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| **COURSE INTRODUCTION:**This course includes electrical wiring, electrical motors, concrete masonry, plumbing and sewage disposal, farm fences, product handling and processing equipment, and farm buildings. (CD 016720, CIP 01.0201) Course Rationale – Agriculture encompasses the food, fiber, conservation and natural resource systems, employing over 20% of the nation’s workforce. Basic construction skills and knowledge in electricity, plumbing, concrete, and masonry are necessary for the building of agricultural structures. |
| **UNIT DESCRIPTION:**  | **SUGGESTED UNIT TIMELINE: 2 WEEKS** **CLASS PERIOD (min.): 50 MINUTES** |
| **ESSENTIAL QUESTIONS:****1. Determine fence selection based on application, location and cost.** |
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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES**  | **CCSS LEARNING GOALS (Anchor Standards/Clusters)** | **CROSSWALK TO STANDARDS** |
| **GLEs/CLEs** | **PS** | **CCSS** | **AFNR Standards** | **DOK** |
| 1. Discuss the terminology, dangers, and safety practices associated with building fences.
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3RST11-12.4SL11-12.1SL11-12.4  | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **2** |
| 1. Describe how to set and brace wood and steel posts.
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3SL11-12.4 RST11-12.9L11-12.6 | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **2** |
| 1. Describe techniques for building barbed and woven wire fences
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3SL11-12.4 RST11-12.9L11-12.6 | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **2** |
| 1. Describe techniques for building high tensile and electric fences.
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3SL11-12.4 RST11-12.9L11-12.6 | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **2** |
| 1. Identify fence mending techniques.
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3RST11-12.9L11-12.6  | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **3** |
| 1. Apply principles of correct fence installation by devising a fencing plan that complies with local codes and includes the materials used, cost, and layout of the fence.
 |  |  |  | G-CO-1 G-CO-12G-MG-2 N-Q-1A-REI-3RST11-12.7RST11-12.3RST11-12.9L11-12.6WHST11-12.2 | PST.01.01PST.01.03PST.02.01PST.04.01PST.04.02PST.04.03PST.04.04PST.05.01PST.05.02PST.05.03 | **4** |
| **ASSESSMENT DESCRIPTIONS\*: (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc. )** Each student will devise a fencing plan for an area designated by the instructor. The plan will include the materials used, cost, and an aerial-view drawing to indicate the layout of the fence. Students must also determine what local building and zoning codes apply to the fence and must design a fence that complies with all relevant codes.Assessment will be based on the overall content and presentation of the fencing plan.**\*Attach Unit Summative Assessment, including Scoring Guides/Scoring Keys/Alignment Codes and DOK Levels for all items. Label each assessment according to the unit descriptions above ( i.e., Grade Level/Course Title/Course Code, Unit #.)** |
| **Obj. #** | **INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)**  |
| 1-6 | 1. Lecture, guest speaker, demonstrations, student application using satellite images, and on sight comparisons.
 |
| 1-6 | 1. Student application using satellite images and on sight comparisons.
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| **Obj. #** | **INSTRUCTIONAL ACTIVITIES: (What Students Do)** |
| 1-6 | 1. Students will engage in study questions in lessons 1 through 5.
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| 1-6 | 1. Students will complete “AS 1.1, Building Legal Fences”; “AS 2.1, Constructing Model Brace Assemblies”; “JS 3.1, Constructing Barbed Wire Fencing”; “AS 4.1, Tensioning Fences”; and “AS 5.1, Splicing Wire.”
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|  | 1. Additional activities that relate to the unit objective can be found under the heading “Other Activities” in the following locations: p. VII-5, p. VII-16 (1), and p. VII-54.
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| **UNIT RESOURCES: (include internet addresses for linking)*** *Agricultural Structures*. University of Missouri-Columbia, Instructional Materials Laboratory, 1999.
* Call 1-800-DIG-RITE First. University of Missouri Outreach & Extension. Lincoln University. Accessed January 17, 2012, from <http://outreach.missouri.edu/webster/ag-edge/legal/dig-rite.html>.
* Cook, J. B., & Nickolaus, G. F. *Basic Procedures in Administration of Zoning Regulations: Appeals*. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from <http://muextension.missouri.edu/explore/commdm/dm7613.htm>.
* Cook, J. B., & Nickolaus, G. F. *Basic Procedures in Administration of Zoning Regulations: Making Applications*. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from <http://muextension.missouri.edu/explore/commdm/dm7612.htm>.
* Local regulatory agencies, such as the planning and development department, public works department, and county board of commissioners
* Matthews, S. F. *Missouri Fencing and Boundary Laws*. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from <http://muextension.missouri.edu/explore/agguides/agecon/g00810.htm>.
* Phillips, R. E. *Constructing Wire Fences*. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from <http://muextension.missouri.edu/explore/agguides/agengin/g01192.htm>.
* Zulovich, J. M. *Selecting Wire Fencing Materials*. MU Extension. University of Missouri-Columbia. Accessed January 17, 2012, from <http://muextension.missouri.edu/explore/agguides/agengin/g01191.htm>.
* Students may use additional outside sources to complete this activity.
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