



Heavy Equipment Repair Technician A.A.S.

Curriculum Code: 1055

Effective: Fall 2020 – Summer 2025

Description

A heavy equipment repair technician is responsible for the efficient, timely, and proper repair on a variety of heavy-duty construction and road equipment. The technician must be knowledgeable in repair of all systems used in heavy equipment including diesel engines, fuel systems, powertrain, electronics, and hydraulics. The technician must be able to diagnose problems, plan repairs including required labor and parts, and then complete the repair. Repairs must be completed with consideration to safety, MIOSHA, and environmental guidelines. A repair technician must be able to work with a minimum of supervision as repairs may be made off site. Attention to detail and a sense of responsibility are required. Students completing this curriculum may also be eligible to apply for a certificate in Heavy Equipment Repair (1041).

Additional Information

All Heavy Equipment Repair (HERT) courses are taught at AIS Construction, 3600 N. Grand River Ave. in Lansing. In addition, one of the courses may be taught by the AIS Construction staff.

Contact Information

Contact the Heavy Equipment Repair Program at the West Campus Building, Room M103, telephone number 517-267-6406.

General Education - Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (Second Course)/Communications or Applied Communications – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Math II, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours

Program of Study Required Courses

| Course Code | Course Title | Credit / Billing Hours |
|-------------|--------------------------------|------------------------|
| AUTM 161 | Auto Heating/Air Conditioning | 4 / 6 |
| HERT 110 | Equipment Introduction | 5 / 5 |
| HERT 120 | Heavy Engine Rebuild | 6 / 6 |
| HERT 125 | Heavy Equipment Electronics | 5 / 5 |
| HERT 130 | Equipment Hydraulics | 6 / 6 |
| HERT 135 | Diesel Fuel System | 4 / 4 |
| HERT 140 | Equipment Powertrain | 5 / 5 |
| HERT 145 | Equipment Service Writing | 4 / 4 |
| WELD 102 | Industrial/Construction Safety | 2 / 3 |

Program of Study Required Courses, Limited Choice – *Select one*

| Course Code | Course Title | Credit / Billing Hours |
|-------------|-----------------------------|------------------------|
| HERT 210 | Heavy Equipment Internship | 3 / 3 |
| MGMT 150 | Managing Customer Relations | 3 / 3 |
| WELD 103 | Combination Welding | 4 / 6 |

Total Credit Hours

61-62 credits / 66-69 billing hours

Recommended Course Sequence

| Semester I (Fall) | Semester II (Spring) |
|--|----------------------------------|
| Gen Ed – English Composition HERT 110 HERT 120 WELD 102 | AUTM 161 HERT 125 HERT 140 |

| Semester III (Summer) | Semester IV (Fall) |
|-----------------------|--|
| HERT 135 HERT 145 | Gen Ed – English Composition (Second Course)/ Communications or Applied Communications Gen Ed – Mathematics or Applied Mathematics HERT 130 |

| Semester V (Spring) |
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| Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab Limited Choice |