



SYLLABUS

Electrical Construction 46.0399

Mr. Eagleson • 2024-2025

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Program description -Electrical Construction is an instructional program that prepares individuals to apply technical knowledge and skills necessary to install, operate, maintain and repair electrically energized residential equipment. Instruction emphasizes practical application of mathematics, science, circuit diagrams and use of electrical codes and includes blueprint reading, sketching, symbol memorization and other subjects essential for employment in the electrical occupations. Independent reading of instructions and directions to complete tasks will be posted in canvas and students will have to read these instructions on their own since we have three levels of students all in the same class, the teacher will be monitoring all students at the same time making individual instruction improbable. Students will be encouraged to develop plans on their own so that they will be prepared to secure future employment or continue their education in the electrical field. Students may have the opportunity to receive industry certifications when applicable.

Textbooks:

2017, NEC, NFPA

Delmar, Cengage Learning. House Wiring on-line edition. Greg Fletcher

2003, Delmar Learning. Electrical Principals. Stephan L. Herman

2001, Delmar Learning. Electricity one 7th edition. Thomas Kubala

Note: Students will not be assigned “take-home” copies of the course textbook. Under no circumstances are students to remove (a) book (s) from the class without permission from the teacher. In other words, DO NOT EXIT THE CLASSROOM IF YOU ARE IN POSSESSION OF TEXTBOOKS.

Daily Required Materials/Items:

- All students are to show up on time, ready to learn.
- All students are required to read the Canvas page and house wiring book daily.
- All students are required to have a pen/pencil and colored pencils.

Assessment and Evaluation: All tests, quizzes and projects will be graded using Steel Center's grading scale:

90-100:	A
80-89:	B
70-79:	C
60-69:	D
<60:	E/F
Incomplete:	I

Measures of Achievement:

- 1. Work Ethics (daily grade):** This grade accounts for **34%** of the student's total grade. The scale is a 0-10 based on preparation, participation, behavior, and productivity or time on task. (see the chart in this syllabus)
- 2. Skills Grade and Knowledge Grade (tests, tasks and assignment grade):** These grades account for **66%** of the student's total grade and are comprised of the evaluation and recording of lab activities the students are assigned each marking period. The scale could be a 1-10 based or %. The knowledge portion will include but not limited to POS tasks, chapter tests, homework, quizzes, time cards, weekly logs, midterm, and final exams, and research papers. (see program brief for description).

Assignments/Timeline:

- Quizzes and tests are assigned throughout the year and throughout units to measure understanding.
- Formal papers will be written at various times throughout the school year.

Other grading factors:

- Be respectful, only one person talks at a time.
- Stay alert and move safely in the classroom and the lab.
- Dress like a professional construction worker.
- Lock your valuables in your locker.
- Electronic devices, iPad, phones or anything similar are not permitted to be in the classroom or shop and must be locked away in your locker.
- Respect others personal space.
- Students are expected to be self-motivated.

Classroom/Shop Rules:

1. Eyes on teacher and task
2. Be Prepared
3. Be Polite and professional
4. No Horseplay
5. Follow The School Rules

Consequences:

- 1X Warning and point deduction of daily grade
- 2X Parental contact and double point deduction
- 3X Office referral and triple point deduction

STEEL CENTER for CTE

Electrical Construction

Mr. Robert Eagleson



SYLLABUS AND PROGRAM RULES

ACKNOWLEDGEMENT SHEET

FOR STUDENT:

With my signature, I acknowledge that I am fully aware of the rules, procedures, and expectations for my CTE program of study. I understand that my signature indicates awareness and not necessarily approval.

Student name: _____

Student signature: _____

Date: _____

FOR PARENT/GUARDIAN:

With my signature, I acknowledge that I am fully aware of the rules, procedures, and expectations for my son's or daughter's CTE program of study. I understand that my signature indicates awareness and not necessarily approval.

Parent/Guardian signature: _____

Parent/Guardian signature: _____

Date: _____

ELECTRICAL CONSTRUCTION Daily Grading Policy 34%

DAILY GRADE RUBRIC

GOOD ATTITUDE	1
COOPERATION	1
CLASS PARTICIPATION	1
TAKES NOTES	1
ON TASK and IN WORK AREA	2
SAFETY	2
WORK CLOTHS, BOOTS	1
CLEANS-UP	1
TOTAL POSSIBLE POINTS PER DAY	10

The daily grade point loss will double if the student violates the same infraction on the same day. The point value loss will triple, and the student will be written up for insubordination should there be a third time for the same infraction on the same day. This is a real-life work facility so there will be zero tolerance to not following the rules.

Example: EC Performance Grade Task # ____ Total pts ___/10 66%

1. The project meets all National Electrical Code specifications

There will be a 1 point deduction for each item in ones grade if any of the following criteria are not met. Boxes are fastened securely Cables are securely fastened to box Cables are supported at proper distances Not more than 8" from a plastic box and not more than 12" from a metal box

Not more than 4 ½ feet between supports

At least a ¼ inch of cable sheath must be exposed in the box where entering

The cable is not closer than 1 1/4" to the faces of the studs

Boxes are not set back more than the nec permits

Wire size is in accordance with the over current protection

Conductors are terminated correctly (clockwise eyes and no bare copper beyond the back of the device)

Projects are grounded properly

At least 6" of conductor is left out for make-up (3" if box is less than 8" in any dimension)

2. The student wired the project correctly There will be a 1 point deduction

for each item in ones grade if any of the following criteria are not met. All projects will be finished with ½" drywall unless noted.

Boxes are mounted at the correct height and are level

Boxes are not going to stick out of the finished wall material

All materials are mounted plumb and level

No more than 3/4" of cable sheath is exposed inside of boxes

Conductors are terminated correctly and snug

All splices are twisted evenly with no exposed conductor showing

Conductors are not nicked during stripping process

Supports are not to loose or to tight

Wires are tucked neatly with the ground first neutral second then hot last

3. The student used the tools properly, worked safely, made a wiring diagram/schematic and completed a Job Hazard Analysis (JHA) form

There will be a 5 point reduction in your grade if you misuse or abuse the tools. There will be a 2 point deduction if the wiring diagram/schematic is not produced at the time of inspection.

There will be a 3 point deduction if the JHA is not produced at the time of inspection.

4. Clean up and project wired in a neat workman like manner (NEC

110.12)The entire work area must be neat and clean prior to the instructors' inspection, failure to clean-up will result in a 3 point deduction.

5. Project functionality and timeliness.

There will be a 5 point to 10 point deduction if the project does not function properly or is wired beyond the estimated time to complete the wiring project per student level (10,11,12).