

# **Introduction to Agricultural Mechanics**

## **COURSE SYLLABUS**

INSTRUCTOR: Mr. Farias

Phone: 361-242-5626 ext. 70107

Introduction to Agricultural Mechanics and Metal Technology is designed as a one year course. The second part of this class is Agricultural Metal Technology and Fabrication. Through classroom instruction, demonstrations, and lab work students will learn different aspects and skills related to agricultural mechanics. Students will be required to take a safety test and pass with 100%. This is to ensure your safety as well as your classmates' safety.

### **Student Guidelines**

1. Follow rules set forth in the Agriculture Science discipline plan.
2. Keep a classroom notebook.
3. Always have supplies when needed.
4. Keep a record book.
5. Always have work clothes available for lab assignments.
6. Always have safety glasses available.
7. Pass safety test with a 100% before going into shop.

### **Reassessment Policy**

All makeup work and retests are to be done within three school days. Lab work missed will have to be made up when convenient with instructor and student. Student must notify instructor of absence.

### **Projects**

There will be several projects assigned throughout the semester. All students will be expected to participate or receive a ZERO as a grade. NO MAKEUPS will be allowed on projects.

### **Recordbooks**

The State Board of Education requires that every student enrolled in an Agricultural Science course keep an accurate recordbook to attain full credit for the course.

## **GRADING PROCEDURES**

**The grading procedures for each six-week period will be as follows:**

|                               |     |
|-------------------------------|-----|
| DAILY CLASSROOM ASSIGNMENTS   | 60% |
| TESTS/PROJECTS/DEMONSTRATIONS | 40% |

Notebooks and record books will be checked weekly for a grade; participation grades will also be given weekly.

**Projects will be graded using the following system.**

|             |     |
|-------------|-----|
| SAFETY      | 25% |
| WORKMANSHIP | 50% |
| CLEAN-UP    | 25% |

**The grading system for each semester will be as follows:**

|                     |     |
|---------------------|-----|
| NINE WEEKS AVERAGES | 80% |
| SEMESTER EXAM       | 20% |

**NOTE: IF RECORDBOOK IS NOT MAINTAINED STUDENT WILL FAIL THE COURSE**

**SUPPLIES NEEDED**

1. One folder or binder
2. Notebook paper
3. Pen/pencil
4. OSHA approved safety glasses (available through instructor)
5. Work clothes

# **INTRODUCTION TO AGRICULTURAL MECHANICS COURSE OUTLINE**

## **FIRST NINE WEEKS**

### **I. ORIENTATION**

### **II. INTRODUCTION TO WORLD AGRICULTURAL MECHANICS**

### **III. SAFETY**

- A. Rules of the shop
- B. OSHA regulations
- C. Color codes
- D. Safety test

### **IV. TOOL IDENTIFICATION AND USAGE**

- A. Hand tool identification
- B. Proper usage of hand tools
- C. Power tool identification
- D. Proper usage of power tools

### **V. ELECTRICITY**

- A. Power sources
- B. Principles
- E. Terminology
- C. Wiring

### **VI. PLUMBING AND WATER FIXTURES**

- A. Steel pipe and fittings
- B. PVC pipe and fittings
- C. Joining types of pipe
- D. Building a water sprinkler

## **SECOND NINE WEEKS**

### **I. CONCRETE AND MASONRY**

- A. Concrete usage
- B. Building forms
- C. Estimating amount of materials needed
- D. Concrete and masonry tool identification and usage
- E. Concrete finishing
- F. Building a stepping stone

### **II. CARPENTRY**

- A. Identifying types of lumber
- B. Identifying and using fasteners
- C. Computing bill of materials
- D. Building rafters
- E. Building walls
- F. Building a folding stool

## **THIRD/FOURTH NINE WEEKS**

### **I. METAL FABRICATION**

- A. Setting up an oxy-fuel rig
- B. Oxy-fuel welding and cutting
- C. Arc-welding
- D. MIG welding