



AGTC 225: COMPACT DIESEL ENGINES

Proposer:**Name:**

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Effective Term:

Fall 2021

Credit Status:

Credit - Degree Applicable

Subject:

AGTC - Agricultural Technology

Course Number:

225

Catalog Title

Compact Diesel Engines

Catalog Description

This course provides students with technical knowledge and hands-on experience in the operation and repair of compact diesel engines.

Advisory on Recommended Preparation:

AGTC 201 or equivalent college course with a minimum grade of C (may be taken concurrently)

Method of Instruction:

Distance Education

Laboratory

Lecture and/or Discussion

Course Units/Hours:**Course Units Minimum:**

3

Lecture Hours Minimum (week)

3

Lab Hours Minimum (week)

1

Total Contact Hours Minimum (semester)

70

Total Outside Hours Minimum (semester)

105

Total Student Learning Minimum Hours (semester)

175

Repeatability:

No

Open Entry/Exit:

No

**Field Trips:**

Not Required

Grade Mode:

Standard Letter

TOP Code:

011600 - * Agricultural Power Equipment Technology

SAM Code:

C - Clearly Occupational

Course Content**Methods of Assessment:**

Multiple choice tests
 Short answer quizzes or exams
 Skill demonstrations

Course Topics:

Course Topics	
1	Introduction to Diesel Engines
2	Engine Management and Safety
3	Diesel Engine Components and Service
4	Air intake and exhaust system
5	Cooling System
6	Lubrication System
7	Fuel Injection Systems
8	Troubleshooting Diesel Engine

Course Objectives:

Course Objectives	
1	Demonstrate appropriate safety procedures.
2	Demonstrate correct tool selection and usage for maintenance and repair of a compact diesel engine.
3	Perform proper set-up and tune-up procedures for compact diesel engines in accordance with manufacturer's specifications.
4	Diagnose malfunctions and affect repairs on compact diesel engines
5	Conduct recommended maintenance procedures on compact diesel engines
6	Describe operation of two- and four-cycle diesel engines.
7	Identify all parts and systems of the compact diesel engine.

Course Outcomes:

Course Outcomes	
1	Upon completion of this course students will be able to pass an industry developed safety exam and be able to apply those rules for safe work habits.
2	Upon completion of this course students will be able to identify and list all parts and systems for compact diesel engines.
3	Upon completion of this course students will be able to describe and list operational parameters for two and four stroke engines.

**Assignments:**

Assignment Type:	Details
Reading	Students will have to read repair and specification manuals to obtain repair procedures for compact diesel engines.
Writing	Students may have to write a service report for services completed on a compact diesel engine
Homework	Students may have to research issues facing the diesel industry.
Lab	Students will have to tear down, inspect and reassemble a compact diesel engine.

Textbooks or other support materials

Resource Type:	Details
Books	Diesel Technology Fundamentals Service and Repair 6th Edition, Andrew Norman Copyright 2016

Other Degree Attributes

Degree Applicable
Not a Basic Skills Course

Distance Learning Addendum

DLA-Approved-May-13-2020-fillable-form.pdf

Additional Attachment

Ag Technology Advisory Committee 2019.docx

Banner Title:

Compact Diesel Engines

Curriculum Committee Approval Date:

02/25/2021

Academic Senate Approval Date:

03/10/2021

District Governing Board Approval Date:

04/12/2021

Course Control Number:

CCC000604419