

Department:

Agriculture

Course Description:

This course is designed to give students knowledge about forage and range management. The course will cover principles of plant species selection, establishment, fertilization, and weed control. Utilization and grazing of natural grasses will also be covered, as well as improved cultivators. The course will include discussion of intensive grazing design and temporary forage systems, silage, and haying methods.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Identify various native grasses and forages in Northeast Kansas.
2. Identify which native grasses or cultivators are adapted for crop and livestock operations in the Midwest.
3. Describe the procedure for preparing a seed bed, explain seeding rates, and list fertilization requirements for grasses and legumes.
4. Determine the ideal method for creating and storing hay, silage, and haylage.
5. Explain the use of forages for conservation practices.
6. Work as part of a team to design and present a rotational grazing plan, including plant species, operating budget, and profit potential.

Course Content:

- A. Forage and Productive Agriculture
 1. Forages in a changing world
 2. Grassland agriculture
 3. Forage production
 4. Economics of forages in the farming enterprise
 5. Forages and soil conservation
 6. Composition and nutritive value of forages
 7. Forage statistics
- B. Forage Grasses and Legumes
 1. Botany of grasses and legumes
 2. Symbiosis: rhizobia and legume plants
 3. Legume and grass seed production
 4. Legume family members
 - a. alfalfa
 - b. red and alsike clover
 - c. sweet clover

- d. white clover
- e. birdsfoot trefoil
- f. lespedezas
- g. crimson clover
- h. arrowleaf clover
- i. other legumes
- 5. Grass family members
 - a. redtop
 - b. bluegrass
 - c. smooth bromegrass
 - d. reed canarygrass
 - e. timothy
 - f. orchardgrass
 - g. fescue
 - h. ryegrass
 - i. bahiagrass
 - j. carpetgrass
 - k. johnsongrass
 - l. dallisgrass
 - m. Common native grasses in Kansas
- C. Forage Production Practices
 - 1. Establishment of new seedlings
 - 2. Weed control in forages
 - 3. Soil fertility requirements of forages
 - 4. Role of nitrogen in forage production
 - 5. Hay and pasture seedlings
- D. Forage Utilization
 - 1. Mechanization of forage harvesting and storage
 - 2. Process of making quality hay
 - 3. Dehydration of forage crops
 - 4. Grass-legume silages
 - 5. Systems of grazing management
 - 6. Various fencing methods and their costs
 - 7. Irrigated pastures and cost effectiveness

Learning Assessments:

Course competencies will be assessed by use of a pre-test, class exams and assignments, projects, quizzes, final exam, and a post-test.

Instructional Materials:

Textbook: Forages Vol. 1: An Introduction to Grassland Agriculture, Barnes, Miller, Nelson, 5th Ed., 1995.

**Guidelines for Requesting Accommodations Based on
Documented Disability or Medical Condition**

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

On-Campus Students: At enrollment, any on campus student may complete a form that will allow them to self-identify any disability.

Off-Campus Regional Students: Self-identify your disability and accommodation needs with the Regional Coordinator and/or instructor, preferably prior to the first class meeting.

Online Students: Self-identify your disability and accommodation needs by contacting the Disabilities Coordinator. Students must provide their own programs to allow accessibility on their home computer.

Any student may also identify their disability by completing an online form located on the HCC homepage under Students Services/Resources/Disabilities. Questions should be directed to the Disabilities Coordinator.