



# RCTC

Regional Career Technical Center

**Course Title:**  
**Automotive  
Technology**  
**Instructor:**  
**Mr. Reavis**  
734-714-1319 Work  
734-740-4872 Cell

## Second Semester 2012-2013 Course Syllabus

### Course Overview

This is an entry-level course for auto technicians that is open to juniors and seniors and utilizes the State mandated NATF curriculum. The new NATEF Standard (just released in May 2012) now will provide exposure to all eight ASE Certification areas over a two year course of study. Students performing at employable levels should be able to pass the State of Michigan or A.S.E. certification tests in the areas studied. While the course is designed to be a two-year program, students may enroll for either one or two years. During the 2012-13 school-year, we will be concentrating on Brakes for the first semester and Electrical/Electronic Systems the following semester. We will also have component sections on Safety, Hazardous Materials, Hand Tools, Power Tools, Measuring Instruments, Fasteners, Tires, Heating & A/C, Automatic Transmissions, and Hybrid Vehicles. The class is approximately 40% classroom work and 60% lab work. Students provide their own work clothes and some hand tools.

Students may earn a full high school math credit in addition to college credits with Washtenaw Community College, Ferris State University, University of Northwestern Ohio, Universal Technical Institute (UTI), Wyo-Tech (formerly Wyoming Technical College), Ohio Technical College (OTC), or Lincoln Technical Institute on an articulation basis while in high school. With instructor's permission, students may elect this class for a second year.

### Prerequisites

- **Must be either a junior or senior in high school**
- **Must have a genuine interest in Automotive Technology**
- **Must be able to provide own transportation to the auto center if coming from a school that does not provide it**

### Course Content

We will (over a two year period) cover all eight ASE Master Mechanic Certification Areas

- **A1 Engine Repair (2013-14)**
- **A2 Automatic Transmission/Transaxle (2012-13)**
- **A3 Manual Drive Train and Axles (2013-14)**
- **A4 Suspension and Steering (2013-14)**
- **A5 Brakes (2012-13)**
- **A6 Electrical/Electronic Systems (2012-13)**
- **A7 Heating and Air Conditioning (2012-13)**
- **A8 Engine Performance (2013-14)**

### Course Materials

- **Textbook (Introduction to Automotive Service by James Halderman © 2013 ISBN 978-0-13-300533-2)**
- **Lab Sheets**
- **Safety glasses**
- **Shoes (no spike heels, slippers, or open toed shoes are permitted)**
- **Students are encouraged to bring a change of clothes or coveralls**

## **Course Policies**

### ***Absences and Makeup Work***

- *If a student will be absent for any reason, they must call the instructor directly and explain the reason for the absence. (His cell# is 734-740-4872).*
- *Students are permitted a maximum of five (5) sick days and one (1) personal day per semester. All other absences will be considered unexcused (except for those where the student is required to attend another school sanctioned function and the student supplies verification from the instructor or sponsor.)*

### ***Class Participation***

- *Each day the student is present for the entire class period they can receive up to 20 participation points.*
- *Participation points will be used as a factor in determining the shop portion of the class grade.*
- *In order to receive the above participation points, the student must actually participate. Those who just sit around or wander around during shop time will receive zero points for the day. Students who sleep in class will receive zero points for the day.*

### ***Classroom Rules/ Expectations***

- *Students who are tardy (unexcused) will receive a maximum of ½ of the day's points if no later than 1 hour. After 1 hour, they will be prorated based on the time of arrival.*
- *Students who leave early (unexcused) will receive no points for the day.*
- *Students who leave early (excused) will receive points prorated based on the time of departure.*
- *Students who are in the shop area without properly worn safety glasses will lose 5 points PER instance (up to the total of 20 points for the day).*
- *Students coming to class without proper shoes will be required to sit in the classroom until someone can provide proper shoes for them to wear. They will lose ½ of the day's points if they do not put on the proper shoes within 10 minutes of the start of class. If they do not have them for an hour or more, they will lose ALL points for the day.*
- *Since schedules can vary from day-to-day, students must come prepared to work in the classroom AND/OR the shop area EVERY day.*

### ***Homework Policy***

- *Class work is assigned a due date. It must be submitted by the end of class on the due date.*
- *When class time is designated as time to work on homework, the student must be actively working on it to receive that day's participation points.*
- *Students who have been absent will lose participation points for using time that is designated as shop time to do their homework unless the day they missed had been a day that had been designated as time to work on homework.*
- *Class work that is submitted the first day after returning from an excused absence will be considered as being on time.*
- *Late class work (not submitted on the due date) will receive 75% of the score it would have received if it had been on time, if submitted the day after it was due. The grade will lose an additional 1% for each additional school day that it is late.*
- *Class work that is late due to an unexcused absence will receive 60% of the score it would have received if it had been on time, if submitted the day after it was due. The grade will lose an additional 1% for each additional school day that it is late.*

## **Grading Policy**

### ***Grade Distribution***

***Grading is determined 50% by classroom work (including, but not limited to, in-class assignments, home work, and quizzes) and 50% by shop achievement (including participation points and accomplishment of NATEF designated required tasks)***

### ***Types of Assessments***

#### ***Classroom portion:***

- ***Homework has a weight of 1***
- ***In-class work has a weight of 1***
- ***Quizzes have a weight of 2***
- ***Various additional assignments will be weighted according to the importance of the assignment (students will be informed of weights at the time the assignment is given)***

#### ***Shop portion:***

- ***Shop assignments are aligned with the national NATEF task lists***
- ***Credit will be assessed based on participation and successful completion of assignments***
- ***Tasks will be performed in small groups***

#### ***Progress Reports***

- ***Will be issued per YPSD schedule***
- ***Within reason can be issued more frequently at student or parent request***
- ***Students will be informed on a regular basis about missing assignments.***

## **Course Procedures**

### ***Work Requirements***

- ***In order to receive the above participation points, the student must actually participate. Those who just sit around or wander around during shop time will receive zero points for the day.***
- ***Students who sleep in class will receive zero points for the day.***
- ***In order to receive credit for the shop portion of the grade, students must complete a detailed accounting of what tasks they did and how they did them.***

#### ***Students must keep a notebook that contains:***

- ***Any hand-outs***
- ***Homework and class work that has been returned***
- ***Quizzes that have been returned***
- ***Shop task sheets that have been returned***
- ***Any other assignments that have been returned***

**RCTC Automotive Technology (Electrical/Electronics)**

**Tentative classroom schedule for second semester of 2012-13 school year\***

	<b>Homework assigned</b>	<b>Homework due</b>
<b>Tuesday 1-29</b> 1. Go over Ch 20 in class.	Read Chapter 20 Do questions at end of chapter 20. Due Tuesday 2-5	
<b>Tuesday 2-5</b> 1. Answer concerns about Ch 20 questions. 2. Quiz on Ch 20 3. Go over Ch 21 in class.	Read Chapter 21 Do questions at end of Chapter 21. Due Tuesday 2-12	Questions at end of Chapter 20
<b>Tuesday 2-12</b> 1. Answer concerns about Ch 21 questions. 2. Quiz on Ch 21 3. Go over Ch 22 in class.	Read Chapter 22 Do questions at end of Chapter 22. Due Tuesday 2-26	Questions at end of Chapter 21
<b>Tuesday 2-19</b> Winter Break No Classes at RCTC		
<b>Tuesday 2-26</b> 1. Answer concerns about Ch 22 questions. 2. Quiz on Ch 22 3. Go over Ch 23 in class.	Read Chapter 23 Do questions at end of Chapter 23. Due Tuesday 3-12	Questions at end of Chapter 22
<b>Tuesday 3-5</b> MME testing for juniors at YHS Shop day for everyone else		
<b>Tuesday 3-12</b> 1. Answer concerns about Ch 23 questions. 2. Quiz on Ch 23 3. Go over Ch 24 in class.	Read Chapter 24 Do questions at end of chapter 24. Due Tuesday 3-19	Questions at end of Chapter 23
<b>Tuesday 3-19</b> 1. Answer concerns about Ch 24 questions. 2. Quiz on Ch 24 3. Go over Ch 25 in class.	Read Chapter 25 Do questions at end of chapter 25. Due Tuesday 3-26	Questions at end of Chapter 24
<b>Tuesday 3-26</b> 1. Answer concerns about Ch 25 questions. 2. Quiz on Ch 25 3. Go over Ch 26 in class.	Read Chapter 26 Do questions at end of chapter 26. Due Tuesday 4-9	Questions at end of Chapter 25
<b>Tuesday 4-2</b> Spring Break No Classes at RCTC		
<b>Tuesday 4-9</b> 1. Answer concerns about Ch 26 questions. 2. Quiz on Ch 26 3. Go over Ch 27 in class.	Read Chapter 27 Do questions at end of chapter 27. Due Tuesday 4-16	Questions at end of Chapter 26

	<b>Homework assigned</b>	<b>Homework due</b>
<b>Tuesday 4-16</b> 1. Review problems with Ch 27 questions. 2. Quiz on Ch 27 3. Go over Ch 33 in class.	Read Chapter 33 Do questions at end of chapter 33. Due Tuesday 4-23	Questions at end of Chapter 27
<b>Tuesday 4-23</b> 1. Review problems with Ch 33 questions. 2. Quiz on Ch 33 3. Go over Ch 40 in class.	Read Chapter 40 Do questions at end of chapter 40. Due Tuesday 4-30	Questions at end of Chapter 33
<b>Tuesday 4-30</b> 1. Review problems with Ch 40 questions. 2. Quiz on Ch 40 3. Go over Ch 39 in class.	Read Chapter 39 Do questions at end of chapter 39. Due Tuesday 5-7	Questions at end of Chapter 40
<b>Tuesday 5-7</b> 1. Review problems with Ch 39 questions. 2. Quiz on Ch 39		
<b>Thursday 5-9</b> <b>Review for Written Final Exam (Ch 20, 21, 22, 23, 23, 25, 26, 27, 33, 39, and 40)</b>		
<b>Tuesday 5-14</b> 1. Written Final Exam		
<b>Thursday 5-16</b> 1. Practical Final Exam		
<b>Tuesday 5-21</b> 1. Exam Fudge Factor Day		
<b>Tuesday 5-28</b> 1. Shop day if everything is caught up		
<b>Tuesday 6-4</b> 1. Shop day if everything is caught up		
<b>Balance of year to catch up on completing NATEF Task List Items</b>		

*Signature(s) I, \_\_\_\_\_, have read the information contained in this course syllabus and understand what will be expected of me in order to be successful in this class.*

*Signed \_\_\_\_\_*

- Chapter 20:** Electrical Fundamentals (**Electrical**) **A6**
- Chapter 21:** Electrical Circuits (**Electrical**) **A6**
- Chapter 22:** Circuit Testers and Digital Meters (**Electrical**) **A6**
- Chapter 23:** Starting and Charging Systems (**Electrical**) **A6**
- Chapter 24:** Dash Warning Lights and Driver Information Systems (**Electrical**) **A6**
- Chapter 25:** Lighting System Inspection (**Electrical**) **A6**
- Chapter 26:** Safety Belts and Airbag Systems
- Chapter 27:** Heating and Air Conditioning Systems (**Heating & A/C**) **A7**
- Chapter 33:** Hybrid Electric Vehicles
- Chapter 40:** Used Vehicle and Pre-Delivery Inspection
- Chapter 39:** Automatic Transmission/Transaxles (**Automatic Transmissions**) **A2**