COWLEY COLLEGE
& Area Vocational Technical School

COURSE PROCEDURE FOR

Soils for Production
AGR1280 3 Credit Hour

Student Level:
This course is open to students on the college level in either the Freshman or Sophomore year.

Catalog Description:

AGR1280 Soils for Production (3cr)
This course includes the basic chemical, physical and biological properties of soils as well as its formation, fertility and usage. This is a lecture course.

Prerequisites:
None

Co-requisites:
None

Controlling Purpose:

The purpose of this this course is to provide the student with the knowledge and skill necessary to formulate rations to feed livestock and that the nutritional needs of the animal is being meet.

Learner Outcomes:
Upon completion of the course, the student will:

1. Demonstrate knowledge of the basic and applied chemical, physical, and biological concepts in soil.
2. Demonstrate knowledge of the origin, classification, and distribution of soils and their relationship to people and food production.
3. Demonstrate knowledge of the management and conservation of soils.
4. Demonstrate knowledge of the environmental impact of soil use.

Units Outcomes and Clock Hours of Instruction for Core Curriculum:
The following outline defines the minimum core content not including the final examination period. Instructors may add other material as time allows.

Evaluation Key:

A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.

B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.

C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.

D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.

F = Failing, will be computed in GPA and hours attempted.

N = No instruction or training in this area.

UNIT 1:

Outcome: Demonstrate knowledge of the basic and applied chemical, physical, and biological concepts in soil.

A	B	C	D	F	N	Specific Competencies *Students will be able to*
						Describe soil formation and the classifying of soils as to their physical properties
						Apply the concepts of soil chemistry to soil fertility, its use and management
						Explain the importance of soil minerals and soil organic matter
						Identify and describe the physical properties of soils

UNIT 2:

Outcome: Demonstrate knowledge of the origin, classification, and distribution of soils and their relationship to people and food production.

A	B	C	D	F	N	Specific Competencies *Students will be able to*
						Describe soil water as to its movement in the soil and its relationship to plants
						Explain the importance of soils to agriculture and the world economy
						Use the technical terminology associated with the description and use of soils.

UNIT 3: Outcome: Demonstrate knowledge of the management and conservation of soils.						
A	B	C	D	F	N	Specific Competencies *Students will be able to*
						Identify soil compaction and soil erosion problems and discuss what causes them
						Describe how field borings, laboratory analysis and aerial photography are integrated to create a soil survey map.
						Demonstrate the ability to interpret a web soil survey map and determine land use and soil management practices to apply to given areas
						Demonstrate skills required to make field observations and interpretations of soils for various uses.

UNIT 4: Outcome: Demonstrate knowledge of the environmental impact of soil use.						
A	B	C	D	F	N	Specific Competencies *Students will be able to*
						Retrieve and use information from a variety of sources for land use planning and soil management decisions.
						Explain the impact of land use and management decisions on agricultural productivity and sustainability, environmental and ecological health, and land degradation.
						Describe the ways in which soils are an integral component of the terrestrial ecosystem.
						Identify soil properties important to land use, environmental quality, plant growth and society/culture.

Projects Required:
Varies, refer to syllabus.

Textbook:
Contact Bookstore for current textbook.

Materials/Equipment Required:
None

Attendance Policy:
Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:
The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:
Based on classroom occupancy

Course Time Frame:
The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

402.00 Academic Code of Conduct
263.00 Student Appeal of Course Grades
403.00 Student Code of Conduct

Disability Services Program:
Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class and which requires accommodations, contact the Disability Services Coordinator.