

Automotive Electrical With Minor in HVAC

CIP Code: 47.0604

Instructor:

Nathan Vannest
Automotive Instructor
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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 and minor emphases on vehicle heating, ventilation, and air conditioning
- Instructional delivery will focus on hands on learning, group collaboration, and hands on task and evaluation.
- The Electrical class is certified by NATEF (National Automotive Technicians Education Foundation) which insures the students are instructed on the most relevant and up to date repairs and techniques.
- The Electrical class NATEF 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
 - 7. A. General Heating and Air Conditioning

Course pacing:

- The Electrical class will cover the automotive standards broken into three units in the first quarter and three units in the second quarter. The units are as follows:

Quarter 1

- Unit 1 Intro and Safety (3 weeks)
- Unit 2 General Electrical Systems (3 weeks)
- Unit 3 Battery (2 weeks)
- Unit 4 Starting Systems (1 weeks)

Quarter 2

- Unit 4 Starting Systems (1 weeks)
- Unit 5 Charging Systems (2 weeks)
- Unit 6 Body and Lighting Systems (3 weeks)
- HVAC System (3 weeks)

CTE Standards:

- NATEF Standards for automotive electrical
- Michigan CTE Employability Standards

Certifications:

- Students will have an opportunity to take the State Certification in 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 call or email me and let me know.
- Late work cannot be made up (an allowance of three days will be made if student is absent and calls-in).
- Some lab task may not be able to be made up because of classroom 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 (Average of Personal and Team)	10%
	Career and Employability	30%
2nd Quarter 45% of overall Grade		
	Lab Tasks (Hands Assessments)	30%
	Tests (Summative Assessments)	30%
	Quizzes (Average of Personal and Team)	10%
	Career and Employability	30%
Final Hands-on Evaluation 10% of overall Grade		

Employability and Lab

4	Advanced	100-98%
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%

Returning Students:

Students interested in coming back for a second year of automotive training must maintain a “C” average in both semesters of their first year. Allowance may be made for extenuating circumstances’ through an appeals form submitted to the automotive instructors. The appeals process will last no longer than 5 school days.

Course resources:

- Textbook, Automotive Technology Principles, Diagnosis, and Service. Third Edition. Copyright 2009.
- 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.
- AC Delco

Articulated Credit:

- This course has opportunities to articulate to Ferris State University, Grand Rapids Community 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.