

# **Course Syllabus (Automotive) Maintenance & Light Repair CTE20104**

## **Course Description**

**Aim:** There is a high demand for motivated and creative individuals in the automotive technician field. The desire for the students to receive industry-based training at the basic level and step up to the higher level of competency in this field is the ultimate goal of this course. Students who complete this course should be able to test for their ASE certification in this field.

**Grade Level:** 10<sup>TH</sup>-12<sup>TH</sup>

**Length:** Semester 1 is for online theory. Semester 2 is tasksheet completion.

**Prerequisites:** None

- **Topics Covered:**
- Introduction to auto shop and personal safety
- Tools and equipment
- Looking for information
- Preparing vehicle for service
- Preparing vehicle for customer
- Basic vehicle service
- Engine repair
- Automatic transmission
- Manual drive train and axles
- Suspension and steering
- Brakes
- Electrical/electronic systems
- Heating and air conditioning
- Engine performance

## **Instructional Philosophy and Delivery Plan**

**Expectation:** Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum percentage based on their local grading scale.

**Delivery Method:** Instruction will consist of online delivery of the course material, supervised by the instructor. Hands on skills will be supervised by a local ASE certified technician.

**Assessment:** Students will be graded on the following items, daily work, tests, and lab task sheets, if the hands-on portion is being completed.

## **Course Standards**

**GST 1.1 Identify and demonstrate general shop safety rules and procedures using OSHA standards**

**GST 1.2 Utilize safe procedures for handling of tools and equipment.**

**GST 2.1 Identify tools and their proper usage in automotive applications**

**GST 3.1 Identify sources of service information**

**GST 3.2 Identify proper vehicle identification information**

**GST 4.1 Prepare vehicle for service**

**GST 5.1 Ensure vehicle is prepared to return to the customer per school/company policy**

**GST 6.1 Perform basic vehicle service**

**GST 7.1 Test and perform actions necessary to repair engine**

**GST 8.1 Service transmission system.**

**GST 9.1 Diagnose and repair manual drive train and axles**

**GST 10.1 Diagnose suspension and steering; determine necessary action.**

**GST 10.2 Inspect and repair tire and wheel assembly**

**GST 11.1 Diagnose and repair brake fluid system**

**GST 11.2 Inspect and repair brake shoes and drum assemblies**

**GST 11.3 Inspect and repair caliper assembly**

**GST 11.4 Inspect and repair rotor assembly**

**GST 11.5 Inspect and repair vacuum supply**

**GST 11.6 Inspect and repair brake indicator light components**

**GST 12.1 Diagnose electrical circuit problems**

**GST 12.2 Inspect and repair battery problems**

**GST 12.3 Diagnose and repair starter**

**GST 12.4 Diagnose and repair charging system**

**GST 13.1 Identify and visually inspect A/C system components**

**GST 14.1 Perform the necessary tests and repairs to improve engine performance**

**GST15.1 Research career opportunities in the transportation, distribution, and logistics (TD&L) fields.**

## **Major Course Projects**

- **CDX Lab task sheets, if doing the hands-on section (Semester 2).**

### Assessment Plan & Grading Scale (may be adjusted to local school scale)

<b>Grade</b>	<b>Scale</b>	<b>Description of Work</b>
<b>A</b>	<b>92-100%</b>	Consistently demonstrates an exceptional level of quality and effort. Having all work in on time and completed to exceed expectations. Mastery in evaluating, synthesizing, and applying the knowledge.
<b>B</b>	<b>84-91%</b>	Consistently demonstrates proficient knowledge with a good effort and quality of work. All assignments are complete and on time. Demonstrates the ability to evaluate, analyze, synthesize and apply the principles.
<b>C</b>	<b>76-83%</b>	Demonstrates proficient knowledge and the ability to apply knowledge. Work shows average effort. A few assignments may be missed or late.
<b>D</b>	<b>68-75%</b>	Work shows minimal effort and some assignments are late. Demonstrates a basic understanding of recalling or comprehending knowledge
<b>F</b>	<b>Below – 68%</b>	Understanding is below basic. Work is of poor quality and does not meet standards or expectations.