



# EDUCATIONAL PLAN

## Bachelor of Applied Science in Diesel Technology

Admission into the BAS-DT program is merit based. Meeting the minimum entrance requirements does not guarantee admission as the number of qualified applicant may exceed the number of amiable enrollment spaces. In order to be placed into the admissions pool, applicants must complete or submit the following:

- Completion of the BAS application materials and
- Proof of an earned associate's degree in diesel technology, diesel mechanics, OR equivalent degree and transcripts approved by BAS administration from a regionally accredited college or university with a minimum cumulative GPA of 2.5

The following courses must be completed prior to bachelor degree obtainment. The courses can be included in the two-year degree or be completed during the bachelor's program in additions to the required courses. Students who have completed the requirements at the time of application will receive preferred entrance consideration.

- Successful completion of each of these required courses with a minimum 2.0 grade:
  - ENGL& 101 – English Composition I (5 credits)
  - Any college level MATH requiring MATH 099 as a prerequisite (such as MATH& 107, MATH& 141, MATH& 146)

<b><u>Required course schedule</u></b>		
<b><u>Fall Quarter</u></b>		
DET 300 Applied Management	5	
DET 430 Shop/Fleet Management	5	
CMST& 220 Pubic Speaking	5	
ENGL& 101 English Composition OR College level MATH, if not met	5	
	15-20	
<b><u>Winter Quarter</u></b>		
DET 330 Hydraulics II	5	
DET 340 Combustions Engine Fuels	5	
PSYC& 100 General Psychology	5	
PHYS& 110 Physics: Non Science Major w/lab	5	
	20	
<b><u>Spring Quarter</u></b>		
DET 310 Electrical III	5	
DET 360 Power Generation & Maintenance	5	
HUM 315 Ethics	5	
DET 450 Internship	5	
	20	

<b><u>Required course scheudle</u></b>		
<b><u>Fall Quarter</u></b>		
DET 320 Emissions Control	5	
DET 400 Material Science of Fluids	5	
ENVS& 100 Survey of Env. Science	5	
	15	
<b><u>Winter Quarter</u></b>		
DET 350 Applied Failure Analysis	5	
DET 410 Regulatory Issues	5	
ENGL& 235 Technical Writing***	5	
	15	
<b><u>Spring Quarter</u></b>		
DET 420 Metalwork & Fabrication	5	
DET 440 Hybrid Drives Electric/Hydraulic	5	
ECON& 201 Microeconomics***	OR	
ECON& 202 Macroeconomics***	5	
Humanities Elective	5	
	20	
***Must meet GUR's (General University Requirements/Distribution Requirements) as listed under the <u>Associate in Arts Degree (DTA)</u> .		

# DEGREE: Bachelor of Applied Science Diesel Technology

**Learning Themes:** General education outcomes at Centralia College help students, faculty, and the general public identify learning expected when a student has completed a degree or program. The administration, faculty, and staff have agreed upon the following five Learning Themes which students can expect to encounter in their courses by the completion of any degree.

**Reasoning:** The ability to extract information from data, develop ideas and solutions, establish logical progression in thinking, and problem solve using such procedures as literary analysis or the scientific methods.

**Written, Oral and Visual Communication:** The ability to make oneself understood in public, interpersonal, professional, artistic, and technical arenas.

**Exploration-Self and Others:** An awareness of the values, beliefs, customs, and contributions of persons from one's own and other traditions, ethnicities, classes, and genders.

**Resourcefulness:** The ability to adapt to change, such as technological innovations or environmental conditions.

**Responsibility:** The ability to be accountable to self, society, and the natural world.

**Purpose:** The Bachelor of Applied Science in Diesel Technology (BAS-DT) program is designed to provide a rigorous educational experience to graduate individuals who are trained in advanced diesel technologies, and are well-grounded in management knowledge, who possess the requisite skills in leadership, communication, teamwork, and ethical values to progress to senior technological positions or to enter their employer's management development programs.

**Program Outcomes** - Students who successfully this program will have demonstrated the ability to:

- Technical
  - A. Analysis and evaluation of data – Analyze and evaluate data collected from component failures, hydraulic systems, and complex electrical circuits.
  - B. Professional interactions – Interact appropriately and professionally with customers and employees.
  - C. Complex system operations – Explain the operation of complex systems including: computerized engine and transmission controls used for fuel efficiency and emissions control; regenerative hybrid technologies used to capture energy; multi-fuel technologies to save fuel costs.
  - D. Theory application – Apply theories and skills taught in the classroom in a shop environment.
  - E. Shop procedures – Create shop procedures that reflect industry standards and maintain compliance with regulations set by governing agencies.
  - F. Fluids analysis – Apply the principles of tribology in the analysis of engine efficiency, life, and maintenance costs.
  - G. Analysis of failure modes – Analyze test results from oil, coolant, fuel, or emissions analysis systems.
- Managerial
  - H. Policies and Practices – Implement the practices, policies, and leadership to efficiently operate a fleet or repair facility.
  - I. HR management and ethical principles – Apply fundamental principles of human resource management and ethics.
  - J. Communications – Employ effective oral, written, and analytical communication appropriate to organizational settings including personnel situations and in large group discussions.
  - K. Leadership styles – Distinguish between management and leadership, and differentiate among the varieties of styles and roles of management and be able to identify the most appropriate in a given situation.
  - L. Use of teams – Create, manage, and participate effectively in teams.

## Estimated Quarterly Program Costs (subject to change without notice)

Resident Tuition (15 credits) and fixed fees*:	\$2674
US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$2808
Non US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$6207
*Tuition is subject to change due to State Legislative actions	
Books and supplies (estimate):	\$427

*Centralia College provides equal opportunity in education and does not discriminate on the basis of race, gender, color, religion, national origin, age, marital status, sexual orientation, or disability.*