

# DIESEL & HEAVY EQUIPMENT TECHNICIAN



Two-Year Technical Diploma  
 32-412-1

Diesel and heavy equipment technicians repair and maintain transportation equipment, such as heavy trucks, buses, locomotives, ships, and automobiles; construction equipment such as bulldozers, cranes, and road graders; and farm equipment such as tractors and combines. Many technicians perform a broad range of repairs from engines to electrical systems. Others specialize in repairs such as fuel and starting systems. Diesel and Heavy equipment technicians use a variety of computerized testing equipment to pinpoint and analyze malfunctions as well as numerous power and hand tools to perform repairs.

The Diesel and Heavy Equipment Technician Program is a two-year program providing job entry skills in service and repair of transportation, construction, industrial, and farm equipment. In addition to providing a foundation in the latest diesel technologies, the program improves skills needed to interpret technical manuals and communicate with coworkers and customers. Students in the program develop a broad base of skills, allowing them to enter the large and ever-expanding field of diesel and heavy equipment service and repair.

## Program Outcomes

- Diagnose, repair and service brake systems
- Diagnose, repair and service Steering & Suspension Systems
- Diagnose, repair and service Electrical/Electronic Systems
- Diagnose, repair and service HVAC Systems
- Diagnose, repair and service Drive Train Systems
- Diagnose, repair and service Hydraulic Systems
- Diagnose, repair and service Diesel Engines

## Graduates Have Found Employment As

- Diesel Mechanic
- Diesel Mechanic Apprentice
- Engine Maintenance Mechanic
- Farm Equipment Mechanic
- Service Engine Repairer
- Tune-up Mechanic
- Industrial and Construction Equipment Mechanic
- Truck Mechanic

View the entire course listing (<http://catalog.blackhawk.edu/courses/>).

| Semester 1     |                              | Credits   |
|----------------|------------------------------|-----------|
| 412-450        | Introduction to Heavy Diesel | 1         |
| 412-451        | Brake Service 1              | 1         |
| 412-452        | Brake Service 2              | 2         |
| 412-453        | Brake Service 3              | 1         |
| 412-454        | Steering & Suspension 1      | 1         |
| 412-455        | Steering & Suspension 2      | 1         |
| 412-456        | Steering & Suspension 3      | 1         |
| 412-457        | Steering & Suspension 4      | 1         |
| 412-458        | Drivetrain 1                 | 1         |
| 412-459        | Drivetrain 2                 | 1         |
| 412-460        | Drivetrain 3                 | 1         |
| 412-461        | Drivetrain 4                 | 1         |
| 804-315        | Trade Math 1                 | 1         |
| <b>Credits</b> |                              | <b>14</b> |
| Semester 2     |                              |           |
| 412-462        | Electrical Fundamentals 1    | 1         |
| 412-463        | Electrical Fundamentals 2    | 1         |
| 412-464        | Electrical Fundamentals 3    | 1         |

|         |                              |   |
|---------|------------------------------|---|
| 412-465 | Electrical Fundamentals 4    | 1 |
| 412-466 | Electrical Troubleshooting 1 | 1 |
| 412-467 | Electrical Troubleshooting 2 | 1 |
| 412-468 | Electrical Troubleshooting 3 | 1 |
| 412-469 | Electrical Troubleshooting 4 | 1 |
| 412-470 | Diesel HVAC 1                | 1 |
| 412-471 | Diesel HVAC 2                | 1 |
| 412-472 | Diesel HVAC 3                | 1 |
| 801-311 | Communication                | 2 |

**Credits 13**

**Semester 3**

|         |                              |   |
|---------|------------------------------|---|
| 412-473 | Advanced Safety Procedures   | 1 |
| 412-474 | Engine Fundamentals 1        | 1 |
| 412-475 | Engine Fundamentals 2        | 1 |
| 412-476 | Engine Fundamentals 3        | 1 |
| 412-477 | Engine Fundamentals 4        | 1 |
| 412-478 | Engine Service Repair 1      | 1 |
| 412-479 | Engine Service Repair 2      | 1 |
| 412-480 | Engine Service Repair 3      | 1 |
| 412-481 | Engine Service Repair 4      | 1 |
| 412-482 | Engine Service Repair 5      | 1 |
| 412-483 | Engine Service Repair 6      | 1 |
| 442-142 | Introduction to Welding      | 1 |
| 442-143 | Shielded Metal Arc Welding 1 | 1 |

**Credits 13**

**Semester 4**

|         |                                       |   |
|---------|---------------------------------------|---|
| 412-484 | Hydraulics 1                          | 1 |
| 412-485 | Hydraulics 2                          | 1 |
| 412-486 | Hydraulics 3                          | 1 |
| 412-487 | Hydraulics 4                          | 1 |
| 412-488 | Diesel Fuel Systems 1                 | 1 |
| 412-489 | Diesel Fuel Systems 2                 | 1 |
| 412-490 | Diesel Fuel Systems 3                 | 1 |
| 412-491 | Diesel Fuel Systems 4                 | 1 |
| 412-497 | Alternate Fuels                       | 1 |
| 412-492 | Inspection & Maintenance Procedures 1 | 1 |
| 412-493 | Inspection & Maintenance Procedures 2 | 1 |
| 412-494 | Inspection & Maintenance Procedures 3 | 1 |
| 412-495 | Inspection & Maintenance Procedures 4 | 1 |
| 412-496 | ASE Certification Review              | 1 |

**Credits 14**

**Total Credits 54**

**General Education Courses Within Program**

| Code    | Title              | Credits |
|---------|--------------------|---------|
| 801-311 | Communication      | 2       |
| 804-306 | Shop Mathematics I | 2       |
| 806-315 | Applied Science    | 2       |