

**Heavy Equipment Operations or  
Heavy Equipment Maintenance**  
*Certificate - 28 or 30 credit hours*

**Purpose:** The Heavy Equipment Maintenance and Heavy Equipment Operations programs prepare students for operations and maintenance jobs in the forestry, trucking, earth-moving, or construction industries. Through intensive shop and field oriented courses, students are introduced to a variety of heavy equipment and learn to operate and maintain, repair, and rebuild it. Emphasis is placed on the maintenance of drive train, running gear, external engine components, and hydraulic systems, as well as on the proper operation of bulldozers, trucks, pay-loaders, backhoes, and other heavy equipment.

**Career Opportunities:** Graduates of this certificate program may find entry level employment as heavy equipment operators or mechanics for construction companies, logging companies, farm operations, or equipment dealers.

**Program Educational Outcomes:** Upon completion of the certificate curriculum in this program, the graduate is prepared to:

1. Demonstrate knowledge of safety issues via OSHA certification as well as certifications in Red Cross, First Aid, and CPR.
2. Operate, maintain, repair, and rebuild a variety of heavy equipment.
3. Maintain drive train, running gear, external engine components, and hydraulic systems.
4. Properly operate bulldozers, trucks, pay-loaders, backhoes, and other heavy equipment.
5. Qualify for employment as entry level operators or technicians for construction, logging, farm operations, or equipment dealers.

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| <b>Course #</b>                         | <b>Course Title</b>                       | <b>Credits</b> |
|---|---|----------------|
| <b>Semester 1</b>                       |   |                |
| ENG101                                  | College Composition                       | 3              |
| FYE100                                  | First Year Experience                     | 1              |
| MET100                                  | General Service                           | 3              |
| MET102                                  | Introduction to OSHA Safety/First Aid/CPR | 3              |
| MET150                                  | Introduction to Equipment Operations      | 2              |
| MET151                                  | Heavy Equipment Operation Project         | 4              |
|   | <b>Total</b>                              | <b>16</b>      |
| <b>Semester 2</b>                       |   |                |
| MAT106                                  | College Mathematics for Technologies      | 3              |
| WEL109                                  | Introductory Welding                      | 2              |
|   | <b>Total</b>                              | <b>5</b>       |
| <b>HEO Certificate</b>                  |   |                |
| MET155                                  | Grade Work                                | 3              |
| MET156                                  | Forklift Operation and Maintenance        | 2              |
| MET157                                  | Crane Theory and Maintenance              | 2              |
|   | <b>Total</b>                              | <b>7</b>       |
| <b>HEM Certificate</b>                  |   |                |
| Choose from 3 of the following courses: |   |                |
| MET152                                  | Heavy Duty Brakes                         | 3              |
| MET153                                  | Heavy Duty Steering & Suspension          | 3              |
| MET158                                  | Heavy Duty Electrical Systems             | 3              |
| MET159                                  | Power Trains                              | 3              |
| MET220                                  | Equipment Hydraulics                      | 3              |
|   | <b>Total</b>                              | <b>9</b>       |