# Todd County Central High School
# Ag Construction Skills

Instructor: Mrs. Brooke White
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**Ag Construction Skills**
**Grades:** 9-12
**Prerequisites:** Principles of Ag

**Course Overview:** 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.

**Course Content:**
Introduction to Ag Construction
Proper safety practices & PPE
Proper equipment, power tool, and hand tool operation procedures
Measurement
Basic welding practices
Calculating materials
Basic electricity
Plans using scales and legends
Preparing bills of materials
Basic principles of design
Wood construction projects

**Course Procedures:**
Upon completion of this course, the student will be able to:

1. Demonstrate safe practices specific to agriculture power, structural, and technical systems (e.g., PPE, materials handling, shop/laboratory operation)
2. Outline power unit and equipment controls, startup and shut down procedures, and operation inspections using owners/service manuals
3. Demonstrate proper use of measurement and layout tools
4. Select, maintain, and use hand/power tools in service, construction, and fabrication
5. Employ safe usage of electric arc welding techniques and machines.
6. Distinguish welding processes, positions, materials preparation, and equipment work piece setup (beveling/grinding)
7. Calculate materials for concrete, brick, stone, or masonry units in agricultural construction
8. Demonstrate the basic principles of electricity.
9. Develop plans using scales and legends
10. Prepare bills of materials to accompany plans and sketches
11. Apply basic principles of design, fabrication, and installation of agricultural structures
12. Discuss the steps in constructing a project out of wood (measuring, cutting, fastening, finishing, etc.)
13. Discuss types of renewable and non-renewable energy (e.g., solar, wind, hydro, fossil fuels)
14. Explain environmental impacts and sustainability of various energy sources (e.g., coal, hydro, wind, geothermal)

Utilize activities of FFA as an integral component of course content and leadership development.

**Course Materials:**

- Pencils & erasers
- Loose-leaf paper and binder or class notebook
- Folder

**Course Policies:**

- ***Absences/Makeup Work:***

    - **Excused Absences:** It is the student's responsibility to see the teacher and arrange for make-up work. Make-up work must be completed in the space of time equal to time missed. For instance, if a student has excused absences for two days, he/she has two school days to complete the work missed. In the case of an extended absence, make-up wok may be requested on one day to be picked up after 2:00 PM the following day. In the cases of extended illnesses, students are encouraged to request make-up work before returning to school in order to keep up with class work and to attend ESS as needed upon returning to school. Students who are on school-sponsored trips must make arrangements with their teachers for make-up work prior to their absence.

    - **Unexcused or Suspended Absences:** Student assignments and/or tests missed during any unexcused or suspended absence cannot be made up and the student will receive a zero for course work missed with the following exceptions: Any project or homework assigned before a suspension occurs, but due during suspension, will be accepted for credit providing the work is turned in to the teacher on the day the student returns to school. Long-term projects assigned during the suspension, but not due until a date after the suspension ends, will be accepted. Make up of semester exams, since they are comprehensive in nature, will also be allowed on the day of the return. Work assigned **AND** due during suspension will not be accepted.

- ***Class Participation:*** Grades will be determined by total points of test scores, homework assignments, projects, daily class work, journals, **and participation**. Sometimes projects may take days or weeks to complete and grades will not be posted until they are completed.

- ***Homework Policy:*** Homework will be assigned occasionally in order to allow you to explore and practice what you are learning. Unless otherwise specified, homework will be due the following school day at the beginning of the period. Work turned in late is graded at the teacher's discretion.

**Grading Policy:**

***Course weights:*** All AG classes will carry a 4 point weight:

A=4 B=3 C=2 D=1 F=0

***Final Grade Average Policy:*** Final grades will be determined by the following:

- 1st grading period average counts 20%
- 2nd grading period average counts 20%
- 3rd grading period average counts 20%
- 4th grading period average counts 20%
- End of Course (EOC) counts 20%
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***Grading Scale:***

| | | |
|---|---|---|
| A | 90-100 | Excellent |
| B | 80-89 | Good |
| C | 70-79 | Average |
| D | 60-69 | Poor |
| F | Below 60 | Failing |
| I | Incomplete | (no credit) |

**Class Rules/Expectations:**

1. Be to class on time, on task, and prepared to learn EVERYDAY!
2. Respect the teacher, the classroom, other students & yourself.
3. Be responsible for your own learning. Any student caught cheating on any assignment will automatically be given a zero.
4. Clean up after yourself. All books, materials, tools, etc. must be put away before leaving class.
5. Keep all personal electronics PUT AWAY!
6. Always be safe. No running, no horseplay, no wrestling, no throwing things, always wear proper personal protective equipment in the shop.
7. Bring all expected materials to class (book, **paper**, **pencil**, etc.
8. No sitting or writing on desks or counters.
9. No food or drinks are allowed in the classroom or shop.
10. **NO ONE** is to leave class without the instructor's permission and obtaining a hall pass. Failure to do so will result in the penalty for skipping.
11. No one is to open teacher's desk drawers, cabinets, etc. or use any of the classroom equipment unless given permission.
12. Discipline procedures and referrals will be given according to the policies of Todd County Central High School.
13. Students are encouraged to become a member of FFA by paying the class fee of $20.00.
14. Everyone will be encouraged to plan a Supervised Agricultural Experience Program (SAEP). Each student will be required to keep records of their SAEP using AET (Agriculture Experience Tracker) online at www.theaet.com.

Teacher Signature: _____ Date: _____

Parent Signature: _____ Date: _____

Student Signature: _____ Date: _____

*By signing this, you are agreeing to abide by all the above stated policies and procedures of Mrs. White's classroom and/or shop. Any violation of the rules and policies will be handled according to Todd County Central High School's discipline procedures.*