

# AGTC 201: SMALL ENGINES

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**Proposer:**

**Name:**

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**Effective Term:**

Fall 2021

**Credit Status:**

Credit - Degree Applicable

**Subject:**

AGTC - Agricultural Technology

**Course Number:**

201

**Catalog Title**

Small Engines

**Catalog Description**

This beginning course is designed to introduce students to the theory and concepts of today's modern power equipment. Applications, basic operation, diagnosis and troubleshooting will be addressed in this course.

**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:**

Oral presentations  
 Problem solving assignments or activities  
 Short answer quizzes or exams  
 Skill demonstrations

**Course Topics:**

Course Topics	
1	Shop and Equipment Safety
2	Basic Operating Principles
3	Identification of engines and using repair manuals
4	Use of Special Tools
5	Systems: Fuel, Electrical, Power Trains, Brakes
6	Engine Troubleshooting and Diagnosis
7	Engine Tuneup
8	Engine Overhaul
9	Cleaning and Storing Engines

**Course Objectives:**

Course Objectives	
1	Compare the operational differences between two and four stroke engines.
2	Develop basic technical skill and knowledge to perform routine maintenance.
3	Develop basic technical skill and knowledge to perform minor and major tuneups and engine overhauls.
4	Evaluate small engine problems and perform repairs to restore proper engine performance.
5	Analyze engine failures and utilize technical manuals in prescribing needed repair procedures.
6	Write up explanation of the repairs needed to restore a small gas engine to working order including the cost involved.

**Course Outcomes:**

Course Outcomes	
1	Students will be able to identify all of the components of the small gasoline engine and explain their function.
2	Students will be able to propose solutions to engine problems and failures utilizing technical repair manuals and publications.

**Assignments:**

Assignment Type:	Details
Reading	In a typical reading assignment, students will be required to read, and interpret, the repair manual of a small gasoline engine to perform needed repairs to an engine.
Writing	In a possible writing assignment, students will complete and enter a service work order to industry standards.
Homework	In a possible homework assignment, students will research advances being made in the outdoor power equipment industry and prepare a written report from their research.



Lab	In a possible lab, students will be asked to demonstrate the correct procedure for a static governor adjustment.
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#### Textbooks or other support materials

Resource Type:	Details
Books	R. Bruce Radcliff. Small Engines, 4th ed. Amer Technical Pub; 3rd edition, 2016, ISBN: 978-0-8269-0033
Manuals	John Deere Corporation. Service Manual, John Deere Corporation, 01-01-2011

#### Other Degree Attributes

Not Transferable  
 Degree Applicable  
 Not a Basic Skills Course

#### Distance Learning Addendum

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

#### Banner Title:

Small 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:

CCC000591333