# Engine Performance I Course No. 40220 Credit: 0.5

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

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

Course Description: A comprehensive, **technical level** course designed to provide students with the basic skills needed to inspect, understand, and diagnose engine control systems.

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: general diagnosis

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Demonstrate and apply safe working practices with tools and machines. |  |
| 1.2 | Identify and follow safety procedures as outlined in OSHA guidelines. |  |
| 1.3 | Access VIN information, electronic service information, and complete customer repair order. |  |
| 1.4 | Perform engine absolute (vacuum/boost) manifold pressure tests; determine necessary action. |  |
| 1.5 | Identify engine service precautions for hybrid vehicles. |  |
| 1.6 | Demonstrate knowledge of vehicle networking. |  |
| 1.7 | Verify engine operating temperature. |  |

Benchmark 2: Computerized controls

Competencies

| # | DESCRIPTION | RATING |
| --- | --- | --- |
| 2.1 | Retrieve and record diagnostic trouble codes. |  |
| 2.2 | Describe the importance of operating all OBDII monitors for repair verification |  |
| 2.3 | Identify and test computer input sensors and devices. |  |
| 2.4 | Identify and test computer-controlled output devices. |  |

## Benchmark 3: Ignition system diagnosis and repair

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Identify, test, and replace ignition system primary and secondary components. |  |

Benchmark 4: Fuel, Air, Induction, and Exhaust systems

Competencies

| # | DESCRIPTION | RATING |
| --- | --- | --- |
| 4.1 | Diagnose ignition/fuel related no start conditions. |  |
| 4.2 | Diagnose ignition/fuel related misfire conditions, power loss, and poor drivability |  |
| 4.3 | Inspect, service, or replace air filters, filter housings, and intake duct work. |  |

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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