

DIESEL TECHNOLOGY AAS

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. Students learn 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. Core instruction for the Diesel Technology program is provided during the first year. During the second year, students receive in-depth instruction in more complex systems. 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.

Admission requirements

1. Complete general LC State admission requirements
2. Submit college placement exam scores
3. Schedule consultation with program faculty

Entrance requirements for AAS degree seeking students in the Diesel Technology program 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 of 2 or equivalent college placement exams.
- Physical recommendations as listed in the US Bureau of Labor Statistics for Diesel Technology.

The diesel program has limited space, and a waitlist is utilized if the program is full. Duration on the waitlist is one semester. If students do not move into program classes after one semester on the waitlist, they need to reschedule their consultation.

Upon completion of the Diesel Technology Program, the student will have the basic skills to:

- 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)

General Education Requirements

Code	Title	Credits
Written Communication		
ENGL-101	WRITING AND RHETORIC I	3.00
Oral Communication		
Select one of the following:		3.00
COMM-101	FUNDAMENTALS OF ORAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	

Mathematical Ways of Knowing

MTHPT-137	MATH FOR TECHNOLOGY	4.00
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Social & Behavioral Ways of Knowing

Select one of the following:		3.00
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ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ECON-201	PRINCIPLES OF MACROECONOMICS	
ECON-202	PRINCIPLES OF MICROECONOMICS	
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	
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	

Additional General Education Core	3.00
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*Additional Core Course cannot be used to fulfill a requirement above.

Select the link below to review LC State's General Education Core courses

<http://catalog.lcsc.edu/general-education> (<http://catalog.lcsc.edu/general-education/>)

Total Credits	16.00
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Program Requirements

Code	Title	Credits
Technical Core		
DSLTC-102	ELECTRICAL SYSTEMS	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
Total Credits		50.00

Sequential Plan of Study

Course	Title	Credits
First Year		
Fall		
DSLTC-102 or DSLTC-102A <i>and</i> DSLTC-102B <i>and</i> DSLTC-102C	ELECTRICAL SYSTEMS or INTRODUCTION TO ELECTRICAL SYSTEMS <i>and</i> ELECTRICAL SYSTEMS I <i>and</i> ELECTRICAL SYSTEMS II	6.00
DSLTC-105	DIESEL ENGINES	6.00
DSLTC-126	SAFETY	2.00
MTHPT-137	MATH FOR TECHNOLOGY	4.00
Credits		18.00
Spring		
CORE	Oral Communication	3.00
DSLTC-210	HYDRAULICS	6.00
DSLTC-220	DIESEL ENGINE FUEL SYSTEMS AND TUNE-UP	6.00
ENGL-101	WRITING AND RHETORIC I	3.00
Credits		18.00
Second Year		
Fall		
CORE	Additional General Education Course	3.00
CORE	Social & Behavioral Ways of Knowing	3.00
DSLTC-103	POWER TRAINS LECTURE AND LAB	6.00
DSLTC-230	POWER TRAINS	6.00
Credits		18.00
Spring		
DSLTC-200	SHOP SKILLS AND CLIMATE CONTROL	6.00
DSLTC-240	CHASSIS, SUSPENSION AND AIRBRAKES	6.00
Credits		12.00
Total Credits		66.00

Graduates from Diesel Technology (<https://www.careeronestop.org/toolkit/careers/occupations/Occupation-profile.aspx?keyword=Bus%20and%20Truck%20Mechanics%20and%20Diesel%20Engine%20Specialists&onetcode=49303100&ES=Y&EST=diesel+mechanic>) programs go on to obtain careers in a variety of fields:

- Heavy Vehicle and Mobile Equipment Service Technician
- Diesel Mechanic/Technician
- Farm Machine Technician
- Construction Machine Technician
- Crane Technician
- Commercial Boat Mechanic