

HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY

* All students applying for the transportation programs are **REQUIRED** to attend a Tuesday Campus Visit

Delivery: Daytime Classes
Start: Fall Semester, Full-Time
Location: Rosemount Campus

Outcomes

Heavy Construction Equip. Technology A.A.S. Degree. . . 72 cr.
 Heavy Construction Equip. Mechanic Diploma. 64 cr.
 Heavy Construction Equip. Maintenance Certificate. . . . 29 cr.

Major Description

Coursework prepares students to succeed as well-trained, mechanically minded, hard-working technicians with heavy equipment dealers and contractors. Instruction involves classroom theory, live shop demonstrations, and repair of heavy equipment currently used in industry. Making repairs on actual equipment is vital to skill development.

Work Environment

Heavy equipment dealers and earth-moving contractors are top employers. Jobs are also available with mining and logging companies. Most mechanics work in indoor shops, but experienced field service technicians travel to job sites to perform repairs.

Potential Job Titles

- Mobile Heavy Equipment Technician
- Construction Equipment Technician
- Field Service Technician
- Dealer Service Technician

Salary Data

- Average Wage: \$26.40/hour
- Top earners: \$29.64/hour

Accreditation

This program is accredited by the Associated Equipment Distributors Foundation (AED).

HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY - A.A.S. DEGREE

*This is a sample course sequence.
 Please contact your program advisor regarding your academic plans.*

First Year - First Semester

HCEM1102	General Shop Mechanics - Introduction	3
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
ENGL1150	Composition I (OR ENGL1200)	3
Total Credits		17

First Year - Second Semester

HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1262	Preventative Maintenance	2
HCEM1271	CAT Basics Training	2
PHIL1200	Critical Thinking	3
SPEE1020	Interpersonal Communication	3
Total Credits		21

Second Year - First Semester

HCEM2115	Transmissions	4
HCEM2135	Hydraulics I	3
HCEM2177	Machine Electronics I	2
HCEM2238	Hydraulics II	3
HCEM2265	Differentials	2
BIOL1110	Environmental Science	3
Total Credits		17

Second Year - Second Semester

HCEM2145	Hydrostatic Systems	3
HCEM2225	Track Drive Systems	3
HCEM2256	Steering Systems	2
HCEM2260	Machine Electronics II	2
HCEM2271	CAT Advanced Training	2
HCEM2280	Climate Control	2
HIST1450	The History of Minnesota	3
Total Credits		17

TOTAL PROGRAM REQUIREMENTS 72

**HEAVY CONSTRUCTION EQUIPMENT MECHANIC
- DIPLOMA**

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First Year - First Semester

HCEM1102	General Shop Mechanics - Introduction	3
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
ENGL1150	Composition I (OR ENGL1200)	3
Total Credits		17

First Year - Second Semester

HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1262	Preventative Maintenance	2
HCEM1271	CAT Basics Training	2
PHIL1200	Critical Thinking	3
SPEE1020	Interpersonal Communication	3
Total Credits		21

Second Year - First Semester

HCEM2115	Transmissions	4
HCEM2135	Hydraulics I	3
HCEM2177	Machine Electronics I	2
HCEM2238	Hydraulics II	3
HCEM2265	Differentials	2
Total Credits		14

Second Year - Second Semester

HCEM2145	Hydrostatic Systems	3
HCEM2225	Track Drive Systems	3
HCEM2256	Steering Systems	2
HCEM2260	Machine Electronics II	2
HCEM2280	Climate Control	2
Total Credits		12

TOTAL PROGRAM REQUIREMENTS 64

**HEAVY CONSTRUCTION EQUIPMENT
MAINTENANCE - CERTIFICATE**

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First Year - First Semester

HCEM1102	General Shop Mechanics - Introduction	3
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
Total Credits		14

First Year - Second Semester

HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1262	Preventative Maintenance	2
HCEM1271	CAT Basics Training	2
Total Credits		15

TOTAL PROGRAM REQUIREMENTS 29



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TECHNICAL COLLEGE**

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2018-2019 CATALOG