**Western Technical College**

# 10006139 Crop Management

## Course Outcome Summary

### Course Information

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| **Description** | Course will provide the student knowledge necessary to plan, produce, protect, harvest, and store commodity crops commonly produced in Wisconsin. Specific attention will be given to variety selection, seed bed preparation, fertilization, planting, weed control, insect control, disease control, harvesting, drying, and storing of crops. Harvest losses, yield determination, and Integrated Pest Mgt. will also be included. Commodity grading, sample collection, and the calibration of yield monitors will be covered. Students will demonstrate the ability to perform a crop profitability comparison. |
| **Career Cluster** | Agriculture, Food and Natural Resources |
| **Instructional Level** | Associate Degree Courses |
| **Total Credits** | 3 |
| **Total Hours** | 72 |

#### Textbooks

No textbook required.

### Program Outcomes

1. Interact as a professional in Agribusiness.
2. Investigate opportunities in Agribusiness.
3. Apply relevant technologies.
4. Apply economic and marketing strategies to Agribusiness Industry.
5. Create a Crop Management Plan.

### Course Competencies

1. **Demonstrate proper scouting procedures and techniques necessary to do field assessments**
2. **Apply plant growth and development knowledge to sustainable crop production.**

## 3. Investigate sustainable forage and crop production methods.

**Learning Objectives**

3.a. Examine methods for corn, soybean, small grain, cover crops, and forage production.

## 4. Define your land ethic.

**Learning Objectives**

4.a. Research the connection of land ethic to your soil and crop management practices
4.b. Develop your land ethic in connection with the principles of sustainable agriculture
4.c. Explain how you demonstrate your land ethic in your soil and crop management practices

## 5. Characterize soil requirements and their relation to crop production.

**Learning Objectives**

5.a. Soil analysis is done using soil samples
5.b. Describe the important influence soil texture has on crop adaptation
5.c. Explain the importance of soil structure
5.d. Analyze soil classifications and their relation to crop production
5.e. Describe soil constituents including water, field capacity, air, nutrients, and pH
5.f. Explain crops that can be produced in the Midwest

## 6. Analyze crop plants in relation to the environment.

**Learning Objectives**

6.a. Examine factors that affect plant growth
6.b. Assess soil water conditions
6.c. Explain why climate is the dominating factor in determining suitability for crops
6.d. Discuss types of climate in relation to latitude, altitude, winds, and locations of waters
6.e. Explain the importance of precipitation and its influence on soil fertility and crop success
6.f. Describe the effect of temperature, light, humidity, and air on plants
6.g. Describe the hydrologic cycle
6.h. Identify sources of soil water depletion
6.i. Recognize the impact of cultural practices on soil and soil water
6.j. Recognize nutrient management planning's impact on surface and subsurface waters

## 7. Manage crop harvest and storage.

**Learning Objectives**

7.a. Organize plan for storage and harvest
7.b. Plan complimentary cropping and nutrient plans.
7.c. Complete periodic assessment of potential crop harvest
7.d. Align with existing equipment, facilities and available labor
7.e. Consider custom storage or custom harvesting opportunities
7.f. Plan identifies alternative methods in case of unforeseen weather and storage problems
7.g. Production amounts and harvest costs are accurately recorded
7.h. Summarize strategies used to handle harvest and storage
7.i. Evaluate crop storage capacity

## 8. Determine impact of alternative cropping methods on business.

**Learning Objectives**

8.a. Assess needs for alternative cropping methods for business
8.b. Identify several alternative methods
8.c. Compares identified alternatives methods
8.d. Determine if alternative would improve current farm business
8.e. Examine alternative crops and farming systems for Wisconsin, including rotational grazing, organic farming, vegetables, use of cover crops, and soil health cropping systems, and other options
8.f. Compare economics of alternative methods with more conventional methods of farming
8.g. Identify criteria to consider when making alternative cropping plan decisions
8.h. Recognize reasons for exploring alternative cropping methods

## 9. Develop a soil health restoration cropping system.

**Learning Objectives**

9.a. Define soil health
9.b. Identify key soil characteristics related to soil health
9.c. Examine soil characteristics
9.d. Identify methods of soil degradation
9.e. Differentiate between nutrient cycles and flows
9.f. Explore farming practices that restore soil health
9.g. Identify characteristics of ecological soil management system
9.h. Describe the relationship between soil health, plant health, and pests
9.i. Create a soil health restoration management plan including use of management, cover crops, crop rotations, nutrient and pest management, and soil conditioning additives

## 10. Formulate a basic nutrient management plan

## 11. Integrate crop and nutrient production records into the business.

**Learning Objectives**

11.a. Interpret production records
11.b. Identify sustainable practices suitable for your farm business
11.c. Evaluate crop and nutrient records and their impact on business financials
11.d. Plan expansions or new enterprises and investments, if appropriate
11.e. Make adjustments to improve quantity and quality of production, if appropriate
11.f. Make adjustments to improve future profitability, if appropriate
11.g. Compare methods for measuring production
11.h. Investigate options for keeping records