# Engine Mechanical Repair Course No. 40216 Credit: 0.5

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| **Student name:** |  | **Graduation Date:** |  |

Pathways and CIP Codes:Vehicle Maintenance & Repair (47.0600)

Course Description: A **technical level** course that covers the tools, skills, and techniques required to perform base engine mechanical repair and testing. This includes engine removal, installation, and maintenance.

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: automotive engine rebuild

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Correctly identify the parts and describe the operation of an internal combustion engine (diesel, gas, 2-stroke, 4-stroke). |  |
| 1.2 | Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action. |  |
| 1.3 | Disassemble and reassemble an internal combustion engine correctly, including finding engine torque and assembly specifications. This may be done in modules. (Example: Cylinder Head Gasket, valve train, and crankshaft). |  |
| 1.4 | Identify and safely use and maintain the tools needed to perform mechanical repairs, including precision measurement tools. |  |
| 1.5 | Identify the machining processes involved with engine mechanical repair. |  |
| 1.6 | Clean and inspect engine parts to determine their quality and usability, including magna-fluxing and dye testing. |  |
| 1.7 | Demonstrate knowledge of the removal and installation of an engine. |  |
| 1.8 | Inspect, repair, or service cooling and lubrication system components. |  |
| 1.9 | Demonstrate knowledge of broken fastener and thread repair techniques. |  |
| 1.10 | Demonstrate knowledge of the various types of gaskets, sealers, and thread lockers and their usages. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

[pathwayshelpdesk@ksde.org](mailto:pathwayshelpdesk@ksde.org)



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