Faculty are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Collegewide Curriculum Committee.

DEPT. Agriculture COURSE NO. 1103

NUMBER OF CREDITS: 3

COURSE TITLE  Introduction to Soil Science

CATALOG DESCRIPTION: Introduces students to the origin, formation, and classification of soils. This includes the physical, chemical, and biological properties of soils, soils as a medium for plant growth, elements, water, air, organic matter, and plant and animal life in the soil.

AUDIENCE  Agriculture students and those students with an interest in basic soil science

FULFILLS MN TRANSFER CURRICULUM AREA(S) *(Leave blank if not applicable)*

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: None

LENGTH OF COURSE: 1 semester

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☐ spring ☒ summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT:
   1. To consider the physical and the chemical composition of soil
   2. To develop the concept of soil colloids – inorganic and organic
   3. To describe the relationship of organisms of the soil to the organic matter and its importance
   4. To demonstrate the forms of soil water and their relationship to plant growth
   5. To understand the classification system of mineral and organic soils
   6. To identify the types of soil
   7. To analyze the acidity and alkalinity of soils and the relationship to plant growth
   8. To determine the nutrients in the soil – Macronutrients and Micronutrients – and their relationship to plant growth
   9. To place emphasis on proper soil management for maximum crop production and proper soil conservation
   10. To explore the field of soils as a career choice
2) THINKING SKILLS:
   1. Understanding of basic soil concepts
   2. Learning of the processes that created the soils we use
   3. Knowing about physical properties of soil
   4. Understanding the role of life in the soil
   5. Knowledge of soil erosion

3) COMMUNICATIONS SKILLS:
   1. Written problems
   2. Group work
   3. Class discussion
   4. Oral presentation

4) HUMAN DIVERSITY:
   1. The importance of soil and water conservation as it relates to humanity
   2. Low input sustainable agriculture

TOPICS TO BE COVERED:
   1. The importance of soil
   2. Soil origin and development
   3. Physical properties of soil
   4. Soil water
   5. Water conservation
   6. Life in the soil
   7. Organic matter
   8. Soil conservation
   9. Government agencies and programs

LIST OF EXPECTED COURSE OUTCOMES: See above under goals

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Interactive Lectures
- Individual Coaching
- Films/Videos/Slides
- Other (describe below)
- Labs and Field Trips

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:
Daily work, unit exams, a final exam and attendance will be utilized for grading.

A - 90% +
B - 80-89%
C - 70-79%
D - 60-69%
F - <60%
Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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