

# North Hennepin Community College

## EEVS 1160: Global Environmental Field Geology

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 3

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science, Goal 10 - People/Environment

An introduction to environmental geology with emphasis on the impact that globalization has on the environments and on geologic resources of various regions of the world, including the United States. Students will examine the geologic development of a particular region and how various cultures and societies approach environmental and geologic resource management problems. Students will explore their own community for the presence of globalization and they will travel to the country or region of study to meet with environmental experts and to observe first-hand the issues covered in this course.

**B. COURSE EFFECTIVE DATES:** 10/19/2017 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Topics covered: Basic geologic principles, plate tectonics, landform development, use of topographic maps, identification of rocks, data collection and analysis, geologic development of mineral resources, mineral resource management and policy development, impact of globalization on regional geology and geologic resource management.

## **D. LEARNING OUTCOMES (General)**

1. Describe and use the scientific method; explain what science is, how it works and the role of science in society and discriminate/recognize science from pseudoscience by evaluating examples (MnTC G-3a; MnTC G-10c; NHCC ELO #1,2)
2. Practice making observations, formulating scientific questions, developing hypotheses and means to test them, and predict outcomes related to their hypotheses (MnTC G-3a,b,c; NHCC ELO #1,2)
3. Evaluate field data by making geologic and environmental interpretations using and understanding of the geology and geologic resources of the study region (MnTC G-2 a,b,c NHCC ELO #1,2)
4. Develop and practice individual and collaborative skills in processing geologic and environmental data, developing hypotheses and means to test them, and predicting outcomes related to the hypotheses proposed (MnTC G-3 a,b,c NHCC ELO #1,2)
5. Use quantitative and graphic methods to describe or model 3-dimensional geologic and/or environmental processes students will enhance their ability to think and visualize spatially (MnTC G-3a,b,c; NHCC ELO #1,2)
6. Enhance their powers of observation and enlarge their awareness by recognition of the complexities globalization and its impact on the natural environment (MnTC G-3a,b,c,d; G-10a,c,d; NHCC ELO #1,2,3)
7. Describe the geology and oceanography (where applicable) of the study area and use geologic principles and rock and/or mineral identification to examine modern and ancient earth systems interaction and cyclicity of/within the study region and their impacts on society and the environment. (MnTC G-3a,b,c,d; G-10a,b,c,d,e; NHCC ELO #1,2,3)
8. Use remote sensing techniques, topographic mapping, and environmental assessment to examine the target area of interest for potential societal impacts and pose solutions for such (MnTC G-3a,b,c; G10a,b,c,d,e; NHCC ELO #1,2,3)
9. Recognize/acknowledge that different approaches may be taken to solve environmental problems based on the geology and/or geologic resources of a particular region and/or culture (MnTC G-10a,b,c,d,e; NHCC ELO #1,2,3)
10. Gain and understanding of the geologic history, conservation and environmental laws, policies, and philosophies of the study region (MnTC G-10a,b,c,d,e; NHCC ELO #1,2,3)

## **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

### Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

### Goal 10 - People/Environment

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

1. Knowledge of Human Cultures and the Physical and Natural World Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
3. Personal and Social Responsibility and Engagement Including: Civic knowledge and involvement campus, local and global; Intercultural knowledge and competence; Ethical reasoning and action; Foundations and skills for lifelong learning.