SALT LAKE COMMUNITY COLLEGE

NAME OF DEPARTMENT - APPRENTICESHIP

PREFIX AND NUMBER OF COURSE – ELI 1110

NAME OF COURSE – ELECTRICITY IA

SEMESTER AND TERM –

INSTRUCTOR'S NAME –

PHONE

E-MAIL ADDRESS

MAILBOX LOCATION –

CONSULTATION HOURS - BY APPOINTMENT

TEXTBOOKS

Mike Holt's Illustrated Guide to Basic Electrical Theory – 3rd Edition
Digital Multimeter Principles by Glen A. Mazur
Mike Holt's Illustrated Guide to Understanding the NEC – Volume 1 – 2020 NEC
2020 NEC Code Book
2020 UGLY's

OTHER MATERIALS REQUIRED

Calculator (Recommended: TI-30 or equivalent. Graphing or programmable calculators are not permitted. Construction Master, Electrical Pro, Project Master, or other similar calculators are not permitted for proctored exams. Calculators on cell Phones will also not be allowed to be used.)
2020 National Electrical Code (Handbooks are not permitted.)
Pencil/Pen
Highlighter
Notebook

ELECTRONIC DEVICES

Electronic devices are not permitted to be used in the classroom. Please turn off all electronic devices. Cell phones are permitted to be in the vibrate mode. If it is necessary to answer a call, please step out of the classroom and make it as brief as possible. Extended phone calls may result in reduction of clock hours.

COURSE DESCRIPTION

Electrical materials and devices, safety on the job site and handling of tools and equipment. Math for electricians and electrical code including definitions and basic direct current fundamentals.

PREREQUISITE

All entering students must demonstrate competence for placement into MATH 1010 by scoring 300 or higher on the mathematics College Placement Test, or provide a transcript showing a grade of C or higher in MATH 0990 or equivalent, or complete ELI 1470 (Math for the Trades) with a grade of C or higher.

COURSE GOALS &/OR LEARNING OBJECTIVES

At the conclusion of this course, the student will demonstrate:

1. A knowledge of basic measurement calculations as well as volume and area calculations.
2. Satisfactory ability to identify and describe the operation of basic electrical devices to include switches and Ground Fault Circuit Interrupters (GFCI).
3. An understanding of electron theory, circuiting and Ohm's Law. This includes the ability to indentify circuit conductors and the relationship between the various circuit properties (Voltage, Current, and Resistance),
4. The ability to perform basic electrical calculations including basic voltage drop and Series circuit calculations.
5. An understanding of general electrical construction knowledge to include construction documents, tool identification, and typical lighting hazards.
6. An introductory understanding of Article 90 to 406 of the NEC

This knowledge will be demonstrated by a final end of semester competency exam on which the student will be required to score a minimum of 75%. The students will also be required to be certified in First Aid and CPR.

COURSE REQUIREMENTS

- **CLASSROOM EXAMS** – Unit tests and exams will be given periodically throughout the semester to assess the student's learning and retention of the course material. There will be a final competency exam on which the student is required to score a minimum of 75%.
- **CPR and First Aid** – Students are required to be CPR and First Aid certified before the end of the semester. Students are required to obtain certification at their own expense. If the student can not prove certification by the end of the semester, a failing grade will be issued for the course.
- **Preparation** – Students should expect to spend 5 hours each week in class and approximately an additional 6 hours of study/homework time each week to be successful in this course.
- **Lab requirement** – Students will be expected to attend a minimum of two labs during the semester. These labs will be scheduled by the instructor.
- **On the Job Training** – It is expected that students are employed in the electrical industry and are working full-time while attending school. It is mandatory that students hold a current valid Utah Apprentice Electrician license while enrolled in school. Students without a valid license may be administratively withdrawn from class.
- **ATTENDANCE -** As per the requirements set forth in 29 CFR 29.5 Standards of Apprenticeship paragraph (b)(4), each apprentice must successfully complete a minimum of 144 hours of related and supplemental instruction each year of Apprenticeship (72 hours each semester). In our efforts to accommodate the demanding schedules of the majority of the Apprentices registered and enrolled at Salt Lake Community College, we are offering each of our courses for a period of 75 hours each semester (2.5 hours for each of 30 evenings). The enforcement of the attendance policy is the responsibility of each instructor. Instructors are required to take attendance each evening. Individual Students will be held responsible for ensuring they have

sufficient clock hours to successfully complete the course. Salt Lake Community College will offer up to an additional 6 clock hours at the end of the semester (usually on a Saturday) for those students who need to "make-up" time. There will be an additional cost of $35 for each block of 3 clock hours, payable on the day of the class. Salt Lake Community College will only offer these additional hours if there is sufficient students to offset the costs associated with providing the training (a minimum of 10 students). Students requiring make up hours must contact the Apprenticeship Office as soon as possible. **Students are not allowed to "make-up" clock hours or labs by attending classes for which they are not registered.** Students with insufficient clock hours will not be permitted to sit for the final Competency Exam at the end of the semester. They will receive a failing grade and be required to re-take the semester course prior to moving forward in their apprenticeship.

- **COMPETENCY EXAM** – The Utah State Licensing Board has mandated a final end of semester competency exam which will be administered on the **second to last** day of class. This competency exam may include any information covered in the approved curriculum outline for the individual program with concentration on the above mentioned course goals and learning objectives. This will be a 60 question, Multiple-Choice and True/False, exam which must be completed in 2 hours. This exam will account for a major portion (25%) of the final grade awarded in the class. Students are required to bring a picture ID and a #2 pencil to this exam. Students without these items may be asked to leave and will receive a failing grade. Additionally, the following materials will be allowed to be used on the competency exam: a 2020 NEC (Handbooks are not allowed); a 2020 UGLY's; a calculator (Recommended: TI-30 or equivalent. Graphing or programmable calculators are not permitted. Construction Master, Electrical Pro, Project Master, or other similar calculators are not permitted. Calculators on cell Phones will also not be allowed to be used in the classroom.).
  **This exam will account for 25% of the final grade awarded for the class. If the student scores less than 75% on the exam, the score will be recorded as a 0 (zero). If the student scores a 75% or higher, the earned score will be calculated as 25% of the final grade.

- **GRADING SCALE AND POLICY** –Grades will be awarded based on the following percentages:
  - Homework: 25%
  - Quizzes: 25%
  - Midterms: 25%
  - Comp Exam: 25%

  THE FINAL GRADE WILL BE ISSUED ACCORDING TO THE FOLLOWING TABLE:

A	94 – 100%
A-	90 – 93%
B+	87 – 89%
B	84 – 86%
B-	80 – 83%
C+	77 – 79%
E	0 – 76%

  Students receiving an E grade will be issued 0 clock hours for the course.