# Unit 1 - Basic Hardware Fundamentals

## Introduction

In this unit we will be learning about precision hardware fundamentals and precision control components. The activities and assignments are designed to expose students to basic precision Ag componentry with an emphasis on providing “hands on” exercises.

# Objectives

In this unit students will:

- Identify the primary control systems on an implement that we would hook our display to
    - Electric and hydraulic components
- Precision Ag anatomy
    - Comparison of a precision ag system to the human body
- Electrical fundamentals and components
    - Fuses and multimeters

## Readings and Resources

- Unit 1 Outline
- Online Tutorials
- Links to online resources

## Assignments

**Complete:**

- Readings
- Discussion 1
- Project 1
- Quiz 1

Please complete the activities below. If you have any questions, please message me. Make sure to read the material in "Readings and Resources" above. Thank You!

# Discussion 1 - Precision Control Application

*What are the systems that drive application of products? Why do we add precision Ag hardware to these systems?*

*Identify and describe the hardware on each implement that drives application and how precision hardware can affect these systems.*

The discussion board forums are an opportunity to have thoughtful discussions about a given topic in precision agriculture. The questions raised will be general in nature and ask you to think deeply.

Please post your initial response by the due date listed in the Course Calendar. Students should then respond to at least one classmate's initial post.

This discussion is worth 20 points.

## Project 1

*Find out how much overlap costs the average farmer that doesn't invest in precision equipment. Work through a couple of scenarios I give you and then do an audit on yourself or any other producer that doesn't have swath control.*

Example1, Example 2, Example 3

Complete the audit, save, then upload the document for the project by clicking on the Project Title.

This assignment has a point value of: 20 points

## Quiz 1

The quiz for this module contains 20 multiple choices and true/false questions. Students will have one attempt and a 25 minute time limit to complete the quiz.

This quiz has a point value of: 20 points