



Western Technical College

10006179 Livestock Management

Course Outcome Summary

Course Information

Description	Students study the principles and processes of reproduction, genetics, live and carcass evaluation, and health and management of livestock. Field trips and hands-on activities will be used to effectively reinforce the material presented in class. Students will demonstrate the ability to perform profitability comparisons.
Career Cluster	Agriculture, Food and Natural Resources
Instructional Level	Associate Degree Courses
Total Credits	3
Total Hours	72

Textbooks

No textbook required.

Course Competencies

1. Develop a program to maintain biosecurity and livestock health

Assessment Strategies

1.1. Demonstration

Criteria

You will know you are successful when

- 1.1. Student is able to monitor vital signs in order to identify ill animals.
- 1.2. Student is able to observe a group of animals and identify ones that need further monitoring or treatment.

Learning Objectives

- 1.a. Identify diseases common to livestock and dairy cattle in your area.
- 1.b. Estimate the economic impact of disease in a herd.
- 1.c. Describe how livestock and dairy cattle become diseased.
- 1.d. Outline ways to prevent disease in livestock.

2. Explore the interaction between nutrition, animal husbandry and housing on the overall health of the animal.

Assessment Strategies

- 2.1. Skill Demonstration

Criteria

- 2.1. Student can recognize how facilities can influence animal health; footing, ventilation, space
- 2.2. Student can identify the most common nutritional causes of illness in an animal

Learning Objectives

- 2.a. Review the NRC (National Research Council) requirements for amount and nutritional value of the class of animals being fed.
- 2.b. Examine the method and timeliness of feed and water presentation.
- 2.c. Examine the environment for lighting, ventilation, cleanliness and other factors that may affect feed and water intake.
- 2.d. Evaluate the economic returns of the feeding program, animal husbandry and housing factors.

3. Analyze livestock reproduction

Assessment Strategies

- 3.1. Demonstration

Criteria

You will know you are successful when

- 3.1. Student demonstrates the proper handling and storage of semen.
- 3.2. Student demonstrates proper insemination procedures.
- 3.3. Student can design and explain a synchronization protocol.
- 3.4. Student can analyze reasons for poor conception rates and recommend future changes.

Learning Objectives

- 3.a. Discuss the collection, extension, and storage of semen
- 3.b. Describe the most successful insemination techniques
- 3.c. Explain timing of insemination for maximum conception
- 3.d. Identify problems associated with herd reproduction.
- 3.e. Evaluate methods of heat detection in the herd.
- 3.f. Evaluate insemination efficiency.
- 3.g. Evaluate overall reproductive performance.
- 3.h. Suggest ways to improve reproductive efficiency in a herd.

4. Explore current technologies in animal reproduction and health.

Assessment Strategies

- 4.1. Written Product

Criteria

You will know you are successful when

- 4.1. you explain use of embryo transfer in genetic improvement.
- 4.2. you give examples of how gene editing in embryo's can improve production.
- 4.3. you explain the role of cloning in animal production.
- 4.4. you discuss the use of cryopreservation of sperm, eggs and embryo's.

Learning Objectives

- 4.a. Select technology for activity monitoring.
- 4.b. Apply reproductive benchmarks
- 4.c. Use different treatments and protocols to enhance reproduction.
- 4.d. Relate the role of technology in advancing reproduction standards.

5. Design an animal welfare plan, as it relates to common management practices.

Assessment Strategies

- 5.1. Research Paper

Criteria

You will know you are successful when

- 5.1. Student defines management practices as they relate to the welfare of the animal
- 5.2. Student researches and develops an animal management plan that addresses the welfare of the animal.

Learning Objectives

- 5.a. Describe how to store health related materials in a way that maintains their effectiveness and does not pose a threat to people or animals.
- 5.b. Use health related materials in a manner consistent with label and legal requirements.
- 5.c. Outline safe equipment operation principles.
- 5.d. Review facilities, equipment and procedures for safety on a regular basis.
- 5.e. Suggest incentive programs for maintaining a safe work place.