

DIESEL SERVICE TECHNOLOGY

pcc.edu/programs/diesel

CAREER AND PROGRAM DESCRIPTION

The diesel service technician repairs and maintains diesel powered trucks and equipment and their support systems.

The program is designed to prepare students for entry-level positions in diesel service technology. Training is varied to give students a broad understanding and background in the different phases of the diesel service industry. Students have additional cost for tools and books.

DEGREES AND CERTIFICATES OFFERED

ASSOCIATE OF APPLIED SCIENCE DEGREE

Diesel Service Technology
Electric Power Generation Service Technology

TWO-YEAR CERTIFICATE

Diesel Service Technology

LESS THAN ONE-YEAR CERTIFICATE

Diesel Service Technology

LESS THAN ONE-YEAR CERTIFICATE CAREER PATHWAY

Electric Power Generation Service Technology

Academic Prerequisites

Diesel Service Technology AAS:

- Completion of RD 80 or higher or equivalent placement test score.
- Completion of MTH 20 or higher or equivalent placement test score or successful completion of the diesel service technology math entrance exam.

Electric Power Generation Service Technology AAS:

- Applicants must pass the placement test administered through the testing center at PCC or an equivalent testing center.
- Required minimum program entrance level requirements: completion of WR 121 or higher, and MTH 98, MTH 65 or any course for which MTH 65 is a prerequisite.
- This is a limited entry program.
 - Application and acceptance process: All prospective students must apply to PCC and the department. For details on final program acceptance and other information contact 971-722-7488.

Diesel Service Technology Certificates:

- Completion of RD 80 or higher or equivalent placement test score.
- Completion of MTH 20 or higher or equivalent placement test score or successful completion of the Diesel Service Technology Math Entrance Exam.

Electric Power Generation Service Technology Certificate:

- Applicants must pass the placement test administered through the testing center at PCC or an equivalent testing center.
- Required minimum program entrance level requirements: completion of WR 121 or higher, and MTH 98 MTH 65 or any course for which MTH 65 is a prerequisite.
- The Electric Power Generation Service Technology certificate is a limited entry program requiring department chair approval. For more details, see the Diesel Department webpage or contact the department chair at 971-722-7488. Completing the certificate

admission requirements does not guarantee admission into the program.

Academic Requirements

- Students must complete every DS course with a grade of "C" or "P" or higher to receive credit for that course towards a DS degree or certificate.
- Students must complete every EPG course with a grade of "C" or "P" or higher to receive credit for that course towards a EPG degree or certificate.

Non-Academic Prerequisites

- None

Non-Academic Requirements

- None

ASSOCIATE OF APPLIED SCIENCE DEGREE

Diesel Service Technology (p. 1)
Electric Power Generation Service Technology (p. 1)

DIESEL SERVICE TECHNOLOGY AAS DEGREE

Minimum 92 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of four courses of General Education. Math/computation competency is met through the math course(s) required in the program of study. Students should consult with program advisors for course planning.

Diesel Service Degree Courses

Code	Title	Credits
CG 209	Job Finding Skills	1
DS 100	Heavy Duty Diesel Electrical/Cummins Electronic Controls	12
DS 101	Diesel Engine Rebuild and Lab Procedures	12
DS 102	Truck Power Train	6
DS 103	Fuel Injection Systems	6
DS 105	Fundamentals of Mobile Air Conditioning Systems	3
DS 106	PMI/Detroit Diesel Electronic Control	4
DS 202	Heavy Duty Power Train	6
DS 203	Fuel Injection Diag, Elect Eng Controls & Aftertreatment	6
DS 205	Mobile and Hydrostatic Hydraulics	9
DS 206	Medium/Heavy Duty Truck Brake, Suspension & Steering	8
MTH 65	Introductory Algebra - Second Term ¹	(4)
WLD 217	Diesel Welding	3
WR 121	Composition I (WR121=WR121Z) ²	4
General Education: 4 courses		
Total Credits		92

¹

Complete MTH 65 or higher, or successful completion of MTH 65 Competency test.

²

This course is part of Oregon Common Course Numbering. WR 121 and WR 121Z are equivalent.

ELECTRIC POWER GENERATION SERVICE TECHNOLOGY AAS DEGREE

Minimum 91 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science

Requirements. Students must complete a total of four courses of General Education. Math/computation competency is met through the math course(s) required in the program of study. Students should consult with program advisors for course planning.

Electric Power Generation Service Technology Degree Courses

Code	Title	Credits
CG 209	Job Finding Skills	1
EPG 101	Electrical Industry Basic Tooling and Safety	4
EPG 102	AC/DC Theory	6
EPG 103	Engine Systems	4
EPG 104	Generator, Alternator, and Motor Fundamentals	4
EPG 105	Generator Application and Installation	2
EPG 106	Instruments, Controls, and Protection	5
EPG 107	Power Generation Troubleshooting and Diagnostics	5
EPG 108	Generator Paralleling and Load Sharing	5
MTH 65	Introductory Algebra - Second Term	(4)
WLD 217	Diesel Welding	3
WR 121	Composition I (WR121=WR121Z) ^Z	4
General Education: 4 courses		
Complete all courses in Diesel Service Track One OR all courses in Dealer Service Track Two		36
Total Credits		91

1

DS 100 requirement may be fulfilled by the completion of DS 104 and DS 204.

Z

This course is part of Oregon Common Course Numbering. WR 121 and WR 121Z are equivalent.

DIESEL SERVICE TRACK ONE

Code	Title	Credits
DS 100	Heavy Duty Diesel Electrical/Cummins Electronic Controls ¹	12
DS 101	Diesel Engine Rebuild and Lab Procedures	12
DS 103	Fuel Injection Systems	6
DS 203	Fuel Injection Diag, Elect Eng Controls & Aftertreatment	6

DEALER SERVICE TRACK TWO

Code	Title	Credits
DST 110	Caterpillar Engine Fundamentals	8
DST 111	Introduction to Caterpillar Service Industry	3
DST 112	Caterpillar Hydraulic Fundamentals	4
DST 113	Caterpillar Engine Fuel Systems	4
DST 114	Fundamentals of Electrical Systems	4
DST 115	Air Conditioning	3
DST 117	Caterpillar Machine Hydraulic Systems	4
DST 201	Machine Electronic Systems	4
DST 202	Caterpillar Engine Performance	3
DST 203	Caterpillar Machine Diagnostic	3
DST 204	Machine Specific Systems	6

TWO-YEAR CERTIFICATE

Diesel Service Technology (p. 2)

LESS THAN ONE-YEAR CERTIFICATE

Diesel Service Technology (p. 3)

LESS THAN ONE-YEAR CERTIFICATE CAREER PATHWAY

Electric Power Generation Service Technology (p. 3)

DIESEL SERVICE TECHNOLOGY TWO-YEAR CERTIFICATE

Minimum 92 credits. Students must meet all certificate requirements.

Diesel Service Technology Certificate Courses

Code	Title	Credits
CG 209	Job Finding Skills	1
DS 100	Heavy Duty Diesel Electrical/Cummins Electronic Controls	12
DS 101	Diesel Engine Rebuild and Lab Procedures	12
DS 102	Truck Power Train	6
DS 103	Fuel Injection Systems	6
DS 105	Fundamentals of Mobile Air Conditioning Systems	3
DS 106	PMI/Detroit Diesel Electronic Control	4
DS 202	Heavy Duty Power Train	6
DS 203	Fuel Injection Diag, Elect Eng Controls & Aftertreatment	6
DS 205	Mobile and Hydrostatic Hydraulics	9
DS 206	Medium/Heavy Duty Truck Brake, Suspension & Steering	8
MTH 105	Math in Society (MTH105=MTH105Z) (or any course for which MTH 95 is a prerequisite) ^{§,Z}	4
WLD 217	Diesel Welding	3
WR 121	Composition I (WR121=WR121Z) ^{§,Z}	4
or WR 122	Composition II (WR122=WR122Z)	
or WR 227	Technical Writing (WR227=WR227Z)	
Diesel Service Technology Human Relations Electives [§]		8
Total Credits		92

§

Course contains Related Instruction and cannot be substituted with another course; Related Instruction details can be viewed here.

Z

This course is part of Oregon Common Course Numbering. The following courses are equivalent:

MTH 105 and MTH 105Z

WR 122 and WR 122Z

WR 227 and WR 227Z

DIESEL SERVICE TECHNOLOGY RELATED INSTRUCTION HUMAN RELATIONS ELECTIVES

Code	Title	Credits
Students must complete a minimum of 8 credits from this list to fulfill the human relations related instruction requirement.		
CG 191	Exploring Identity and Diversity for College Success	4
PSY 101	Psychology and Human Relations	4
PSY 201A	Introduction to Psychology - Part 1	4

PSY 202A	Introduction to Psychology - Part 2	4
PSY 214	Introduction to Personality	4
PSY 215	Human Development	4
PSY 216	Social Psychology	4
PSY 222	Family & Intimate Relationships	4
PSY 231	Foundations of Human Sexuality	4
PSY 232	Human Sexuality in Social Context	4
PSY 236	Psychology of Adult Development and Aging	4
PSY 239	Introduction to Abnormal Psychology	4
PSY 240	Personal Awareness and Growth	4
SOC 204	Introduction to Sociology	4
SOC 206	Social Problems	4
SOC 213	Diversity in the United States	4
SOC 218	Sociology of Gender	4
SOC 232	Death and Dying: Culture and Issues	4
WS 101	Women's Studies	4

DIESEL SERVICE TECHNOLOGY LESS THAN ONE-YEAR CERTIFICATE

Minimum 40 credits. Students must also meet all certificate requirements.

Diesel Service Technology Certificate Courses

Code	Title	Credits
CG 209	Job Finding Skills	1
WLD 217	Diesel Welding	3
Diesel Service Technology Electives		36
Total Credits		40

DIESEL SERVICE TECHNOLOGY CERTIFICATE ELECTIVES

Code	Title	Credits
DS 100	Heavy Duty Diesel Electrical/Cummins Electronic Controls ¹	12
DS 101	Diesel Engine Rebuild and Lab Procedures	12
DS 102	Truck Power Train	6
DS 103	Fuel Injection Systems	6
DS 105	Fundamentals of Mobile Air Conditioning Systems	6
DS 106	PMI/Detroit Diesel Electronic Control	4
DS 202	Heavy Duty Power Train	6
DS 203	Fuel Injection Diag, Elect Eng Controls & Aftertreatment	6
DS 205	Mobile and Hydrostatic Hydraulics	6
DS 206	Medium/Heavy Duty Truck Brake, Suspension & Steering	8

1

DS 100 requirement may be met by the completion of DS 104 and DS 204.

ELECTRIC POWER GENERATION SERVICE TECHNOLOGY CAREER PATHWAY CERTIFICATE

Minimum 30 credits. Students must meet all certificate requirements.

Electric Power Generation Service Technology Courses

Code	Title	Credits
EPG 101	Electrical Industry Basic Tooling and Safety	4
EPG 102	AC/DC Theory	6
EPG 103	Engine Systems	4
EPG 104	Generator, Alternator, and Motor Fundamentals	4
EPG 105	Generator Application and Installation	2
EPG 106	Instruments, Controls, and Protection	5
EPG 107	Power Generation Troubleshooting and Diagnostics	5
Total Credits		30