



# AGTC 210: AG PROJECT CONSTRUCTION

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**Proposer:**

Name:	Email:
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**Effective Term:**

Fall 2019

**Credit Status:**

Credit - Degree Applicable

**Subject:**

AGTC - Agricultural Technology

**Course Number:**

210

**Catalog Title**

Agriculture Project Construction

**Catalog Description**

This course is designed to give students an understanding of the mechanics and technology of fabrication. This class will study the characteristics, types and costs of construction materials for their use in agriculture and industrial equipment fabrication.

**Method of Instruction:**

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:**

Problem solving assignments or activities  
 Project  
 Short answer quizzes or exams  
 Skill demonstrations

**Course Topics:**

Course Topics	
1	Safety
2	Drawing and Sketching
3	Bill of Material
4	Use of Shop Tools
5	Design
6	Construction of Project
7	Project Finishing

**Course Objectives:**

Course Objectives	
1	Demonstrate the correct use of shop power tools and hand tools.
2	Apply the correct calculations to completing a bill of materials.
3	Apply concepts of fabrication designs including drawings and sketches to the construction and fabrication of an agriculture project.
4	Demonstrate the application of all general safety rules as they apply to a fabrication shop.

**Course Outcomes:**

Course Outcomes	
1	Upon completion of this course students will be able to list, explain and demonstrate general safety rules as they apply to the fabrication shop.
2	Upon completion of this course students will be able to use power tools and hand tools safely and to industry and manufacture standards.
3	Upon completion of this course students will be able to demonstrate and produce simple fabrication drawings and sketches and apply these drawings to the completion of student laboratory projects.

**Assignments:**

Assignment Type:	Details
Reading	Students shall be assigned six hours of homework per week. Reading units in the text, or industry publications, before class lectures would be one possible assignment. Students may be assigned a bill of material problem which will require them to apply the appropriate equations to reach the correct answer.



Writing	In a possible writing exercise, students might author a welding procedure sheet which should include the following: A. Cost of material B. Cut orders for material C. Fabrication and assembly processes
Homework	In a possible homework assignment, students will be asked the placement for a conventional pull trailer using the following equation: $EFY + 0 = -10,000 + x + y$ (force in y direction = 0) $EM (A) = 0 = -121 \times 10,000$ (moment at point A acceleration)
Other	In a typical lab exercise, students would draw a basic set of plans for a project they wish to fabricate in class. This exercise will require students to apply the concepts and techniques of an orthographic drawing. Students will expand this drawing to include a bill of materials and a procedure list (cut list). This exercise must pass the scrutiny of the instructor before a student may proceed to project layout.

### Textbooks or other support materials

Resource Type:	Details
Books	Ray Herren. Agriculture Mechanics, Fundamentals and Applications, 6 ed. Thompson Delmar, 2009, ISBN: 978-1435400979

### Other Degree Attributes

Degree Applicable  
Not a Basic Skills Course

### Materials Fee:

20

### Banner Title:

Ag Project Construction

### Curriculum Committee Approval Date:

03/12/2019

### Academic Senate Approval Date:

03/27/2019

### District Governing Board Approval Date:

04/08/2019

### Course Control Number:

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