



Western Technical College

30090333 Crop Management

Course Outcome Summary

Course Information

Description	This course is designed to enable the student to become acquainted with the area's major crops and approved practices dealing with the efficient growth, harvest and marketing of the harvested crops. Lessons on managing crop harvest and storage to prevent loss of product and income, interpreting production records, and utilizing emerging technology will be taught. Students will also prepare a marketing plan and investigate alternative cropping methods including organic production and cover crops. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.
Career Cluster	Agriculture, Food and Natural Resources
Instructional Level	Technical Diploma Courses
Total Credits	3
Total Hours	180

Experiential Learning

1. Work Based Learning

Program Outcomes

1. Utilize agronomic resources for optimal farm production.
2. Evaluate livestock management plans.
3. Plan for operation and maintenance of farm facilities and equipment.
4. Create farm business plans.
5. Apply marketing principles to agricultural enterprises.

Course Competencies

1. **Develop a cropping plan**
Assessment Strategies

- 1.1. by completing a cropping intentions plan on paper to be handed in to the instructor.
- 1.2. by sharing with the class or instructor, various cropping alternatives depending upon changing weather conditions or other emergency items.

Criteria

Performance will be satisfactory when:

- 1.1. learner assembles a crop plan considering soil characteristics, seasonal conditions, livestock needs, crop nutrient requirements, crop markets, and government programs.
- 1.2. learner applies factors such as crop acreage, water quality, highly erodible land and rotation necessary for the business enterprise.
- 1.3. learner examines the possibility for adding irrigation equipment to ensure crop production.
- 1.4. learner adjusts plan if unfavorable weather conditions or other emergencies develop.

Learning Objectives

- 1.a. Use crop rotation to reduce erosion, increase yield, and reduce pest losses.
- 1.b. Describe a crop rotation system.
- 1.c. Determine crops that grow well on my soil which I can use in my farming business.

2. Select a pest management plan

Assessment Strategies

- 2.1. by sharing with the instructor, the student's plan for controlling pests on the farm on a crop basis and field basis.

Criteria

- 2.1. learner selects pest management plan which complements existing crop and nutrient plan.
- 2.2. learner selects pest management plan which considers short- and long-term environmental issues.
- 2.3. learner analyzes the plan for cost effectiveness.
- 2.4. learner selects a plan that aligns itself with existing equipment, facilities, and labor.

Learning Objectives

- 2.a. Identify pests that could cause economic loss in crops.
- 2.b. Compare the available pest management measures.
- 2.c. Determine when and what control measures to use.
- 2.d. Compare the control measures with the economic, timeliness and weather factors.

3. Manage crop harvest and storage

Assessment Strategies

- 3.1. by sharing with the instructor, the student's plan for crop harvest and storage on a crop basis.

Criteria

- 3.1. learner organizes plan for crop harvest and storage.
- 3.2. learner uses cropping and nutrient plan and existing equipment, buildings, and labor to develop crop harvest and storage plan.
- 3.3. learner examines custom storage, custom harvesting, and alternative opportunities in case of unforeseen weather or storage situations.
- 3.4. learner develops a plan for machinery/equipment repair, maintenance and replacement.
- 3.5. learner calculates production harvested and their associated costs.

Learning Objectives

- 3.a. Evaluate costs of a variety of crop harvesting and storage methods.
- 3.b. Determine crop harvest and storage alternatives.

4. Explore alternative cropping methods

Assessment Strategies

- 4.1. by discussing in class or with the instructor, a variety of crop or cropping alternatives and the advantages and disadvantages of them.

Criteria

- 4.1. learner assesses needs for alternative crops and cropping plan.
- 4.2. learner identifies several alternative crops and/or cropping methods.
- 4.3. learner compares the various alternative crops or cropping systems.

4.4. learner determines if the alternatives would improve current farm business.

Learning Objectives

4.a. Investigate possible new crops for the farming business.

4.b. Evaluate the economic and agronomic factors involved with any new cropping endeavor.

5. Interpret production records

Assessment Strategies

5.1. by class discussion and/or discussion with the instructor.

Criteria

5.1. learner compares crop and nutrient records with business goals.

5.2. learner uses information to plan expansion or new enterprises and investments.

5.3. learner analyzes record information to make adjustments to improve quality and quantity of production and improve future profitability.

Learning Objectives

5.a. Identify which records are useful for analysis.

5.b. Calculate a cost per unit of the student's production.

5.c. Compare the student's cost per unit with the state average and the national average.

5.d. Compare the student's crop practices and results with state and national information.

6. Select agronomy consulting and technology program

Assessment Strategies

6.1. by the student discussing in class or with the instructor, the program they are selecting for use in their farm business.

Criteria

6.1. learner identifies program options including company, consultant, fertility plan, weed and pest control plan, cropping plan, cost and services.

6.2. learner compares the strengths and weaknesses of the options.

6.3. learner selects and implements the program that best meets the needs of the operation.

6.4. learner determines the program complements nutrient plan, tillage, conservation, and cropping plans.

Learning Objectives

6.a. Identify items the student needs to be successful.

6.b. Locate an agronomy service which meets the needs the student has.

7. Identify emerging agricultural issues and practices

Assessment Strategies

7.1. by the student discussing in class and/or with the instructor, the emerging farm and agricultural issues and practices.

Criteria

7.1. learner assesses the impact of government programs.

7.2. learner discusses current farm and agricultural issues on U.S. and world agriculture markets.

7.3. learner is aware of new technologies and their affect on agriculture.

Learning Objectives

7.a. Listen to, watch, and read agricultural news from local, state, and national sources.

7.b. Discuss in class news items that may have an effect on the students' farming operations.

8. Prepare a marketing plan

Assessment Strategies

8.1. by the student discussing in class or with the instructor, the advantages, disadvantages, and obstacles involved with several methods of marketing.

Criteria

8.1. learner identifies the variety of methods of marketing a crop.

8.2. learner compares the strengths and weaknesses of the methods.

8.3. learner selects and implements the marketing methods which best meet the needs of the operation.

Learning Objectives

- 8.a. Evaluate a plan for marketing crops.
- 8.b. Determine which methods are available for use locally.
- 8.c. Describe the differences between the methods.
- 8.d. Identify crop marketing methods.