



2009-2010
Career and Technical
Programs

Advanced
Technology Division
(541) 463-5380

Two-Year Associate
of Applied Science
Degree

Lift Truck/
Material Handling
Equipment
Technician Option

Two-Year Certificate
of Completion

Diesel Technology

Purpose To prepare the graduate for employment in occupations such as heavy equipment technician, highway truck technician, and lift truck and material handling technician. Possible job opportunities are available with truck fleets, logging fleets, heavy construction companies, OEM dealerships, road construction contractors, parts sales and service, and general heavy equipment repair shops.

Learning Outcomes The graduate will:

- be able to explain and identify various technologies used in the repair of on- and off-highway vehicles.
- use lab station simulators to diagnose and troubleshoot system components.
- demonstrate checks and adjustments on heavy equipment chassis and power trains, including on highway automatic transmissions.
- demonstrate diesel engine overhaul procedures using industry standard tooling and equipment including disassembly, failure analysis, assembly, and operation of engine on a dynamometer.
- demonstrate industry troubleshooting procedures to diagnose electrical systems including starting, charging, air conditioning, electronic control systems and lighting.
- demonstrate industry troubleshooting procedures to diagnose hydraulic systems used on off- and on-highway vehicles including forklifts, crawlers, excavators, backhoes, skidsteers, and powershift transmissions.
- demonstrate and use industry safety standards.
- access library, computing, and communications services and obtain information and data from regional and national networks.
- demonstrate basic math skills using formulas to find force, pressure, area, and volume.

The lift-truck material handling option graduate will also:

- demonstrate general maintenance, diagnosis, and testing of hydraulic systems on forklifts, loaders, and equipment with hydraulic assist transmissions.

Employment Trends Statewide, 164 annual openings for diesel technicians are projected in Oregon and 17 openings are projected annually in Lane County. Those with an associate degree have a competitive advantage in this labor market.

Wages Statewide average, \$20 hourly, \$40,000 annually (\$50,000+ with experience). Lane County average, \$20 hourly, \$41,000 annually.

Costs in Addition to Tuition and Registration Fees (estimates)*

Books	\$1,300
Tools.....	\$400
Fees.....	\$648
Total	\$2,348

* Subject to change without notice, Differential fees are being considered for some courses in this program. See the online credit class schedule for current course fees.

Program Accreditation Association of Equipment Distributors Foundation (AEDF). Membership: Northwest Diesel Industry Council (NDIC).

Prerequisites Minimum placement score- of 68 in Reading OR completion of RD 080 OR prior college. A high school diploma or equivalent is recommended for all applicants to this program.

Note: See counselor or advisor to learn what entry-level skills are suggested for successful completion of this program.

Criteria Used for Admission Students may enter this program fall, winter, or spring term. For consent to enroll in major courses, students must attend a program orientation for fall terms (dates available in Counseling or Enrollment and Student Financial Services) or contact advisor/counselor in winter and spring terms.

Diesel Technology

Cooperative Education (Co-op) Co-op offers students college credit and a grade for on-the-job work experience related to their educational and career goals. Through Co-op, students connect theory and practice, develop skills, expand career knowledge, and make contacts for the future. Work schedules and work sites vary. Under the supervision of the Diesel Technology Co-op Coordinator and with instructor consent, a maximum of 18 Co-op credits in DS 280 may be earned in lieu of required Diesel Technology course credits. Contact Marv Clemons, Diesel Technology Co-op Coordinator, Bldg. 8, Rm. 111, (541) 463-3158.

Program Advisor Betty Svarverud, Bldg. 12, Rm. 203, (541) 463-5378, svarverudb@lanecc.edu

Program Counselor Carolyn Litty, Bldg. 12, Rm. 202, (541) 463-5236, littyc@lanecc.edu

Two-Year Associate of Applied Science Degree

First Year	Fall
DS 155 Heavy Equipment Hydraulics ^{*,D,G}	12
MTH 060 Beginning Algebra ^{*,D,G,M} or higher mathematics.....	4
Total Credits	16

	Winter
DS 154 Heavy Duty Braking Systems ^{*,D,G}	12
WLD 121 Shielded Metal Arc Welding 1 [*]	4
PE/Health requirement ^{D,R}	3
Total Credits	19

	Spring
DS 158 Heavy Equipment Chassis and PowerTrains ^{*,D,G} ..	12
Human Relations requirement ^R	3
WR 115W Introduction to College Writing: Workplace Emphasis ^{D,W} or higher writing	3
Total Credits	18

Second Year	Fall
DS 256 Diesel and Auxiliary Fuel Systems ^{*,D,G}	12
MTH 076 Applied Geometry for Technicians ^{*,S} or higher mathematics.....	4
Choice of:.....	3-4
MFG 197 Manufacturing Technology ^{*,D,G}	
WLD 122 Shielded Metal Arc Welding 2 [*]	
Total Credits	19-20

	Winter
DS 257 Diesel Electrical Systems ^{*,D,G}	12
CS 120 Concepts of Computing: Information Processing ^S or higher computer science.....	4
WLD 143 Wire Drive Welding 1 [*]	4
Total Credits	20

	Spring
DS 259 Diesel Engines and Engine Overhaul ^{*,D,G}	12
Arts and Letters requirement ^R	3
Total Credits	15

Elective DS 280 Co-op Ed: Diesel (optional)

Two-Year Certificate of Completion

First Year	Fall
DS 155 Heavy Equipment Hydraulics ^{*,D,G}	12
MTH 060 Beginning Algebra or MTH 076 Applied Geometry for Technicians ^{*,D,G,M} or higher mathematics.....	4
Total Credits	16

	Winter
DS 154 Heavy Duty Braking Systems ^{*,D,G}	12
WLD 121 Shielded Metal Arc Welding 1 [*]	4
Total Credits	16

	Spring
DS 158 Heavy Equipment Chassis and PowerTrains ^{*,D,G} ..	12
Human Relations requirement ^H	3
WR 115W Introduction to College Writing: Workplace Emphasis ^{D,W} or higher writing	3
Total Credits	18

Second Year	Fall
DS 256 Diesel and Auxiliary Fuel Systems ^{*,D,G}	12
Choice of:.....	3-4
MFG 197 Manufacturing Technology ^{*,D,G}	
WLD 122 Shielded Metal Arc Welding 2 [*]	
Total Credits	15-16

	Winter
DS 257 Diesel Electrical Systems ^{*,D,G}	12
WLD 143 Wire Drive Welding 1 [*]	4
Total Credits	16

	Spring
DS 259 Diesel Engines and Engine Overhaul ^{*,D,G}	12
PE/Health elective ^D	3
Total Credits	15

Diesel Technology

Diesel Technology: Lift Truck/Material Handling Equipment Technician Option

Two-Year Associate of Applied Science Degree

First Year	Fall
DS 155 Heavy Equipment Hydraulics ^{*,D,G}	12
MTH 060 Beginning Algebra ^{*,D,G,M} or higher mathematics	4
Total Credits	16

	Winter
DS 257 Diesel Electrical Systems ^{*,D,G}	12
WLD 121 Shielded Metal Arc Welding 1 [*]	4
PE/Health requirement ^{D,R}	3
Total Credits	19

	Spring
DS 259 Diesel Engines and Engine Overhaul ^{*,D,G}	8
DS 260 Lift Truck/Material Handling Equipment (Electric) ^{D,G}	4
Human Relations requirement ^R	3
WR 115W Introduction to College Writing: Workplace Emphasis ^{D,W} or higher writing	3
Total Credits	18

Second Year	Fall
DS 260 Lift Truck/Material Handling Equipment (Mast/Upright) ^{D,G}	6
DS 256 Diesel and Auxiliary Fuel Systems ^{*,D,G}	6
MTH 076 Applied Geometry for Technicians ^{*,S} or higher mathematics	4
Choice of:.....	3-4
WLD 122 Shielded Metal Arc Welding 2 [*] MFG 197 Manufacturing Technology ^{*,D,G}	_____
Total Credits	19-20

	Winter
AM 244 Engine Performance ^{*,D,G}	4
CS 120 Concepts of Computing: Information Processing ^S	4
DS 260 Lift Truck/Material Handling Equipment (Electric) ^{D,G}	5
DS 154 Heavy Duty Braking Systems ^{*,D,G}	3
WLD 143 Wire Drive Welding 1 [*]	4
Total Credits	20

	Spring
DS 260 Lift Truck/Material Handling Equipment (Electric/ Maintenance/Schematics) ^{D,G}	9
DS 158 Heavy Equipment Chassis and Power Trains ^{*,D,G} ..	3
Arts and Letters requirement ^R	3
Elective DS 280 Co-op Ed: Diesel (optional)	_____
Total Credits	15

Standard footnotes:

* Prerequisite required

A Meets Arts/Letters requirement

B Must be passed with grade of "B-" or better to use as a prerequisite

D Degree or certificate requirement; must be passed with grade of "C-" or better

G Must be taken for a grade, not P/NP; major requirement

H Meets Human Relations/Social Science requirement

M Meets Mathematics requirement

P Meets PE/Health requirement

R Required for AAS degree

S Meets Science/Math/Computer Science requirement

W Meets Written Communications or English Composition requirement

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and compliance with the *Americans with Disabilities Act* 6/09