The LLTC Electrical Certificate program offers an industry recognized curriculum providing the basic knowledge and skills in applied electrical theory; residential wiring, blueprint reading, construction safety and The National Electrical Code. Students gain valuable electrical experience through coursework, lab instruction and hands on work. As a graduate of the Electrical Technician program you are equipped to enter the workforce as an apprentice/mentor, depending on your interest or skill level.

Graduates may choose to work in an electrical construction related field as an apprentice or further their educational experience at an approved Minnesota Department of Labor and Industry Apprenticeship Program. An emphasis on sustainable residential electricity will introduce students for careers in the emerging green technology field. The one-year Electrical Technician Certificate is an excellent way to record an individual's course work in transcript form and prepare individuals for a career in construction electricity.

**PROGRAMMATIC OUTCOMES:**
1. Demonstrate professionalism and related employability skills.
2. Develop skills necessary to enter an apprenticeship/mentorship program in the electrical construction field.
3. Use National Electrical and Fire Codes to implement all electrical design and installation methods.
4. Apply problem solving and/or mathematical strategies to electrical circuitry.
5. Build, install and repair residential electrical systems in a lab setting.
6. Demonstrate knowledge of common safety rules with equipment operation and practices.
7. Successfully complete OSHA 10 competency exam.
8. Work with the LLTC Carpentry Program to develop and practice the skills of time management and collaboration on a construction project, such as building a house.

**LLTC ELECTRICAL TECHNICIAN CERTIFICATE**

The basic requirement for the certificate is the completion of 31 semester hours of credits. To earn a one-year Electrical Technician Certificate, a student must complete the following courses:

- **MATH 150** College Algebra or greater 3 cr.
- **ELEC 110** Intro to Electrical Circuit Theory 3 cr.
- **ELEC 114** Materials and Codes 2 cr.
- **ELEC 116** Introduction to Residential Wiring 2 cr.
- **ELEC 118** Electrical Circuit Theory 4 cr.
- **ELEC 120** Residential Wiring and the NEC (Natl elect code) 4 cr.
- **ELEC 122** Electrical Services 3 cr.
- **ELEC 124** Electrical Blueprints 2 cr.
- **ELEC 216** Motors and Controls 3 cr.
- **ENER 210** Intro to Solar Energy 2 cr.
- **EDU 140** Professional Skills 3 cr.

**Total: 31 credits**

**FALL SEMESTER PLAN - 15 CR.**
- **MATH 150**
- **ELEC 116**
- **ELEC 110**
- **ELEC 122**
- **ELEC 114**
- **ENER 210**

**SPRING SEMESTER PLAN - 16 CR.**
- **ELEC 118**
- **ELEC 216**
- **ELEC 120**
- **EDU 140**
- **ELEC 124**