HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY

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. Technology Diploma . . . . . 64 cr.
Heavy Construction Equip. Technology Certificate . . . . . 30 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: $25.76/hour
- Top earners: $30.41/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.

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

First Year - First Semester

HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
HCEM1170	CAT Basics Training I	1
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
HCEM1270	CAT Basics Training II	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
HCEM2270	CAT Advanced Training III	2
HCEM2280	Climate Control	2
HIST1200	History of the U.S. from 1877 to PRESENT	3
	Total Credits	**17**
	TOTAL PROGRAM REQUIREMENTS	**72**

*** Select General Education electives from any MnTC goal area.*

HEAVY CONSTRUCTION EQUIPMENT TECHNOLOGY – DIPLOMA

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

First Year - First Semester

HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
HCEM1170	CAT Basics Training I	1
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
HCEM1270	CAT Basics Training II	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**

** Select Technical electives: HCEM2279 Specialized Lab IV 1–3 credits and/or HCEM2280 Climate Control 2 credits.*

HEAVY CONSTRUCTION EQUIPMENT MAINTENANCE – CERTIFICATE

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

First Year - First Semester

HCEM1101	General Shop Mechanics - Introduction	2
HCEM1110	Welding and Flame Cutting	2
HCEM1132	Heavy Duty Electrical	3
HCEM1140	Diesel Engine Overhaul I	4
HCEM1150	Applied Failure Analysis	2
HCEM1170	CAT Basics Training I	1
	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
HCEM1270	CAT Basics Training II	2
	Total Credits	**15**
	TOTAL PROGRAM REQUIREMENTS	**29**

DAKOTA COUNTY
TECHNICAL COLLEGE

Real Education. Real Results.

2015-2016 CATALOG