

2018-2019 EDUCATIONAL PLAN

Bachelor of Applied Science Diesel Technology

Recommended course schedule

Fall Quarter, Junior Year Credits

DET 102 Forklift Certification	1
DET 300 Applied Management	5
DET 320 Emissions Control	5
Elective	<u>5</u>
	16

Winter Quarter, Junior Year Credits

DET 325 Material Science of Fluids** (NS) *	5
DET 335 Regulatory Issues	5
Elective	<u>5</u>
	15

Spring Quarter, Junior Year Credits

DET 345 Metalwork and Fabrication	5
DET 355 Hybrid Drives Electric/Hydraulic	5
DET 365 Internship	5
Elective	<u>5</u>
	20

Fall Quarter, Senior Year Credits

CMST 330 Prof and Org Communication** (H) *	5
DET 430 Shop/Fleet Management	5
DET 455 Applied Failure Analysis	5
	<u>15</u>

Winter Quarter, Senior Year Credits

DET 435 Hydraulics II	5
DET 445 Combustion Engine Fuels	5
Elective	<u>5</u>
	15

Spring Quarter, Senior Year Credits

DET 415 Electrical III *	5
DET 465 Power Generation & Maintenance	5
HUM 315 Ethics** (H) *	<u>5</u>
	15

Total Credits 96

* Course has a prerequisite.

**Must meet GUR's (General University Requirements/
Distribution Requirements) as listed under the Associate in Arts
Degree (DTA).

QTR/YR _____ CREDITS _____

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QTR/YR _____ CREDITS _____

The following courses must be completed prior to bachelor degree
obtainment. Some courses can be included in the two year degree or
be completed during the bachelor's program in addition to the required
courses.

Students must complete a total of 60 credits of General Education
courses carrying the following distributions prior to graduation. Courses
that cannot be included in an associate degree are bolded.

- Communication (C) 10 credits
 - _____
 - _____
- Humanities (H) 10 credits
 - CMST 330 Prof & Org Communication**
 - HUM 315 Ethics**
- Social Science (SS) 10 credits
 - _____
 - _____
- Quantitative Skills (M) 5 credits
 - _____
- Natural Science (NS) 10 credits, one course with lab
 - DET 325 Material Science of Fluids**
 - _____
- Distribution Elective (C), (H), (SS), (M), (NS) 15 credits
 - _____
 - _____
 - _____

DEGREE: Bachelor of Applied Science Diesel Technology

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 complete this program will have demonstrated the ability to accomplish the following:

- 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.

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.

Estimated Quarterly Program Costs (subject to change without notice)

Resident Tuition (15 credits) and fixed fees*:	\$2224
US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$2375
Non US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$6224
*Tuition is subject to change due to State Legislative actions	
Books and supplies (estimate):	\$100