COURSE SYLLABUS – Agricultural Construction Skills I
Grade Level: 10-12.
5th Period: 11:40 A.M. – 12:30 P.M.

Carlisle County High School  
Agriculture Department  
CREDIT(S): 1

Mr. Jonathan Miles Hargrove  
4557 State Route 1377  
Bardwell, KY 42023  
1-270-628-3800-Ext. 4201  
miles.hargrove@carlisle.kyschools.us

TITLE:
Agricultural Construction Skills I.

COURSE DESCRIPTION:
Prepares students to construct and maintain agricultural structures and equipment. Develops basic skills such as: tool identification, interpreting plans, calculating a bill of materials, electrification, carpentry, welding, metal fabrication, plumbing, and masonry. Content may be enhanced with appropriate computer applications. Leadership development will be provided through FFA. Each student will be expected to have a supervised agricultural experience program. This course may be extended to two credits offered on a two-hour basis provided that instruction is enhanced with laboratory experience, project construction, and in-depth skill development.

PURPOSE:
To provide students interested in pursuing a career(s) in industrial agriculture construction and engineering the opportunity to explore the wide array of concepts and opportunities relevant to the industry, as well as become exposed to and develop competencies in the skills relevant to the career cluster(s).

COURSE OBJECTIVES:
To develop a general understanding of agricultural construction methods and concepts. An emphasis will be placed on construction planning and implementation.

CONTENT OUTLINE:
The course content outline consists of introductory level work on agricultural structures, with an emphasis on construction skills development and implementation, mathematics, and engineering. Continuous assessment work on a Supervised Agricultural Education Experience (SAEP) will also take place.

Classroom content outline MAY include, but is NOT limited to:
Unit: Introduction, FFA, Agriculture, and Industrial Technology

- Careers In Agricultural Systems Technology and In General Agriculture
- FFA Implications of the Class
- FFA/Leadership/SAE
- SAE’s
- Safety
- Applications to the Agriculture Industry

Unit: Agricultural Engineering

- Specification Using Precision Equipment
- Agricultural Mathematics (Basic – Structures Emphasis)
- Infrastructure
- Experimental Design and Analysis
- Measuring Tools and Methods
- Construction of Moonbuggy
- Land Surveying
- Tools, Techniques, and Formulas
- Developing Plans
- Developing Bills of Materials
- Location and Arrangement
- Electricity (Wiring)

Unit: Construction Methods

- Welding (Arc, MIG, TIG, Oxy-Acetylene)
- Woodworking
- Usage of Power Tools
- Other Building and Construction Methods

*The above schedule is subject to change without notice, with time extensions or shortenings on certain subjects. Schedule is subject to school activities, closings due to weather, or other occurrences. Please refer to school handbook for further information.

INSTRUCTIONAL ACTIVITIES:

- Lectures.
- Demonstration.
- Field trips/clinical experiences.
- Laboratory experiments.
- Assessments.
- Daily Participation.
- Quizzes.
- Group discussions.
- Individual speeches.

**RESOURCES:**

- Guest lecturers.
- Textbooks.
- Internet.
- Local news media.
- Local school media.
- Classroom tools and resources.

**GRADING PROCEDURES:**

Letter grades will be assigned as follows:

A: 100%-90%
B: 89%-80%
C: 79%-70%
D: 69%-60%
F: Below 60%

**Grades may be made on the basis of, but not limited to (students will be made aware of point values before assignments are given):**

- Classroom Participation
- Daily Participation activities
- Quizzes
- Exams
- Semester/Final Exam
- Laboratory Assessments
- Research Papers, etc.
- Late Work: All students must be in compliance with the Kentucky Compulsory Attendance laws and statutes. A student who is absent for an “excused” reason will be given the opportunity to make-up the missed work, and will receive credit for any made-up work. A student will have the same number of days to make up work as the number of days missed. A student who is absent for unexcused reasons or for disciplinary reasons will be allowed to make up work but not be given credit for it. Students who accumulate an excessive number of absences per class, may be referred to the Attendance Review Committee of each school to evaluate the student’s academic progress. After evaluation, recommendations will be made in order for the student to stay abreast academically. Missed time may be completed hour for hour depending on time missed during Extended School Services.
- In addition to the above statement, late work will be dealt with in accordance to the classroom rules and expectations set forth. Please refer to them.

**TEXT AND REFERENCES:**
Various – Please see instructor for details.

**PREREQUISITES:**

Preferred Introductory Agricultural Education Class (Principles of Agriculture).

**Agricultural Construction Skills**

Valid KY Course # 010241

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<table>
<thead>
<tr>
<th>NATIONAL AFNR STANDARDS</th>
<th>Content/Process statements followed by # codes in Bold = KOSSA Standards, *Italic = Academic Expectations</th>
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<tbody>
<tr>
<td>CS.03</td>
<td>Students will:</td>
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<tr>
<td></td>
<td>• demonstrate employability and social skills relative to the career cluster. AA 001, AA 004, AA 006, AA 007, AA 008, AA 010, EA 001-EA 013, EB004, EC 005, EC 006, EC 009, EC 010, ED 002, ED 003; 1.1, 2.36, 2.38</td>
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<tr>
<td>PST.02</td>
<td>• demonstrate safe usage of hand woodworking and metal working tools. AA001, EA 013, OD 002, OE003, OE004; 2.3, 2.30, 2.37</td>
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<tr>
<td>PST.02</td>
<td>• demonstrate safe usage of portable and stationary power machines. AA001, EA 013, OD 002, OE003, OE004; 2.3, 2.30, 2.37</td>
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<tr>
<td>PST.02</td>
<td>• employ safe usage of electric arc welding techniques and machines. AA001, EA 013, OD 002, OE003, OE004; 2.3, 2.30, 2.37</td>
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<tr>
<td>PST.02</td>
<td>• employ safe usage of gas heating, cutting, welding, and brazing techniques and equipment. AA001, EA 013, OD 002, OE003, OE004; 2.3, 2.30, 2.37</td>
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<td>PST.01</td>
<td>• use plumbing tools and fixtures.OC002; 2.1, 2.2, 2.37</td>
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<td>PST.04</td>
<td>• utilize tools, techniques, and formulas for concrete construction. AA001, AB002, AB 004, AB 005, AB 006, AB 007, AB 008, OC 002, OE 004, OL008; 2.3,2.8,2.09,2.10</td>
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<td>PST.05</td>
<td>• demonstrate the basic principles of electricity. OH 003, OL002, OL003, ON001, OM001; 2.1,2.2,2.3,2.5</td>
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<td>Course Code</td>
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<td>PST.04</td>
<td>select and utilize proper painting materials and tools. <strong>OC 002, OL004, OL005; 2.1,2.3,2.8,2.9</strong></td>
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<td>PST.04</td>
<td>develop project plans including plans and bill of materials for agricultural project construction. <strong>OI004, OK002, OL004; 2.1,2.3,2.8,2.9</strong></td>
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<td>PST.05</td>
<td>relate the influence of agricultural mechanics industry on globalized production. <strong>ON005; 2.19,2.20</strong></td>
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<td>ABS.03</td>
<td>maintain records on supervised agricultural experience program and be able to summarize and analyze results in making financial decisions. <strong>AB 001, AB 002, EC 002, EC 003; 1.11, 2.13, 2.18</strong></td>
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<td>CS.01</td>
<td>utilize activities of FFA as an integral component of course content and leadership development. <strong>AA 013, AA 014, AA 015; 1.12, 2.16, 2.37</strong></td>
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</tbody>
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**CONNECTIONS**

- PROGRAM OF STUDIES – REVISED 2006
- KENTUCKY OCCUPATIONAL SKILL STANDARDS (KOSSA) above are from the Ag Power, Structural, Tech Systems
- ACADEMIC EXPECTATIONS
- SECRETARY’S COMMISSION ON ACHIEVING NECESSARY SKILLS (SCANS)
- FFA CONNECTIONS: Agricultural Mechanics CDE, Job Interview CDE, Agricultural Mechanics Design and Fabrication Proficiency and Agricultural Mechanics Repair and Maintenance Proficiency