

Automotive Electrical

CIP Code: 47.0604

Instructor:

Nathan Vannest
Automotive Instructor
Kent Career/Technical Center
1655 East Beltline N.E.
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Room# Office A192; Classroom A195; & Lab A175
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Required Materials:

- OSHA approved safety glasses (provided by instructor)
- Closed toed shoes or boot (steel toed boots are recommended, but not required)

Description of the course content:

- The Automotive Electrical class is an 18 week class with a major concentration on vehicle electrical systems
- Instructional delivery will focus on hands-on learning, group collaboration, blend of in-person and online instruction, and industry lead evaluations.
- The Electrical class is certified by ASE (Automotive Service Excellence) Education Foundation which ensures the students are instructed on the most relevant and up to date repairs and techniques.
- The Electrical class ASE Educational Foundation standards are:
 - 6. A. General Electrical Systems
 - 6. B. Battery Diagnosis and Service
 - 6. C. Starting System Diagnosis and Repair
 - 6. D. Charging System Diagnosis and Repair
 - 6. E. Lighting Systems Diagnosis and Repair
 - 6. F. Gauges, Warning Devices, and Driver Information Systems Diagnosis and Repair
 - 6. G. Horn and Wiper/Washer Diagnosis and Repair
 - 6. H. Accessories Diagnosis and Repair

Course pacing:

- The Electrical class will cover the automotive standards broken into seven units over two quarters of nine weeks
The units are as follows:

Quarter 1

- Unit 1 Safety (2 weeks)
- Unit 2 General Electrical Theory (3 weeks)
- Unit 3 General Electrical Systems (3 weeks)
- Unit 4 Batteries (1 weeks)

Quarter 2

- Unit 4 Batteries (1 weeks)
- Unit 5 Starting Systems (2 weeks)
- Unit 6 Charging Systems (2 weeks)
- Unit 7 Lighting and Accessories (3 weeks)

CTE Standards:

- Standards for automotive electrical
- Michigan CTE Employability Standards

Certifications:

- Students will have an opportunity to take the State Certification in Automotive Electrical Repair.
- Students will have an opportunity to take the ASE Student version test of MLR and Automotive Electrical Repair

Attendance Expectations:

- Students are expected to **attend class every day** that their home schools are in session.
- If students cannot attend class, they are expected to have **parent call** and inform KCTC of the reason for absents.
- **Late work cannot be made up** (an allowance of three days will be made if students' parent calls-in absents).
- Some lab tasks may not be able to be made up because of **lab time restraints**, attendance is critical

How a grade is earned:

Students' grades are:

| | | |
|---|---------------------------------------|-----|
| 1st Quarter 45% of overall Grade | | |
| | Lab Tasks (Hands-on Assessments) | 30% |
| | Tests (Summative Assessments) | 30% |
| | Quizzes (Electude Average for Module) | 10% |
| | Career and Employability | 30% |
| 2nd Quarter 45% of overall Grade | | |
| | Lab Tasks (Hands Assessments) | 30% |
| | Tests (Summative Assessments) | 30% |
| | Quizzes (Electude Average for Module) | 10% |
| | Career and Employability | 30% |
| Final Hands-on Evaluation 10% of overall Grade | | |

Employability and Lab

| | | |
|----------|--------------------------|----------------|
| 4 | Advanced | 100-95% |
| 3 | Proficient | 94-80% |
| 2 | Developing | 79-70% |
| 1 | Beginning | 69-60% |
| 0 | Minimal Knowledge | 59-0% |

Grading scale for the KCTC:

| | |
|----|---------|
| A | 100-94% |
| A- | 93-90% |
| B+ | 89-87% |
| B | 86-84% |
| B- | 83-80% |
| C+ | 79-77% |
| C | 76-74% |
| C- | 73-70% |
| | |
| D+ | 69-67% |
| D | 66-64% |
| D- | 63-60% |
| E | 59-0% |

Course resources:

- Ford Motor Online Learning/Training System.
- AC Delco Online Learning/Training System.
- Online service information is obtained from Mitchell on Demand. Ondemand5.com
- Moodle for online testing and course materials.
- PowerSchool for checking grades and attendance.
- S/P2 for safety training.

Articulated Credit:

- This course has opportunities to articulate to Ferris State University, Grand Rapids Community College, Baker College and several other technical schools.

Embedded Core Credit:

- This course offers the opportunity to earn credit towards your home school requirements for core classes such as math or science. Speaking with your counselors at both your homeschool and here at KC/TC can make sure that you qualify for those credits.

Working conditions:

- Students will work as a team of 2 to 3 students and in small groups consisting 4 to 6 students.
- Students will work on customer cars to reinforce their education.
- Students will keep their work area clean and organized at all times.
- Students are required to wear a uniform, safety glasses and leather shoes while in the shop.