

# DIESEL TECHNOLOGY ATC

The Diesel Technology Program provides a well-rounded education in the service and repair of trucks and heavy equipment related to areas including farming, logging, marine, locomotive, and construction. Students learn theory in shop practice, diesel engines, safety, hydraulics, DC electrical systems and microcomputers, power trains, brakes, and chassis and suspension. The student will also receive comprehensive safety training applicable to the work environment. Employment opportunities are available with a wide variety of diverse companies including trucking, logging, mining, construction, general and specialty repair shops, dealerships, and government agencies including the park service, the state, county shops, city shops, and other state and federal agencies. Students entering with prior training from high school, military, or industry can challenge portions of the training program by examination and/or performance testing. Students must achieve competencies in course work before moving to the next instructional area. Shop experience is combined with related theory. A specified set of tools is required upon entry. The tool list can be found on the program website.

All students will be subject to a Driver's License Validation check and must hold a valid driver's license while enrolled in the mechanics programs. This program has physical requirements that may affect the student's ability to perform in this program.

Entrance requirements for Advanced Technical Certificate (ATC) degree seeking students include:

- A valid driver's license with no DUI conviction within the past year.
- ALEKS score of 14 or higher in Math and Writing Placement Exam score of 2 or higher, or qualify for MTHPT-103 and ENGL-101.
- Physical recommendations as listed on US Bureau of Labor Statistics for Diesel Technology.

Upon completion of the Advanced Technical Certificate, the student will possess skills in:

- Application of shop and industry safety procedures
- Develop a safety attitude, use and identify personal protective equipment, understand fire safety, and material handling
- Understand terminology; knowledge of tools and equipment; knowledge of CDL operation; use of scan tools and diagnostic tools
- Certification in forklift and crane operation
- Evaluation of diesel engine performance
- Engine identification and external component identification
- Familiar with Power Trains systems; able to disassemble and reassemble PowerShift transmissions, straight gear transmissions, drive lines, differentials, and clutches
- Able to troubleshoot and repair various engine systems such as engine brakes, emission controls, evolving hybrids, electrical, and multiplexing.
- Knowledge of theory and operation of various systems
- Learn the basic operation and function of air brakes, chassis, and suspension systems
- Understand hydraulic schematics; diagnosing and repairing hydraulic systems
- A/C systems students will receive MACS A/C Certification
- Knowledge of DOT compliance
- Obtain Commercial Driver's License Training (CDL)

## Advanced Technical Certificate Requirements

Code	Title	Credits
<b>General Education Core</b>		
Select one of the following:		3.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ART-100	INTRODUCTION TO ART	
ECON-201	PRINCIPLES OF MACROECONOMICS	
ECON-202	PRINCIPLES OF MICROECONOMICS	
ENGL-175	LITERATURE AND IDEAS	
ENGL-257	WORLD CLASSICS	
ENGL-258	INTERNATIONAL LITERATURE	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	WORLD HISTORY I	
HIST-102	WORLD HISTORY II	
HIST-111	UNITED STATES HISTORY I	
HIST-112	UNITED STATES HISTORY II	

HRPT-184	DIVERSITY IN ORGANIZATIONS
HRPT-185	HUMAN RELATIONS IN ORGANIZATIONS
HUM-101	THE ART AND HISTORY OF THE MOTION PICTURE
HUM-150	INTRODUCTION TO THE ARTS
POLS-101	AMERICAN NATIONAL GOVERNMENT
POLS-237	INTERNATIONAL POLITICS
POLS-285	COMPARATIVE GOVERNMENT
PSYC-101	INTRODUCTION TO GENERAL PSYCHOLOGY
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY
SOC-101	INTRODUCTION TO SOCIOLOGY
SOC-102	SOCIAL PROBLEMS
SS-184	DIVERSITY IN ORGANIZATIONS
SS-185	HUMAN RELATIONS IN ORGANIZATIONS
THEA-101	SURVEY OF THE THEATER
<b>Total Credits</b>	<b>3.00</b>

## Program Requirements

Code	Title	Credits
<b>Technical Component</b>		
DSLTC-102	ELECTRICAL SYSTEMS (or DSLTC-102A, DSLTC-102B and DSLTC-102C)	6.00
DSLTC-103	POWER TRAINS LECTURE AND LAB	6.00
DSLTC-105	DIESEL ENGINES	6.00
DSLTC-126	SAFETY	2.00
DSLTC-200	SHOP SKILLS AND CLIMATE CONTROL	6.00
DSLTC-210	HYDRAULICS	6.00
DSLTC-220	DIESEL ENGINE FUEL SYSTEMS AND TUNE-UP	6.00
DSLTC-230	POWER TRAINS	6.00
DSLTC-240	CHASSIS, SUSPENSION AND AIRBRAKES	6.00
MTHPT-103	APPLIED ALGEBRA	3.00
<b>Total Credits</b>		<b>53.00</b>