MASTER COURSE OUTLINE
Prepared By: Landra Kosa   Date: Feb 2017

COURSE TITLE
Intro to Precision Agriculture

GENERAL COURSE INFORMATION

Dept.: AGR	Course Num: 120	(Formerly:)
CIP Code: 01.0301	Intent Code: 21	Program Code: 105
Credits: 5		
Total Contact Hrs Per Qtr.: 77		
Lecture Hrs: 33	Lab Hrs: 44	Other Hrs:
Distribution Designation:		

COURSE DESCRIPTION (as it will appear in the catalog)
This course provides an overview of the fundamentals of precision agriculture. Specifically covering Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, data analysis, mapping, and variable rate agriculture technologies. Course concepts will be applied and reinforced through laboratory instruction.

PREREQUISITES
None

TEXTBOOK GUIDELINES
Textbook determined by Agriculture faculty (Example: Precision Agriculture Technology for Crop Farming, Zhang)

COURSE LEARNING OUTCOMES
Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:
1. Explain the different technologies used for precision agriculture.
2. Demonstrate use of precision agriculture equipment.
3. Explain the principles of GPS and GIS
4. Describe remote sensing and its application in precision agriculture.
5. Analyze precision agriculture data.
6. Define automation and its role in agriculture.
7. Discuss the advantages and issues associated with precision agriculture..

INSTITUTIONAL OUTCOMES
IO3   **Human Relations/Workplace Skills**: Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations

COURSE CONTENT OUTLINE
1. Intro to Precision Agriculture
    a. *History of Precision Agriculture*
    b. *Overview of Technologies*

2. GPS
3. GIS
4. Sensors and Sensing
   a. Real time sensors
5. Precision Maps
6. Automation
   a. Autonomous Equipment
7. Data Analysis

DEPARTMENTAL GUIDELINES *(optional)*

_____   _____

DIVISION CHAIR APPROVAL   **DATE**