

HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY

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

Outcome

Heavy Construction Equipment Technology A.A.S. Degree 72 credits
 Heavy Construction Equipment Technology Diploma 64 credits
 Heavy Construction Maintenance Certificate 28 credits

Major Description

Coursework prepares students to succeed as well-trained, mechanically minded, hard-working mechanics with heavy equipment dealers and contractors. Instruction involves classroom theory, mock-up demonstrations and repair of customer-owned heavy equipment. Making repairs on actual equipment is vital to skill development. Mechanics already in the field can update their knowledge by registering for specific courses.

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 Mechanic
- Construction Equipment Overhauled
- Caterpillar Mechanic
- Construction Equipment Mechanic
- Machine Overhauled
- Field Service Technician

Salary Data

- Average Wage: \$24.24/hour
- Top earners: \$31.83/hour

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

Completion of this degree will also satisfy the requirements for the Advanced Caterpillar Technology A.A.S. degree, which prepares students for a challenging career with a focus on the Caterpillar product line. Ziegler/Caterpillar of Minnesota/Iowa has formed a partnership with DCTC to offer this degree.

Fall Semester – First Year

Course#	Course Title	Credits
HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1160	Specialized Lab I	3
COML1400	Introduction to Computers	3
Total Credits		17

Spring Semester – First Year

Course#	Course Title	Credits
HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1261	Specialized Lab II-A.A.S.	2
SPEE1020	Interpersonal Communication	3
	General Education Elective**	3
Total Credits		19

Fall Semester – Second Year

Course#	Course Title	Credits
HCEM2115	Transmissions	4
HCEM2135	Hydraulics I	3
HCEM2145	Hydrostatic Systems	3
HCEM2176	Specialized Lab III-A.A.S.	2
	General Education Electives**	7
Total Credits		19

Spring Semester – Second Year

Course#	Course Title	Credits
HCEM2225	Track Drive Systems	3
HCEM2238	Hydraulics II	3
HCEM2255	Steering Systems	3
HCEM2265	Differentials	2
HCEM2280	Climate Control	2
	General Education Elective (MnTC Goal 3 or 4)**	4
Total Credits		17

TOTAL PROGRAM REQUIREMENTS 72

This is a sample course sequence resulting in an A.A.S. degree. Please consult your program advisor regarding your academic plans.

*** Select General Education electives from any MnTC goal area. See pages 116-118 in the college catalog.*

HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY – DIPLOMA

Fall Semester – First Year

Course#	Course Title	Credits
HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1160	Specialized Lab I	3
COML1400	Introduction to Computers	3
Total Credits		17

Spring Semester – First Year

Course#	Course Title	Credits
HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1261	Specialized Lab II-A.A.S.	2
SPEE1020	Interpersonal Communication	3
Total Credits		16

Fall Semester – Second Year

Course#	Course Title	Credits
HCEM2115	Transmissions	4
HCEM2135	Hydraulics I	3
HCEM2145	Hydrostatic Systems	3
HCEM2176	Specialized Lab III-A.A.S.	2
ENGL1100	Writing and Research Skills (or ENGL1102)	3
Total Credits		15

Spring Semester – Second Year

Course#	Course Title	Credits
HCEM2225	Track Drive Systems	3
HCEM2238	Hydraulics II	3
HCEM2255	Steering Systems	3
HCEM2265	Differentials	2
HCEM2280	Climate Control	2
	Technical Elective*	3
Total Credits		16
TOTAL PROGRAM REQUIREMENTS		64

*This is a sample course sequence resulting in a diploma.
Please consult your program advisor regarding your academic plans.*

* Technical Electives – Student must choose between HCEM2279
Specialized Lab IV 1–3 credits and/or HCEM2280 Climate Control 2 credits.

HEAVY CONSTRUCTION EQUIPMENT MAINTENANCE – CERTIFICATE

Fall Semester – First Year

Course#	Course Title	Credits
HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1160	Specialized Lab I	3
Total Credits		14

Spring Semester – First Year

Course#	Course Title	Credits
HCEM1234	Heavy Duty Electronics	3
HCEM1246	Diesel Engine Overhaul II	3
HCEM1250	Brakes	2
HCEM1256	Diesel Engine Tune-up	3
HCEM1260	Specialized Lab II	3
Total Credits		14
TOTAL PROGRAM REQUIREMENTS		28

*This is a sample course sequence resulting in a certificate.
Please consult your program advisor regarding your academic plans.*