**LYONS TOWNSHIP HIGH SCHOOL DISTRICT 204**

**Applied Arts/Tech**

**LTCC: Car Care Essentials - Level 4 - Grades 11 & 12 – Semester Course**

**Course Syllabus**

**Course Standards:**

Don’t leave home without it! This course will teach the necessary skills in basic car care,  
preventative maintenance, and road-side safety. Students will learn how to maximize the life of his/her vehicle while saving money and becoming a self-sufficient automotive technician. Students will have the opportunity to work on live vehicle repairs after covering units such as, vehicle history, vehicle ID methods, under hood checks, lubrication and cooling systems, tires, brakes, steering and suspension, purchasing used vehicles, and detailing an automobile. This course is the foundation of the automotive program.

**Core Instructional Resources:**

This class will be taught through note guided lecture, discussion, and lab work. Students will conduct labs through many different models of cars, owned by themselves, the school, and the faculty. Hand and power tools are used on a regular basis.

**Supplementary Instructional Resources:**

*Materials:*  Pen, Pencil, Paper, Student notebook, Safety Glasses (Z87 approved), Shop clothes and shoes (optional), NATEF Job Sheets Work Book

Resources: Classroom auto book, Library, Internet, and Magazines, All Data

**Media (film, video, etc.), Field Trips, Guest Speakers, etc:**

Media:

- Various Automotive VHS and DVD videos, YouTube

* Power Point Presentations

Trips: - Chicago Auto Show

Guest Speakers:

* Universal Technical Institute
* Wyoming Technical Institute

**“Other” LTCC Exclusive Opportunities:**

* Dealership (Spring/Winter break Internships) 10 Students
  + Job Offers over summer
* Engine rebuild Competition (Nationally Qualifying) 5 Students
* Auto Club (Wednesdays 3-5:30) Room 176 NC

**Major Projects/Performance:**

**Dream Car:**

You have just graduated college and have officially started your first paying job! You have saved up $25,000 and will now spend what should be paying off your college loans on a brand new ride and modifications of your choice. Your dream car will finally become a reality! You are going to create a presentation explaining in detail how you will go about building your car.

**Homework Policy:**

- Late work will be accepted up to 3 days.

- Each day an assignment is late 15% of the overall grade will be deducted.

DON’T MISS LABS!

-Labs must get signed within 24 hrs of completing the lab. Failure to do so will result in an **M** (missing which counts as a 0 in the grade book) and must be made up on YOUR free time. (Study Hall, Lunch, Before/After School)

**Grading Scale:**

The student will be graded using quizzes, exams, homework, and lab write-ups. Total points will be calculated to determine the grade for the class…. *There is no rounding up!*

**100-90 (A) 89.9-80 (B) 79.9-70 (C) 69.9-60 (D) 59.9-0 (F)**

**% of Each?**

Homework- 20%

Exams- 40%

Lab Sheets- 40%

Final Exam- 20%

**Lab Behavior**

When in lab, ***SAFETY*** is #1 priority. Any act deemed unsafe by teacher, the student will be sent to the classroom and receiving a failing grade for that lab. Multiple offenses may cause for permanent removal from the LAB.

**Teacher:** Mr. Engelhardt - (708) 579 6434 (Ext. 6434) [Jengelhardt@lths.net](mailto:Jengelhardt@lths.net)

**Division Chair/Assistant Division Chair**

Mr. Jason Hlavacs - TEL: SC (708) 579-7439 / NC (708) 579-6381 / FAX: (708) 579-6726

**Car Care Essentials Course Outline**

**Unit 1: Safety**

* Safety Power Point
* Safety forms & glasses
* Hoisting / Lift Lab Demo
* Safety video
* Safety test (Must get 100%)
* Book Work - Chapters 6, 7, & 11
* ***Job Sheets***

***- 8: Safety Checklist***

***- 9: Fire Extinguisher***

***- 15: Vehicle Hoisting***

***- 13: Power & Shop Equip Safety***

**Unit 2: Tools**

* Tools Power Point
* Tools Game
* Tools Test
* Book Work - Chapters 9 & 10
* ***Job Sheets***

***- 12: Hand Tool Identification***

**Unit 3: Vehicle Identification/Under Hood Checks**

* Vehicle ID Methods Power Point
* Safety Work Form Overview
* Under Hood Check Demo
* Under Hood Check/Lift Lab (Bring your car in)
* Vehicle ID Test
* Book Work - Chapters 15 & 16
* ***Job Sheets***

***- 24: Vin Code***

***- 26: Technical Service Bulletins***

***- 28: Vehicle Safety Certification Label***

***- 29: Vehicle Emission Control Information***

***- 30: Safety Check (Car)***

***- 34/199: Cooling System Inspection***

***- 35: Accessory Drive belt Inspection***

***- 296: Brake Fluid Inspection***

***- 214: Inspect Belts & Hoses***

***- 66: Fluid Leakage Detection***

***- 67: Engine Fluid Leaks***

***- 31: Windshield Wiper Blade Service***

***- 38: Fluid Check***

***- 146: Battery Specifications***

***- 148: Battery & Capacity Tests***

**Unit 4: Road Side Safety**

* Road Side Safety Power Point
* Changing a Tire Lab (Scissors Jack)
* Jump Starting Lab
* Road Side Safety Quiz
* Book Work - None
* ***Job Sheets***

***- 151: Battery Charging***

***- 152: Jump Starting***

***- 306: Install Wheel & Torque Lug Nuts***

**Unit 5: Lubrication / Oil**

* Lubrication / Oil changes Power Point
* Oil Change Demo
* Oil Change Shop Car Lab (3 days)
* Oil Change Live Lab
* Lubrication / Oil Test
* Book Work - Chapter 22
* ***Job Sheets***

***- 33/56: Engine Oil Change***

***- 32: Engine Oil Dipstick Test***

**Unit 6: Tires**

* Tires Power Point
* Tire Rotation lab / Tire Drill & Repair Lab
* Tire Machine / Tire Balancer Demo/Lab
* Tire Test
* Book Work - Chapters 109 & 111
* ***Job Sheets***

***- 36/335: Tire Rotation***

***- 331: Tire Identification***

***- 333: Tire Inspection & Air Loss***

***- 338: Tire Replacement (Machine)***

***- 339: Tire Repair (Drill Lab)***

**Unit 7: Brakes**

* Brakes Power Point
* Brake Pad/Rotor Demonstration
* Brake Pad/Rotor Practice (Shop Cars)
* Brake Job Live Lab
* Brakes Test
* Book Work - Chapters 99, 101, & 102

**Unit 7: Brakes (Cont)**

* ***Job Sheets***

***- 285: Brake System Component Identification***

***- 307: Disc Brake Identification***

***- 303: Drum Brake Identification***

***- 308: Disc Brake Diagnosis & Service***

***- 293: Red Brake Warning Lamp Diagnosis***

***- 314: Parking Brake Indicator Light***

***- 310: Brake Pad Wear Indicator System***

**Unit 8: Cooling System**

* Coolant Power Point
* Coolant Flush Demonstration
* Coolant Flush Labs (Shop Cars)
* Live Coolant Flush Lab
* Cooling System Test
* Book Work - Chapters 20 & 21
* ***Job Sheets***

***- 45: Coolant Flush***

***- 46: Cooling System Tests***

***- 48: Engine Cooling System Inspection***

***- 51: Radiator and Heater Hose Replacement***

***- 54: Engine Fan inspection and Testing***

**Unit 9: Used Car**

* Used Car Power Point
* Buying, fixing, and selling vehicles
* Used vs. New
* What to look for (Crash)
* Detailing an Automobile
* Dream Car Project

- Best Presentation Builds/Races Their Dream Car in Forza Motorsports

* Book Work - None
* ***Job Sheets (None)***

Classroom Management Plan Mr. Engelhardt LTCC 2015-2016

**My classroom Philosophy:**

**Act like an adult and you will be treated like one!** I believe, as a teacher my responsibility is to provide my students with a safely monitored and controlled classroom.  Effective classroom management starts with cooperation and understanding from my students.

**Expectations/Policies/Rules/Boundaries:**

1. When I’m talking…. you’re not
2. When someone else is talking……
3. Safety (Safety glasses, No Horseplay)
4. Respect (Yourself, Each Other, Rules, tools, etc.)
5. Honesty will take you far in my classroom (don’t lose my trust…)
6. Be on time to class
7. Bring appropriate materials to class daily (Pen, Pencil, Paper, Notepad, etc.)
8. French ***WILL NOT*** be tolerated
9. You can and may plead your case
10. Allaccidents should be reported to the teacher immediately
11. Each student will receive 3 hall visits per semester
12. Truancy does ***NOT*** give you another day to complete an assignment!
13. Any items considered a weapon or a potential personal safety risk for you or other students will be confiscated and the student will be immediately transported to the office where proper punishment will be issued. (Knife, Lighters, BB Gun, Drugs, Etc.)
14. I will ONLY respond to emails sent from your LTHS account. Other addresses will get no response.
15. All assignments are due on the specified due date. **15%** of final grade will be issued for every day late up till 3 days. After 3 days the assignment will no longer be accepted.
16. The final bell signifies class is over… NOT you’re dismissed, please wait to be dismissed.

**Consequences:**

1. Verbal warning
2. Loss of points
3. Students teacher conference
4. Call to request home intervention / Referral to administration

MY GOAL IS **NOT** TO SEND YOU TO THE OFFICE…

YOU ARE ADULTS….

ACT LIKE ONE…

**Promoting Motivation:**

* If my students act like adults they will be treated like adults. This results in complete respect via teacher/student. This creates a positive learning environment where students can thoroughly enjoy and absorb everything this class has to offer. Negativity is frowned upon and creativity is encouraged! “**Making Mistakes & Understanding them is the Key to Learning”**

**Classroom Setting:**

- Students anticipate coming to class because of the highly adult structured classroom environment. “***Freedom*** and ***Responsibility*** are one of the same”

- Clean, Organized, Safe, **FUN,** Laid Back, Work Friendly Environment

- Classroom is clearly split into 2 sections. (Classroom & Lab)

- **No students!** outside the auto’s program are allowed in the lab portion of the classroom at any time without my permission and will be accompanied by myself or another auto’s student at all times.

- **Additional Help?**

**Parental Involvement:**

* Students will have this Classroom Management Plan signed by their legal guardian and returned by the date specified.
* Parents will be involved for both positive and negative student behavior. It is my goal that parents are fully involved and aware of their students’ progress in my classroom.

**Vision:**

* A typical/Ideal day in my classroom entails seeing my students explore their creative and experimental side. The classroom is respectful, managed, organized, and is involved in the curriculum/assignments for that day. Students are having fun, questions are being asked, in depth learning is taking place, and my students can take home valuable and useful information that can be used in their everyday life.

If you put forth an honest effort, We will have a great semester!

Cleaning / Open Labs – (Job Sheet) Signatures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Make/  Model | Job Description | Did you feel today went well and why? | Was job area clean? Mr. E. Signature |
|  |  |  |  |  |
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|  |  |  |  |  |
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|  |  |  |  |  |

**Safety and Lab Work Form**

**Owner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Make: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Model: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**VIN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mileage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Year: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Engine Size: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Job Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**(Was / Now) (Was / Now)**

**Tires: F/D Cond. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ F/P Cond. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PSI: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ PSI: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**

**R/D Cond. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R/P Cond. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PSI: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ PSI: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Air Filter: OK Replace Next Visit Needs Replacement**

**Belts: OK Glazing / Cracks / Loose Needs Replacement**

**Hoses: OK Bulging / Brittle / Leaking Needs Replacement**

**Coolant: OK Brown/Milky/Chunky Needs Replacement**

**Transmission Fluid: OK Filled $ 7.00 Per Quart? \_\_\_\_\_\_**

**Oil: OK Filled $4.00 / $7.00 x \_\_\_\_ qts = $\_\_\_\_\_\_\_**

**Brake Fluid: OK Filled / $2.00 BF Flush Recommended**

**Power Steering: OK Filled / $2.00 PS Flush Recommended**

**Windshield Wipers: OK Brittle / Dirty / Smudge Needs Replacement**

**Windshield Solution: OK Filled / $2.00**

**Running/Turn/Brakes Lights OK Burnt Out Which One(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Brakes: Rotors: (F) \_\_\_\_\_\_\_\_\_(R) \_\_\_\_\_\_\_\_\_\_Pad Life (% remaining) (F) \_\_\_\_\_\_\_% (R) \_\_\_\_\_\_\_%**

**Special Write-Up: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Vehicle Work cannot be warranted and LTHS has the right to hold car if it unsafe to drive. There is also no guarantee that the car will be done by the end of the day. In other words if it is a students car and it is un drivable they must have planned alternate means of transportation ahead of time. Parts and disposal fees will be charged to the owner of the car. If the amount due has not been paid the vehicle will not be released.

Release of Liability:

With intending to be legally bound hereby, the undersigned agrees and does hereby release from liability and to indemnify and hold harmless Lyons Township High School District #204, and any of its employees/students, and Board of Education as regards to automotive class. This release is for any and all liability for personal injuries (including death) and property losses or damage occasioned by, or in connection with any activity or accommodations for this class. The undersigned further agrees to abide by all the rules and regulations promulgated by Lyons Township High School and/or its staff/students throughout the time the vehicle is in this class.

**Registered Owner \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_**

***Contact Information: Phone # or (EXT): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

*Labor Cost: $\_\_\_\_\_\_\_\_\_\_*

**(Group/s)** *Parts Cost: $\_\_\_\_\_\_\_\_\_\_*

**Work Done By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *Total Amount Due:* $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(***Bill to be paid at LTHS North Book Store)*

**Class Groups**

**Period: \_\_\_\_\_\_**

**Group #1 Group #2 Group #3**

**1.\_\_\_\_\_\_\_\_ 1.\_\_\_\_\_\_\_\_ 1.\_\_\_\_\_\_\_\_**

**2.\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_**

**3.\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_**

**4.\_\_\_\_\_\_\_\_ 4.\_\_\_\_\_\_\_\_ 4.\_\_\_\_\_\_\_\_**

**Group #4 Group #5 Group #6**

**1.\_\_\_\_\_\_\_\_ 1.\_\_\_\_\_\_\_\_ 1.\_\_\_\_\_\_\_\_**

**2.\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_**

**3.\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_**

**4.\_\_\_\_\_\_\_\_ 4.\_\_\_\_\_\_\_\_ 4.\_\_\_\_\_\_\_\_**

**Rotations: (Technicians =T, Shop Manager= SM, Tool Manager= TM)**

**#1- [T-1,2, TM-3 SM-4] #2- [T-2,3, TM-4 SM-1]**

**#3- [T-3,4, TM-1 SM-2] #4- [T-4,1, TM-2 SM-3]**

**AFTER ROTATION #4, IT STARTS ALL OVER AGAIN**

LTHS AutoShop *2015-16*

Bathroom/Locker Pass

Date:\_\_\_\_\_\_\_\_

LTHS AutoShop *2015-16*

Bathroom/Locker Pass

Date:\_\_\_\_\_\_\_\_

LTHS AutoShop *2015-16*

Bathroom/Locker Pass

Date:\_\_\_\_\_\_\_\_