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## Welcome Letter and Syllabus

### EET-119 (State Electrician Trainee Topics)

Dear Student,

Welcome to the Electrical and Electronics Technology (EET) Department's course titled "*State Electrician Trainee Topics*". This course is presented online (through the Canvas learning management system) with a **mandatory** In-Person Laboratory at Cuesta College. My name is Bret Allen, and I will be your instructor in the upcoming hybrid (i.e. distance education/online and weekly face-to-face meetings) course: **State Electrician Trainee Topics (EET – 119, Monday from 7:00 pm – 9:50 pm [CRN:33175])**. This letter is to inform you of some important details regarding the **Spring 2019** online class with an in-person laboratory. Please read these eight (8) pages carefully! The first 2 pages are the welcome letter containing important information and the final 6 pages are the course syllabus. The final page requires you to acknowledge that you understand the course requirements through an online acknowledgement via Canvas which your instructor will explain at the first course meeting.

#### Course Overview

The online section of EET-119 is actually a hybrid in that it is not 100% online as mentioned above. You will have online access to lecture notes as well as quizzes given during a previous semester with complete solutions, a mid-term exam given during a previous semester with complete solutions, and videos of my lectures and other important material for the entire lecture component of the course. You will be required to show-up at Cuesta's San Luis Obispo Campus on Mondays for the in-person lab, checks ✓ for understanding, discussions, exams, and networking with EET Industry Advisory Committee members for perspective employment.

You will find me to be very approachable and eager to assist in learning this course material. One of my teaching axioms is to find creative ways to simplify complex material. In addition, we take great pride in assisting students with job placement in top companies and have a strong track record. We maintain a strong Industry Advisory Committee and make every attempt to align our curriculum with the needs of local industry. Many of the skills you will learn in the EET program are applicable to industrial companies throughout the country. We have the only non-union State Certified Electrician Trainee Program within over 100 miles of our main campus. Your enrollment in this course makes you immediately eligible for an Electrician Trainee Certification number/card issued by the CA Department of Labor Enforcement. During the first 2 weeks of the course, your instructor will explain the application process and employment opportunities. You will also find State Electrician Program resources (e.g. program description, course sequencing, application forms, hourly requirements, etc.) on your primary online resource, Canvas. If you have any questions about becoming a State Certified Electrician contact your instructor.

You will find that I emphasize the importance of being able to articulate the material you learn in this course. With many years of industrial experience as an Electrician, Licensed Electrical Contractor, Electrical Engineer, and a Manager/Director with a large power utility, I have been on both sides of the interview table. Being interviewed for jobs and promotions as well as interviewing many applicants for jobs and promotions has given me insight into who usually gets hired and why. Your future with a potential employer is typically decided in a relatively short interview. Your ability to convince an interview panel that you really understand your areas of study and training can push your name to the top of an applicant pool.

As such, I will be placing emphasis on your ability to explain what you have studied in the course. As with anything you will get better with practice. I will not embarrass anyone by putting students on the spot in front of the class. I generally help you to accomplish this with one to one oral quizzes involving your labs and projects. I will let you know when they are scheduled in advance and what to expect so

you can prepare. When we have oral quizzes during selected labs. I will help you if you are having a hard time. This has proven to be a very positive experience for students in the past. Student confidence builds as the semester progresses.

The syllabus can be found beginning on the third page of this document. You may contact me at (805) 215-4725 (cell.) with questions. If I am away when you call please leave an email ([ballen@cuesta.edu](mailto:ballen@cuesta.edu)) and/or a text message on my cell phone.

Leaving an email or text message on my cell phone will typically get the quickest response. The best time to call my cell phone is in the afternoon or evening. You may call me as late as 11:00 pm any weeknight (M-F). I would much prefer that you call me when you have a question. The question and material is fresh in your mind and I can typically help you much quicker than waiting until you may have forgotten some of the details. Do not be concerned about interrupting me. If I cannot take student calls my cell phone will be off and I will return your call in a timely manner. If you get my voicemail, text messages typically get the quickest response.

### **Book Requirements**

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**Text:** State Electrician Trainee Topics (Pearson) – Custom Publication (Only available through Cuesta bookstore and the Cuesta bookstore online.)

The Lab. resources will be discussed during the first-class meeting.

### **Components of Distance Education**

*There are several ways to learn the material on your own and with my assistance:*

- Begin by watching the video lecture(s) assigned during laboratories; then read and outline all chapter material assigned from your textbook.
- Access distance education resources on Canvas at: [cuesta.instructure.com](http://cuesta.instructure.com)  
If you are enrolled in the course, you will automatically be emailed an invitation to all resources online available through Canvas.
- Come to my posted office hours in faculty office 4323 at the San Luis Obispo campus.
- Contact me by telephone at (805) 546-3917 (Cuesta) or on my cell # (805) 215-4725 (Best)
- Contact me by e-mail. **Please begin the subject with “EET-119 Student” on every e-mail.** My e-mail address is [ballen@cuesta.edu](mailto:ballen@cuesta.edu)

### **Computer Requirements**

The following requirements are necessary for this class:

- An e-mail account that is checked regularly
- Access to a PC or Mac
  - Internet Connection
  - PC and Internet access is available on campus. *Computer access at home is highly recommended.*

**EET 119**

Room 4501-D

Monday

CRN#: 33175 meets from 7:00 pm to 9:50 pm

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**Instructor: Bret Allen** (*Engineering and Technology Division*) Email: ballen@cuesta.edu

Office: 4323 Telephone: 546-3917 or 215-4725 (cell.)

Office Hours: Monday: 4:45 PM to 6:45 PM &amp; 9:50 PM to 10:50 PM, Tuesday: 9:50 PM to 10:50 PM, &amp; Thursday: 9:50 PM to 10:50 PM (Or by appointment).

INSTRUCTOR'S CELL. 805-215-4725 (11:00 AM–11:00 PM, M-Sat)

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**Schedule:** Spring Semester 2019**Mid-term:** Administered via Canvas LMS (Deadline: 3-25-19 before 11:59 pm)**Final:** Mon., 5-20-19, 7:00 pm – 9:00 pm, Room:4501-D, SLO Campus**Homework****/ Quizzes:**

This course will use quizzes administered via the Canvas Learning Management System (LMS) in lieu of regularly assigned homework. This course is divided into twelve (12) modules, and each module contains at least one quiz pertaining to that module's subject matter. Homework will not be collected at each session. Your instructor will announce if there is a homework assignment due and explain the assignment detail. If you are absent for a valid reason be sure to contact your instructor by email or on his cellular telephone (805-215-4725) to determine if there was a homework assignment announced in your absence. Your instructor has scheduled courses until 10:00 PM Monday through Thursday and encourages you to contact him by cell phone during the indicated hours. If your instructor is lecturing or in a meeting when you call, you will be transferred to his voicemail. Brief text messages generally result in the timeliest response.

**Lab Credit:** To receive lab credit, students must submit the correct laboratory code for that day's lab assignment on the Canvas LMS. Students who fail to submit the correct code will not receive credit for that lab assignment. Lab codes are given to students by the instructor towards the end of each lab.

**Canvas LMS:** This class will be utilizing the Canvas platform, which is Cuesta's chosen "Learning Management System." Canvas will be used to administer tests, receive credit for labs, and distribute course material. Canvas may be accessed either (1) through the Cuesta website (Cuesta.edu) and by then clicking on the Canvas link or (2) by accessing Cuesta's Canvas site directly at [cuesta.instructure.com](http://cuesta.instructure.com).

**Course Overview:** 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 multi-source power distribution and alarm system topics. Introduction to HVAC operational theory, general system testing and troubleshooting.

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**Text:** State Electrician Trainee Topics (Pearson) – Custom Publication (Only available through Cuesta bookstore and the Cuesta bookstore online.)

Note: The course covers multiple core competencies required by the state for general electrician trainee certification programs as described in the "course overview" above

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**Course Schedule:** *(Start dates listed are Mondays of each week)*

<u>Week #</u>	<u>Start Date</u>	<u>Module.</u>	<u>Subject</u>
1	1-21	1	No Class; Review Canvas Material & Read OSHA Safety Quiz PDF
2	1-28	1&2	Electrical Safety / OSHA / Intro to Electrical Circuits / Ohm's Law
3	2-4	2	Intro to Electrical Circuits / Ohm's Law
4	2-11	3	Electrical Theory / Parallel and Combination Circuits
5	2-18	4	NO CLASS -- Intro to the National Electrical Code (NEC)
6	2-25	5	Batteries and Electrical Test Equipment
7	3-4	5	Batteries and Electrical Test Equipment (Part 2)
8	3-11	6	Grounding and Bonding (Part 1)
9	3-18	6	Grounding and Bonding (Part 2) & Mid-Term Review
10	<b>3-25</b>	6	<b>Mid-Term Exam Due online by 3-25</b> / Grounding and Bonding (P3)
11	4-1	7	No Class – Spring Break -- Transformers (Part 1)
12	4-8	7	Transformers (Part 2)
13	4-15	8	Conductors and Cables
14	4-22	9	Soldering / Wire and Cable Connections
15	4-29	10	Intrusion Detection Systems
16	5-6	11	Fire Alarm Systems
17	5-13	12	Intro. To Cooling (HVAC) & Final Exam Review
18	<b>5-20</b>	N/A	<b>Final Exam (Mon., 5-20-18, 6:00 pm – 8:00 pm)</b>

(Exam dates in bold)

- Indicates the week(s) hand-out is posted on your instructor's academic website under [Student Resources](#)

Note: *This schedule may be subject to change, handouts may be distributed by hard copy or posted on the Canvas LMS. If you have any questions about "handout" material be sure to discuss it with your instructor (e.g. some "handout material" may consist of example problem(s) from your textbook and assigned research (internet, etc) to prepare you for questions/topics on the General Electrician State Exam; in other words under the Assignment/Ch. column in the Course Schedule section: HO#\_ may refer to any of the following: 1. A hard copy handout, 2. Graphics and narrative posted on Canvas (or) 3. Example problem(s) from your textbook and/or public domain information from the internet for you to study for upcoming discussions, laboratories, quizzes or exams. Your instructor will clarify assignment and study expectations each.*

*At the conclusion of each laboratory meeting, the instructor will make available the laboratory code for that meeting. These codes reflect a credit/no credit score for participating in the day's laboratory work. These codes must be entered into their respective Canvas entries to receive laboratory credit for each meeting. Failure to do so will result in 0 credit for the laboratory meeting.*

*This is an introductory survey course designed to prepare you for subsequent courses in the EET Program and to provide you with the theoretical knowledge and applications (labs.) to prepare you for specific categories of questions on the CA General Electrician Exam. You will be eligible to take the exam once you have completed all courses required for Certificate of Proficiency (C.P.) in Electrical Technology as specified in the Cuesta Catalog.*

*In the event a laboratory assignment was a research-based, you will have the opportunity to describe aspects of the laboratory experiment you feel more comfortable explaining. The objective here is NEVER to put a student on the spot or create embarrassment, but rather to learn and grow in knowledge. The laboratory is the environment where it is "ok" to have misunderstandings or make mistakes (with the exception of creating reckless or intentional safety related hazards) Students who*

have invested appropriate time in preparing for experiments and exams will generally receive higher scores than students who have not invested time in preparation. If you neglect to study the weeks' material as described by the instructor your grade for that week will likely reflect it.

This approach has proven to be an effective method of motivating students to remain current. Equally important, these "oral quizzes" have proven to better prepare students for oral interviews in industry. We are effectively role-playing actual interview questions through out the Electrical Technology Program. If you have any questions please ask your instructor. This approach is effective because the process occurs one-on-one (instructor-to- student) and the emphasis is on skill improvement and your increasing ability to articulate the course material. If you have any questions please ask your instructor. If you prefer that any "oral quiz" be conducted outside the presence of your lab group, please quietly advise your instructor and we will move to an area in the Lab. that will provide privacy.

\*Laboratory participation with single phase and/or poly-phase electric circuits at voltages above 60 volts (RMS) will be at the sole discretion of the lead instructor based on his or her assessment of individual student safety.

The lead instructor's case-by-case assessment of individual student safety is final and binding. It should be understood that this standard is for the safety and protection of all students / visitors and is a firm contractual condition of enrollment in the course. (Note: this is rarely an issue however, "horseplay" an ongoing lack of attention to detail or safety instructions creates a dangerous environment for anyone in the course, Thank You).

### **Grading:**

#### **Grade Proportions:**

Labs	18%
Quizzes:	28%
Mid-term:	22%
<u>Final:</u>	<u>32%</u>
 Total:	 100%

#### **Grade Scale:**

93 – 100% = A
<u>90 – 92 % = A-</u>
87 – 89 % = B+
83 -86 % = B
<u>80 – 82 % = B-</u>
77 – 79 % = C+
<u>70 - 76 % =C</u>
67 - 69 % =D+
63 – 66 % = D
<u>60 - 62 % = D-</u>
Below 60% = F

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**Deadlines For Withdraw:** Your instructor may drop you if you miss two (2) successive classes without notification and due cause; however, it is the **student's responsibility** to drop the class through Admissions and Records if you must drop the course. Check the Cuesta home page for withdraw deadlines or contact your instructor.

**Start class on time:** Exams will start at the beginning of class, if you are late you will forfeit test time. Also, please be to class on time, so the class is not disturbed by your late arrival.

### **Students “Wait-Listed” or attempting to Add the Course:**

For student and personnel safety there is a limit to the number of students that the power laboratory can safely accommodate. Due to the fact that there is generally some attrition as the semester progresses your instructor will add students beyond the laboratory capacity at his/her discretion. If you are either on the student waitlist or attempting to add the course, be advised that it is **your responsibility** to contact the instructor on the first day to request an add code. Due to OSHA safety regulations it is not always possible to accommodate every student who wants to add the course.

**If the instructor provides you with an add code for the course it is the STUDENT’S RESPONSIBILITY** to add the course through Banner or at the Admissions and Records office located next to the library on the main campus.

### ***Official Cuesta Add Policy per Admissions & Records (re-phrased for students):***

#### **Adding Students to Credit Courses**

1. Add authorization codes will be included with class rosters, which will be available in confidential faculty rosters found the faculty’s’ portal, myCuesta, under My Web Services – Faculty and Advisors – “Class Attendance Rosters” link under the Faculty Tab on date specified on Cuesta website.
2. These add authorization codes should NOT be distributed to selected students until the first day of class.
3. Students who wish to add your class must obtain an add authorization code directly from the instructor. **It is the instructor's discretion to issue add codes to waitlisted students after the class begins.** It is recommended that you distribute add authorization codes based upon students’ priority on the Waitlist before adding walk-in students not on the Waitlist. Per Academic Senate, *“Faculty are encouraged, but not required to use the waitlist as an add priority list when giving out add codes at the beginning of a term.”* Students are responsible for processing add authorization codes by the deadline date, which is one-day prior to Census date. **No Exceptions.** *Apportionment is based on the number of students actively enrolled as of the census date.*
4. The deadline for students to add your class is the day before the Census date. Add codes will not be accepted in myCuesta or walk-in registration on or after the class Census date because the deadline to add is one-day prior to Census. This deadline will be strictly enforced in compliance with Board Policy AP 5070.

**Class Ethics:** All assignments, quizzes, and exams in this class are individual assignments unless the instructor specifically labels them as “group” assignments. Any student who turns in any course work that is not a result of her/his own design, creation, or study will receive a course grade of “F”.

**Accommodations:** If you are a student with a verified disability please make an appointment with the instructor to discuss your need for accommodation(s) as soon as possible. This is a confidential process between the student, the instructor and the DSPS Department at Cuesta. Your instructor will assist you in obtaining all resources and accommodations you are entitled to under state and federal law. If you believe you have a physical, mental, or learning disability that has not yet been verified, your instructor will confidentially assist you in the verification process.

**Academic Honesty:** All students are expected to follow the guidelines for academic honesty listed in Cuesta’s most recent catalog.

**Make-up policy:** If it is unavoidable that you cannot take the midterm exam at the scheduled time, you may arrange with the instructor to take it earlier than scheduled. Please arrange this ahead of time by contacting the instructor. The midterm may only be made-up after the scheduled time if the instructor has been notified (prior to the exam) of an exigent, verifiable circumstance that prevents you from taking the midterm at the designated time. The lowest quiz score will be dropped from the grade computation. Therefore, no make-ups will be allowed for missed quizzes since you can miss any quiz without affecting your grade. The final exam must be taken on the date and time specified in this syllabus. There are generally no exceptions.

**Respect:** Every student is entitled to an environment that promotes learning. We all learn in different ways and at different rates. No student should be made to feel unwelcome because they ask questions or need additional attention from the instructor.

### **STUDENT LEARNING OUTCOMES:**

1. - Identify fundamental properties of electricity.
2. - Determine the function of voltage, current, resistance, and power in a simple circuit.
3. - Identify operational characteristics, code requirements, system maintenance, of commercial fire alarms.
4. - Identify operational characteristics, code requirements, system maintenance, of commercial security alarms.
5. - Identify the basic functional characteristics and operation of HVAC systems.
6. - Describe the use of industry standard equipment and methods for troubleshooting HVAC systems.
7. - Describe the make-up and organization structure of the network cabling industry.
8. - Describe the economic factors, technical performance characteristics, and basic testing of network cabling.

## **Acknowledgment:** EET-119 (Spring-2019, CRN: 33175)

By way of a submission on Canvas, you are acknowledging that you have read and that you understand the terms, conditions, and scheduling in this syllabus. You must accept the terms of this syllabus to remain enrolled in this course. Although the scheduling may be subject to change due to unforeseen or exigent circumstances on behalf of the college, student, or the instructor; you agree to abide by the terms set forth in this syllabus.

### **Attendance**

Normal progress and successful completion of scholastic work depends upon regular attendance. Students are expected to attend all classes and laboratories for which they are registered (unless course meeting(s) are canceled for administrative or other reasons. [ Note: Any course cancelation(s) will be posted under ANNOUNCEMENTS in Canvas. **Please check announcements before each scheduled course meeting.** This is intended to provide advance notification of cancelation(s) to students to avoid traveling to campus if a class is canceled. Course cancelation(s) are typically very rare.

Instructors set an attendance policy for each class, and it is the student's responsibility to know and comply with each one. Instructors may drop a student from a class for infractions of the attendance policy. Any student who misses two (2) successive class meetings may be dropped from this course by the instructor. In the event of exigent circumstances, you must notify the instructor via email ([ballen@cuesta.edu](mailto:ballen@cuesta.edu)) that you will be missing two (2) successive course meetings and provide reasonable evidence of exigency or you may be dropped by the instructor. You must also not drop more than 2-weeks behind in "due-date Canvas assignments" or you may be dropped from the course by the instructor. Again, In the event of exigent circumstances, you must notify the instructor via email ([ballen@cuesta.edu](mailto:ballen@cuesta.edu)) if you fall more than 2-weeks behind "due-date Canvas assignments" with reasonable evidence of exigency or you may be dropped by the instructor.

**To assure a seat in the class, registered students are advised to attend the first-class session.** If you are on the wait-list or attempting to add the course, it is strongly recommended that you attend the first-class session. It is the student's responsibility to officially withdraw from a course which the student is no longer attending. Failure to officially withdraw from a class may result in an "F" (failing) grade.

Note: If for any reason, you stop attending the course it is **your responsibility** to officially drop the course through banner. Although the instructor may drop you from the course for missing two (2) consecutive meetings (or) falling more than 2-weeks behind "due-date Canvas assignments", it is still the student's responsibility to officially drop/withdraw from the course to avoid a letter grade on your transcripts consistent with your comprehensive course grade.

You also acknowledge that it is your responsibility to officially add the course if provided an add code by your instructor. Please be sure to read the entire syllabus and ask your instructor to clarify any questions before acknowledging the syllabus on Canvas.

Your acknowledgement of the terms and conditions in this syllabus will count toward your course grade as the first laboratory completion exercise / code.

Cuesta College and the EET Department faculty are committed to assisting you with your academic, industry placement, transfer and other related goals. Your instructor is committed to help you succeed!