use resistor color codes to read resistor values.

- Quizzes/Exams

6. Utilize schematic diagrams, block diagrams, and wiring diagrams to visualize electrical circuits.

- Quizzes/Exams

7. Interpret Ohms Law to calculate voltage, current, and resistance.

- Quizzes/Exams

8. Calculate power using voltage, current, and resistance.

- Quizzes/Exams

9. Analyze series and parallel circuits for voltage, current, and power values.

- Quizzes/Exams

10. Assess component failures in series and parallel circuits.

- Quizzes/Exams

11. Apply Kirchoff's voltage and current laws to circuit analysis.

- Quizzes/Exams

12. Use Thevenin's, Norton's, and Superposition network theorems to simplify circuits.

- Quizzes/Exams

13. Apply the concept of alternating current to series and parallel circuits.

- Quizzes/Exams

14. Calculate RMS values of voltage and current.

- Quizzes/Exams

15. Interpret the concept of Capacitance and Inductance, and their application as electronic circuit components.

- Quizzes/Exams

16. Analyze Capacitance and Inductance in terms of energy storage, circuit phase shift of voltage and current, and reactance.

- Quizzes/Exams

17. Apply concept of reactance to calculate voltage and current values in an AC circuit.

- Quizzes/Exams

18. Network with local electronic or electrical EET advisory contacts to examine applications of renewable and reactive power to improve efficiency

- Internet Research
- Quizzes/Exams

19. Examine OSHA regulations.

- Internet Research
- Quizzes/Exams

- **Course objectives EET-119 (State Electrician Trainee Topics, 4-Unit Hybrid Course):**

Objectives
Page Last Saved on Thursday, Nov 17, 2016 at 1:20 PM By Angie Edmonds

1. Explain dangers of electrical shock.

- Internet Research
- Lab Reports
- Quizzes/Exams

2. Discuss OSHA regulations.

- Group Work
- Internet Research
- Lab Reports
- Performance Exams
- Quizzes/Exams

3. Interpret electrical schematics

- Essay Exams
- Group Work
- Internet Research

4. Utilize test equipment.

- Group Work
- Performance Exams

5. Define units of electrical measurements.

- Lab Reports
- Quizzes/Exams

6. Identify types of test equipment.

- Class Performance(s)
- Lab Reports
- Quizzes/Exams

7. Describe safe operation of various test equipment.

- Group Work

- Performance Exams
- Quizzes/Exams

8. Demonstrate use of multimeters to measure current, voltage and resistance.

- Group Work
- Lab Reports
- Performance Exams
- Quizzes/Exams

9. Demonstrate oscilloscope to measure voltage and frequency.

- Group Work
- Lab Reports
- Performance Exams
- Quizzes/Exams

10. Construct circuits and build breadboard circuits.

- Group Work
- Lab Reports
- Performance Exams

11. Demonstrate soldering of electrical connections.

- Group Work
- Performance Exams

12. Describe functions, operations and characteristics of various types of fire alarm systems and components.

- Group Work
- Lab Reports
- Performance Exams
- Quizzes/Exams

13. Explain appropriate wiring methods and devices configurations (Fire Alarms)

- Group Work
- Performance Exams
- Quizzes/Exams

14. Explain code requirements and use code to answer specific questions for security systems.

- Lab Reports
- Quizzes/Exams

15. Utilize proper manuals and techniques for system maintenance and troubleshooting security alarms.

- Lab Reports
- Performance Exams

- Quizzes/Exams

16. Describe the function, operation and characteristics of heating, air conditioning and refrigeration systems (HVAC).

- Internet Research
- Performance Exams
- Quizzes/Exams

17. Demonstrate standard punch-down networking terminations

- Group Work
- Performance Exams
- Quizzes/Exams

18. Explain the standard types on network cabling used for commercial applications

- Lab Reports
- Performance Exams
- Quizzes/Exams

19. Identify required wire sizing per national electric code to safely operate electrical loads.

- Quizzes/Exams

20. Describe applications for parallel electric circuits in commercial buildings.

- Lab Reports
- Quizzes/Exams

21. Describe applications for series electric circuits in commercial buildings.

- Lab Reports
- Quizzes/Exams

22. Describe applications for combination electric circuits in commercial buildings.

- Lab Reports
- Quizzes/Exams

23. Identify categories of electric power and their applications.

- Lab Reports
- Quizzes/Exams

- **Course objectives EET-169 (Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)**
  - Objectives

Page Last Saved on Wednesday, Sep 28, 2016 at 10:17 PM
By Stephen Ames

1. Upon completion of this course the student should be able to: 1. Demonstrate a working knowledge of basic electrical theory. 2. Read electrical drawings. 3. Correctly identify and use hand tools and equipment used by electricians. 4. Demonstrate the ability to work safely. 5. Identify and describe the minimum requirements for various wiring designs. 6. Demonstrate how to make electrical connections. 7. Demonstrate methods of wiring non-metallic sheathed cable. 8. Demonstrate methods of wiring metal clad armored flexible cable. 9. Demonstrate how to install service equipment. 10. Demonstrate how to install control systems.

- **Course objectives EET-181 (National Electric Code, 3-unit lab/lecture - formerly CTCH-181)**

  - Objectives

Page Last Saved on Wednesday, Sep 28, 2016 at 10:27 PM
By Stephen Ames

1. Upon completion of the course, the student will: 1. Demonstrate a working knowledge of the National Electrical Code. 2. Be able to use the code to solve field problems. 3. Acquire the basic theory required to understand the operation of the various electrical systems. 4. Be able to cite the current code requirements which must be field inspected. 5. Be able to make a comparative analysis of relationship between the Uniform Building Code and the National Electrical Code. 6. Be able to identify and describe the minimum requirements for the various wiring designs, wiring methods and materials used.

Course objectives EET-183 (Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)

- Objectives

Page Last Saved on Wednesday, Sep 28, 2016 at 10:22 PM
By Steven Ames

1. Analyze and understand industrial building plans and specifications.
2. Analyze commercial loads.
3. Analyze industrial loads.
4. Examine an industrial unit substation.
5. Analyze industrial feeder bus systems.
6. Analyze Programmable Logic Controllers.
7. Analyze harmonics and techniques to reduce harmonics.
8. Examine branch-circuit installation requirements.
9. Analyze feeders and motor installations.
10. Examine conduit infrastructure requirements.
11. Analyze over-current protection systems as well as commercial lighting systems.
12. Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads

- Alignment of topics and scopes, methods of evaluation, and assignments with objectives

EET-113 (Electronics for Computer Technicians, 3-Unit D.E. Course):

Assignments

Independent Work (minimum 2 examples)

1. Review distant education videos, lecture notes and associated reading material from Delmar textbook

- Determine the function of voltage, current and resistance in a simple circuit.
- Solve for voltage, current, resistance, and power using laws of electricity.
- Interpret Ohms Law to calculate voltage, current, and resistance.
- Apply Kirchoff's voltage and current laws to circuit analysis.

2. Meet with or contact local industry to assess applications of course material for course research project

- Network with local electronic or electrical EET advisory contacts to examine applications of renewable and reactive power to improve efficiency

3. Performance evaluation based on independent study of local electronics industry applications of renewable and reactive power to improve energy efficiency.

- Interpret the concept of Capacitance and Inductance, and their application as electronic circuit components.
- Analyze Capacitance and Inductance in terms of energy storage, circuit phase shift of voltage and current, and reactance.
- Apply concept of reactance to calculate voltage and current values in an AC circuit.
- Network with local electronic or electrical EET advisory contacts to examine applications of renewable and reactive power to improve efficiency

Critical Thinking Assignments (minimum 2 examples)

1. Analyze multiple techniques for achieving the same results and assess optimal method(s)

- Solve for voltage, current, resistance, and power using laws of electricity.
- Interpret Ohms Law to calculate voltage, current, and resistance.
- Assess component failures in series and parallel circuits.

2. Solve complex circuits and assess modes of component failure

- Assess component failures in series and parallel circuits.
- Use Thevenin's, Norton's, and Superposition network theorems to simplify circuits.
- Analyze Capacitance and Inductance in terms of energy storage, circuit phase shift of voltage and current, and reactance.

3. Analyze isolation transformer for efficiency and source current reduction using power factor correction and transient inrush ratings.

- Solve for voltage, current, resistance, and power using laws of electricity.
- Translate electrical units using scientific and engineering notation.
- Assess component failures in series and parallel circuits.
- Apply the concept of alternating current to series and parallel circuits.
- Interpret the concept of Capacitance and Inductance, and their application as electronic circuit components.
- Apply concept of reactance to calculate voltage and current values in an AC circuit.
- Network with local electronic or electrical EET advisory contacts to examine applications of renewable and

reactive power to improve efficiency

- Alignment of topics and scopes, methods of evaluation, and assignments with objectives

EET-119 (State Electrician Trainee Topics, 4-Unit Hybrid Course):

Assignments Page Last Saved on Tuesday, Nov 15, 2016 at 11:08 PM By Bret Allen

Independent Work (minimum 2 examples)

1. Research soldering best practice as defined by the Institute of Printed Circuits (IPC) and submit report based on guidelines provided by instructor.

- Interpret electrical schematics
- Identify types of test equipment.
- Demonstrate soldering of electrical connections.

2. Describe the advantages of an analog meter that are generally easier for an electrician trainee to learn and read

- Utilize test equipment.
- Define units of electrical measurements.
- Identify types of test equipment.
- Demonstrate use of multimeters to measure current, voltage and resistance.

Critical Thinking Assignments (minimum 2 examples)

1. Describe how and why clamp on (hall effect) ammeters are generally used in the electronic and electrical field for troubleshooting.

- Utilize test equipment.
- Define units of electrical measurements.
- Identify types of test equipment.
- Describe safe operation of various test equipment.
- Demonstrate use of multimeters to measure current, voltage and resistance.

2. Compare a time domain instrument to a frequency domain instrument and assess which instrument would be more suitable for measuring harmonic distortion in networking systems.

- Utilize test equipment.
- Define units of electrical measurements.
- Identify types of test equipment.
- Describe safe operation of various test equipment.
- Demonstrate oscilloscope to measure voltage and frequency.

3. Describe 2 acceptable (industry standard) types of cables that could be used in commercial fire alarm system to attenuate electromagnetic interference and the insurer a voltage drop of less than 3% over a 100 foot span of conduit connecting a power sub-panel to a fire alarm panel in a hospital.

- Describe functions, operations and characteristics of various types of fire alarm systems and components.

- Explain appropriate wiring methods and devices configurations (Fire Alarms)

- Alignment of topics and scopes, methods of evaluation, and assignments with objectives

EET-169 (Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)

Page Last Saved on Wednesday, Sep 28, 2016 at 10:17 PM
By Stephen Ames

Independent Work (minimum 2 examples)

1. Primarily College Level. Library has resources needed for assignment completion. Two hours of independent work done out of class per each hour of lecture or class work, or 3 hours lab, practicum, or the equivalent per unit. Students will be given reading and study assignments in the textbook and hand-out materials. Laboratory exercises will require that they utilize critical thinking methods in order to solve problems encountered in the lab. Assignments will relate to "real world" situations commonly encountered in industry. Consequently, the assignments will relate directly to the course objectives stated in the course outline. Examples of critical thinking assignments: Class participation and assignments require and develop critical thinking. 1. Develop multiple techniques for achieving the same results. 2. Analyze completed exercises. 3. Apply known principles to new proposals and situations. 4. Recognize and correct errors.

- Alignment of topics and scopes, methods of evaluation, and assignments with objectives

EET-181 (National Electric Code, 3-unit lab/lecture - formerly CTCH-181)

Assignments

Page Last Saved on Wednesday, Sep 28, 2016 at 10:27 PM
By Stephen Ames

Independent Work (minimum 2 examples)

1. Textbook Reading: The reading assignment will typically cover one-half chapter per week. Homework: Answer questions in the workbook on the weekly reading.

Critical Thinking Assignments (minimum 2 examples)

- Alignment of topics and scopes, methods of evaluation, and assignments with objectives

EET-183 (Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)

Assignments

Page Last Saved on Wednesday, Sep 28, 2016 at 10:22 PM
By Stephen Ames

Independent Work (minimum 2 examples)

1. Research applicable electrical codes to develop industrial building installation plans.

- Analyze and understand industrial building plans and specifications.
- Analyze industrial loads.
- Examine an industrial unit substation.
- Analyze industrial feeder bus systems.
- Examine branch-circuit installation requirements.
- Analyze feeders and motor installations.
- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

2. Visit a county planning office to obtain written design and installation requirements for industrial facilities.

- Analyze and understand industrial building plans and specifications.

3. Investigate an industrial buildings harmonic distortion and take corrective measures to improve it.

- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

Critical Thinking Assignments (minimum 2 examples)

1. Research applicable electrical codes to develop commercial building installation plans.

- Analyze commercial loads.
- Analyze harmonics and techniques to reduce harmonics.
- Examine branch-circuit installation requirements.
- Analyze feeders and motor installations.
- Examine conduit infrastructure requirements.
- Analyze over-current protection systems as well as commercial lighting systems.
- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

2. Discuss electrical safety requirements with local inspectors. Class participation and assignment require and develop critical thinking.

- Analyze and understand industrial building plans and specifications.
- Analyze commercial loads.
- Analyze industrial loads.
- Examine an industrial unit substation.
- Analyze industrial feeder bus systems.
- Analyze Programmable Logic Controllers.
- Analyze harmonics and techniques to reduce harmonics.
- Examine branch-circuit installation requirements.
- Analyze feeders and motor installations.
- Examine conduit infrastructure requirements.
- Analyze over-current protection systems as well as commercial lighting systems.
- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

3. Investigate a commercial buildings power factor and take corrective measures to improve it.

- Analyze commercial loads.
- Analyze harmonics and techniques to reduce harmonics.
- Analyze feeders and motor installations.

- Analyze harmonic transformers with K-factor ratings for non-linear commercial and industrial loads.

4. Review electrical working drawings to assess compliance with local and national codes.

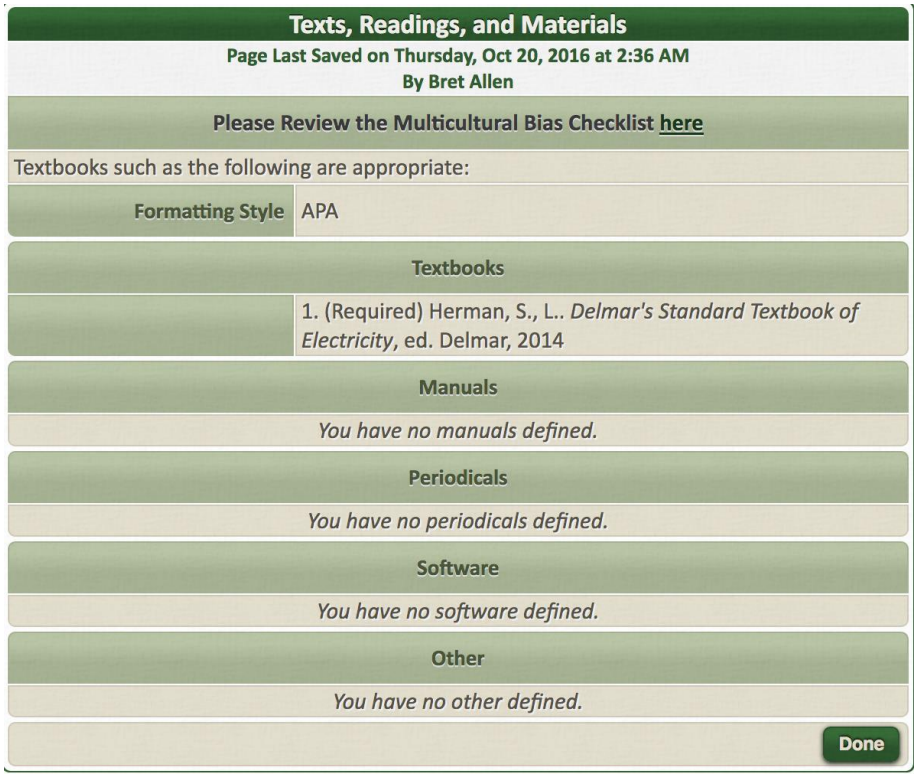
- Analyze and understand industrial building plans and specifications.
- Analyze commercial loads.
- Analyze industrial loads.
- Examine an industrial unit substation.
- Examine branch-circuit installation requirements.
- Analyze over-current protection systems as well as commercial lighting systems.

5. Use a phase rotation meter to determine if a 3-phase induction motor is wired into a positive sequence or negative sequence configuration. Then determine if the motor will rotate CW or CCW.

- Analyze commercial loads.
- Analyze industrial loads.
- Analyze feeders and motor installations.

- Textbooks

EET-113 (Electronics for Computer Technicians, 3-Unit D.E. Course):



Texts, Readings, and Materials

Page Last Saved on Thursday, Oct 20, 2016 at 2:36 AM
By Bret Allen

Please Review the Multicultural Bias Checklist here

Textbooks such as the following are appropriate:

Formatting Style	APA

Textbooks

1. (Required) Herman, S., L.. *Delmar's Standard Textbook of Electricity*, ed. Delmar, 2014

Manuals

You have no manuals defined.

Periodicals

You have no periodicals defined.

Software

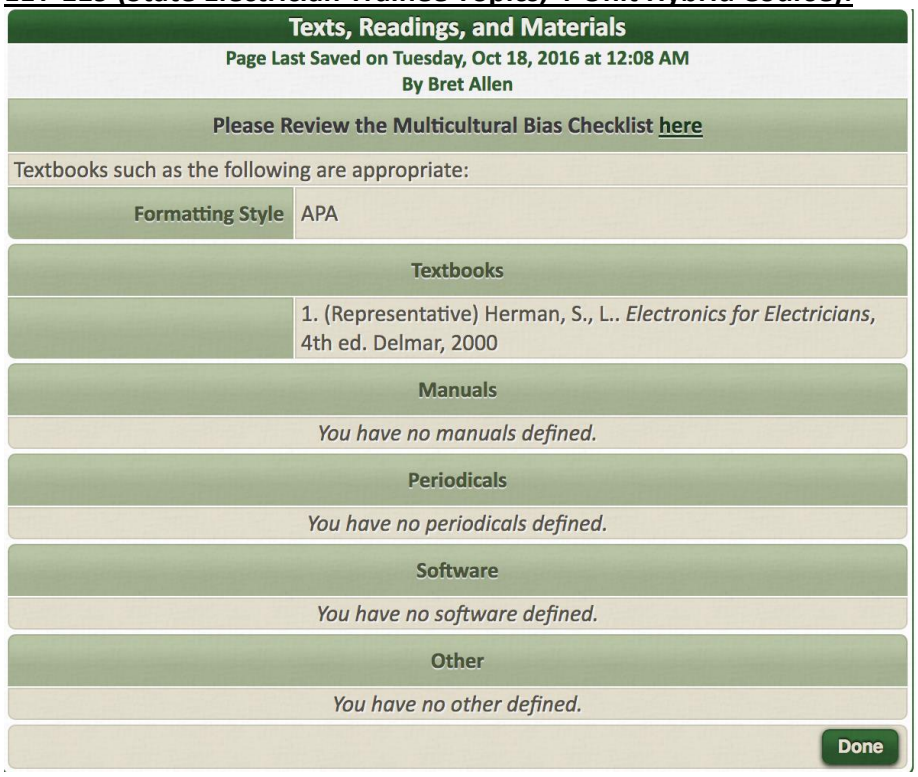
You have no software defined.

Other

You have no other defined.

Done

EET-119 (State Electrician Trainee Topics, 4-Unit Hybrid Course):



Texts, Readings, and Materials

Page Last Saved on Tuesday, Oct 18, 2016 at 12:08 AM
By Bret Allen

Please Review the Multicultural Bias Checklist here

Textbooks such as the following are appropriate:

Formatting Style	APA

Textbooks

1. (Representative) Herman, S., L.. *Electronics for Electricians*, 4th ed. Delmar, 2000

Manuals

You have no manuals defined.

Periodicals

You have no periodicals defined.

Software

You have no software defined.

Other

You have no other defined.

Done

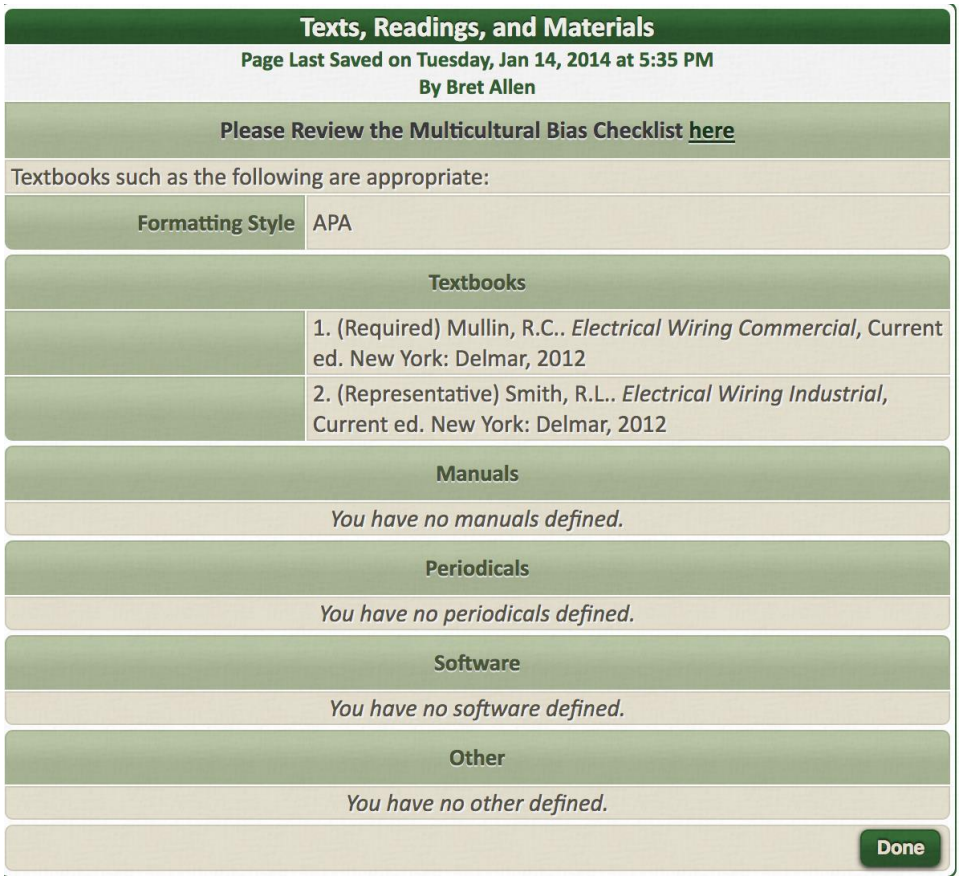
EET-169 (Residential Wiring, 3–unit lab/lecture – formerly CTCH-169)

Texts, Readings, and Materials	
Please Review the Multicultural Bias Checklist here	
Textbooks such as the following are appropriate:	
Formatting Style	APA
Textbooks	
	1. (Required) Mullin.. *"Electrical Wiring Residential"*, ed. , Mullin. "Electrical Wiring Residential". Delmar Publishers, current edition.
Manuals	
You have no manuals defined.	
Periodicals	
You have no periodicals defined.	
Software	
You have no software defined.	
Other	
You have no other defined.	
Done	

EET-181 (National Electric Code, 3-unit lab/lecture - formerly CTCH-181)

Texts, Readings, and Materials	
Please Review the Multicultural Bias Checklist here	
Textbooks such as the following are appropriate:	
Formatting Style	APA
Textbooks	
You have no textbooks defined.	
Manuals	
You have no manuals defined.	
Periodicals	
You have no periodicals defined.	
Software	
You have no software defined.	
Other	
	1. National Electrical Code". National Fire Protection Association, current edition
Done	

EET-183 (Commercial and Industrial Wiring Systems , 4-Unit lab/lecture - formerly CTCH-181)



Texts, Readings, and Materials

Page Last Saved on Tuesday, Jan 14, 2014 at 5:35 PM
By Bret Allen

Please Review the Multicultural Bias Checklist here

Textbooks such as the following are appropriate:

Formatting Style	APA

Textbooks

	1. (Required) Mullin, R.C.. *Electrical Wiring Commercial*, Current ed. New York: Delmar, 2012
	2. (Representative) Smith, R.L.. *Electrical Wiring Industrial*, Current ed. New York: Delmar, 2012

Manuals

You have no manuals defined.

Periodicals

You have no periodicals defined.

Software

You have no software defined.

Other

You have no other defined.

Done

- CSU/IGETC transfer and AA GE informatt

  None applicable

V. PROGRAM OUTCOMES, ASSESSMENT AND IMPROVEMENTS

A. Attach o**r** insert the assessment cycle calendar for your program.

Electronic & Electrical Technology (EET) Department
Program Revised Assessment Calendar
Revised Spring 2016 (4 Year Cycle)

Cycle Stage	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017
SLO Assessment	X	EET 228	EET 213 & 119	EET 183, & 267	EET 224, & 257	EET 169, 227, 181, & 270
Analyze Results & Develop Plan Improvements	X	X	EET 228	EET 213, & 119	EET 183 & 267	EET 224, & 257
Plan Implementation	X	X	X	EET 228	EET 213 & 119	EET 183 & 267

Cycle Stage	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021
SLO Assessment	EET 271	EET 228	EET 213 & 119	EET 183, & 267	EET 224, & 257	EET 169, 227, 181, & 270	EET 228
Analyze Results & Develop Plan Improvements	EET 169, 227, 181& 270	EET 271	EET 228	EET 213 & 119	EET 183, & 267	EET 224, & 257	EET 169, 227 & 181, 270
Plan Implementation	EET 224, & 257	EET 169, 227, ~~181~~ & 270	EET 271	EET 228	EET 213 & 119	EET 183, & 267	EET 224, & 257

All courses were assessed for 2014-2015 CPPR. Schedule ensures that all courses are assessed again for 2018-2019 CPPR & 2022-2023 CPPR. Complete cycle by end of Spring 2018 and Spring 2021. (New schedule includes a break from assessment for Fall 2014) revised August 2015

B. Have you completed your course assessments in eLumen or CPAS?

Yes/No

Yes, program and course CPAS completed.

If no, what are your plans for completing this important work? Indicate the date of completion.

Yes, CPAS course and program (AS,CA and CS) assessments have been completed and up-to-date through 2016 - 2017. Assessments were completed for all active degrees/certificates and active program courses. Assessments for 2017 – 2018 will be entered into eLumen.

C. Have you mapped course level SLOs to Program –Level SLOs in eLumen?

No (pending 2017-2018 academic year – APPW, etc)

If no, what are your plans for completing this important work? Indicate the date of completion.

2017 – 2018 academic year end.

D. Highlight improvement efforts that have resulted from SLO assessment.

Every SLO for every delivered course was assessed using the Apperson DataLink grading hardware and software. Individual SLO's were mapped to individual questions and assingment by identifying which student learning outcome maped with each question/sub-assignmet then programming the data link assessment software to assess the percentage SLO compentcy with individual students on individual exams and assingments.

This provided a breakdown of how well individual students were demonstrating % compentency with individual SLO's maped to course quizzes, mid-terms, and finals. This data was then aggregated for overall percentage compentency with eacy individual SLO for each course delivered.

By identifying individual SLO's that fell below 75% compentency, the delivery of instructional material was modified or augmented to ensure that individual SLO's were satisfied at 75% or better for each course delivered.

For EET department faculty who had not yet implempemted the use of the DataLink system, it was necessary for them to manually assess % compentency with each SLO connected to their course.

All data on SLO performance for each course delivered was documented via CPAS for 2016 – 2017. CPAS data was uploaded to the engineering/V network drive for review and accessability. Modifications to the delivery of course material was then discussed and implemented for the purpose of bring SLO percentaged above 75% (min.)

For the 2017-2018 academic year, eLumine will be used to report and analize SLO percentages for delivered courses and implement modifications to the delivery of

course content to improve student learning and performance overall for each delivered program course.

SLO assessment has been successful in identifying how succefully course outcomes and objectives are being met and identifying potential strategies to improve student learning and identifying pedagogy effectiveness and any needs for change in the delivery of course material.

E. Recommend changes and updates to program funding based on assessment of SLOs.
   - For funding requests, complete the applicable Resource Plan Funding Request Worksheet

     - See funding request worksheet – Unit Plan

   - For faculty hiring needs, attach Section H – Faculty Prioritization Process

     - Adjunct pool in process for EET Department

     - Part-time Laboratory Assistant needed (Backfull position - see Unit Plan)

F. Identify and describe any budget requests that are related to student learning outcomes assessment results or institutional/programmatic objectives.

   - Identified in Unit Plan

VI. PROGRAM DEVELOPMENT/FORECASTING

Create a short narrative describing the forecasting elements, indicating how they support efforts to achieve any of the following, where applicable: Program Outcomes, Institutional Goals, Institutional Objectives, and/or Institutional Learning Outcomes.

A. New or modified action steps for achieving Institutional Goals and Objectives

Schedule multiple guest speakers (2 to 4) from industry to discuss workplace standards and expectations to assist students in identifying the essential theoretical, practical, interpersonal, safety, team, and soft skill-sets that employers expect. Better prepare students to identify the essential axioms to best prepaire for career and personal success.

B. New or modified action steps for achieving Institutional Learning Outcomes

Same as narrative response to "A" above.

C. New or modified action steps for achieving program outcomes

Our department has an immediate need for commercial/industrial wiring trainers to support the Commercial and Industrial Wiring Systems course (EET-183). Due to the cost of these trainers from industry the EET the department is working in conjunction with the welding department to fabricate 5 portable steel trainers on caster wheels.

The cost of necessary raw materials to fabricate the trainers it is outside our current department budget however, is approximately 90% less than comparable trainers available " off-the-shelf" from industry suppliers. The cost of raw materials to fabricate these much-needed trainers on campus it is approximately $2000. Additionally, our department has an urgent need for commercial/industrial infrastructure equipment for student laboratories (e.g. three phase circuit breaker panels, single phase circuit breaker panels, subpanels, disconnect switches, commercial copper wire,commercial fuses, switches, conduit, boxes, fittings, etc.

This equipment is necessary for students in EET-183 to complete necessary course laboratories in our department. We are currently making do with substandard trainers and reusing equipment from previous semesters in order to complete required laboratories.

Additionally, we are in need of power hand tools in order for students to work in smaller groups during scheduled laboratories. we have been seeking funding and equipment from local industry as well as our advisory committee however, we have been unable to secure sufficient support to meet current needs.

D. Levels or delivery of support services

Recent delivery of support services for the electrician trainee certification application process has been outstanding. Additionally, delivery of support services from within our division has been prompt and outstanding. We are fortunate to have such an outstanding team with in our division.

E. Facilities changes

"N/A"

F. Staffing projections

Part-time Laboratory and Instructional Aide (see EET unit plan). Adjunct EET faculty pool in process for construction technology courses recently transferred to the EET department.

G. Strategies for responding to the predicted budget and FTES target for the next academic year

Our understanding is that there should be sufficient funding to me the supply and equipment needs moving into the next academic year however, there is inadequate funding to meet the immediate needs of our state certified electrician trainee program.

VII. END NOTES (If Applicable)

If applicable, you may attach additional documents or information, such as assessment forms, awards, letters, samples, lists of students working in the field, etc.

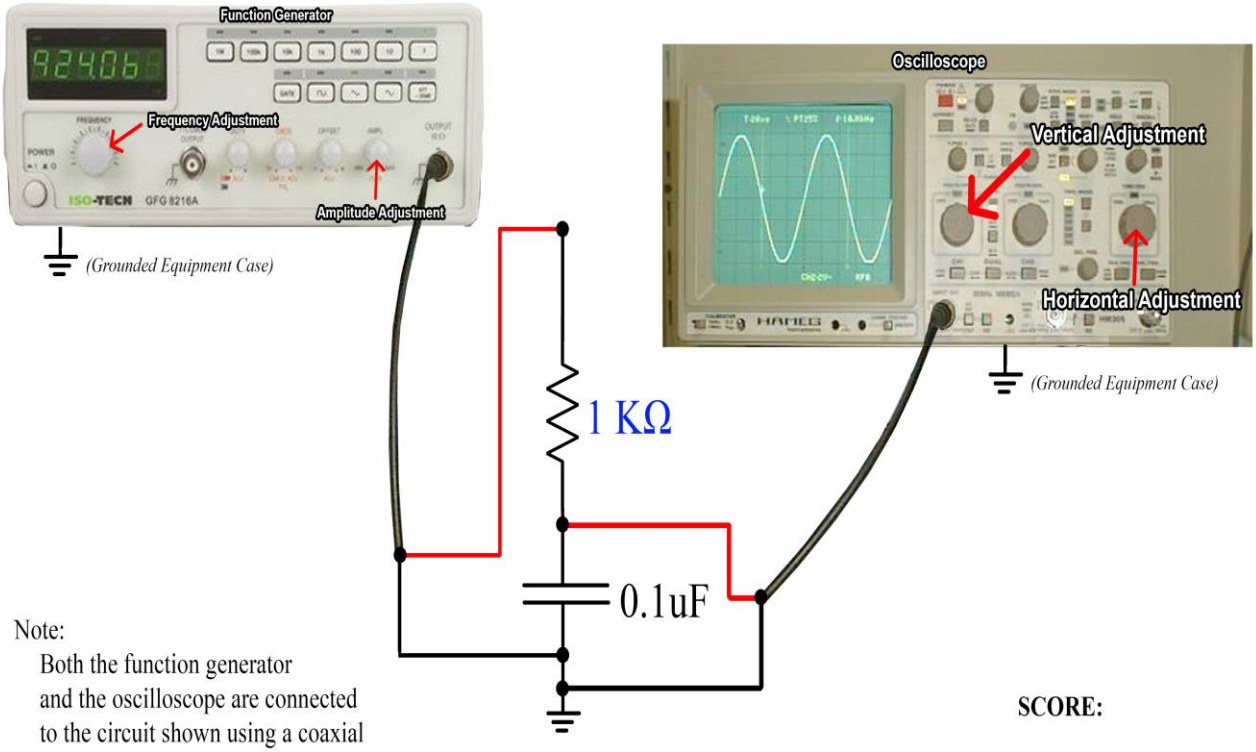
Sample/typical laboratory coversheet handout (Created in Photoshop for AC Electronics Fundamentals (EET-213) :

EET 213 Unit 9 Lab Coversheet

Name: _____
Date: _____

Series Resistive-Capacitive Voltage Distribution Lab

(See attachment for lab objectives and procedures)



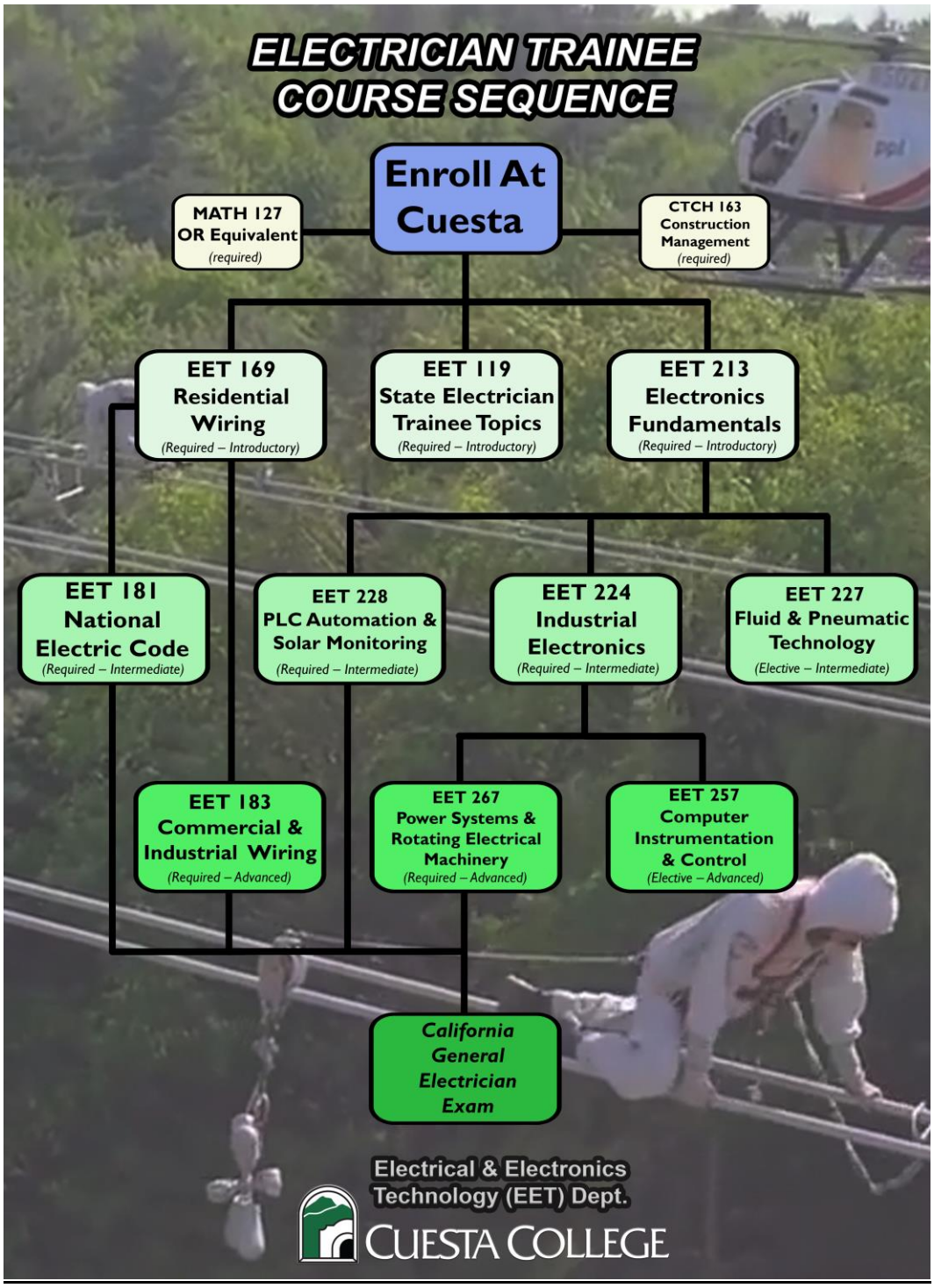
Note:
Both the function generator and the oscilloscope are connected to the circuit shown using a coaxial cable with an alligator clip breakout for positive (red) and ground (black) connections.

SCORE:

_____
(Inst. B. Allen)

ATTACHMENTS including course seq flowchart & marketing poster

- EET COURSE SEQUENCE FLOWCHAT *(below)*
- EET MARKETING POSTER (*see following page)*




Start your
ELECTRONICS &
ELECTRICAL TECHNOLOGY
career
@ Cuesta!
Conveniently
located
CUESTA
COLLEGE
Hartnell
College
133 Miles
Cuesta
College
100 Miles
Santa Barbara City
College
Colleges With California
State Approved Electrician Programs
Program Offerings
• A.S. IN ELECTRICAL TECHNOLOGY
• ELECTRONICS AND STATE ELECTRICIAN
CERTIFICATE OF ACHIEVEMENT
• POWER AND INSTRUMENTATION
CERTIFICATE OF SPECIALIZATION
Career Opportunities
• COMMERCIAL / INDUSTRIAL ELECTRICIAN
• UTILITY LINE WORKER
• SOLAR TECHNICIAN / ELECTRICIAN
• UTILITY EMERGENCY SERVICE TECHNICIAN
• ELECTRICAL FOREMAN / SUPERINTENDANT
• AND MANY MORE
ELECTRICIAN TRAINEE
COURSE SEQUENCE
Enroll At
Cuesta
MATH 127
OR Equivalent
CTCH 163
Construction
Management
EET 169
Residential
Wiring
EET 119
State Electrician
Trainee Topics
EET 213
Electronics
Fundamentals
EET 181
National
Electric Code
EET 228
PLC Automation &
Solar Monitoring
EET 224
Industrial
Electronics
EET 227
Fluid & Pneumatic
Technology
EET 183
Commercial &
Industrial Wiring
EET 267
Power Systems &
Rotating Electrical
Machinery
EET 257
Computer
Instrumentation
& Control
California
General
Electrician
Exam
Electrical & Electronics
Technology (EET) Dept.
CUESTA COLLEGE

VIII. After completing and submitting this document, please complete the Overall Program Strength and Ongoing Viability Assessment with your Dean before May 15, 2017.

Review with dean pending, complete prior to 5-15-2017

SIGNATURE PAGE

Faculty, Director(s), Manager(s), and/or Staff Associated with the Program

Instructional Programs: All full-time faculty in the program must sign this form. If needed, provide an extra signature line for each additional full-time faculty member in the program. If there is no full-time faculty associated with the program, then the part-time faculty in the program should sign. If applicable, please indicate lead faculty member for program after printing his/her name.

Student Services and Administrative Services Programs: All full-time director(s), managers, faculty and/or classified staff in the program must sign this form. (More signature lines may be added as needed.)

Division Chair/Director Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

SUPPLEMENTAL DOCUMENTS

FACULTY HIRING PRIORITIZATION INFORMATION (IF APPLICABLE)

If your program requested a faculty position for consideration, please attach or embed the following worksheets that were presented to the College Council. The guidelines for faculty prioritization can be found here: https://sharepoint.cuesta.edu/Committees/faculty_prioritization/Committee%20Documents/Prioritization%20Process%20Handbook.pdf

"N/A"

D. Applicable Signatures:

Vice President/Dean	**Date**
Division Chair/Director/Designee	**Date**
Other (when applicable)	**Date**

The above-signed individuals have read and discussed this review. The Director/Coordinator, Faculty, and staff in the program involved in the preparation of the CPPR acknowledge the receipt of a copy of the Vice President/ Dean's narrative analysis. The signatures do not necessarily signify agreement.

OPTIONAL SURVEY

Please take 15 minutes to complete the IPPR Survey. Your assessment will serve to help us make the form and process better.

Thanks,

The IPPR Committee

Survey Link: (survey link to be included prior to document dissemination October 1, 2016)

[Unable to locate survey link}