

# North Hennepin Community College

## GEOG 1010: Physical Geography

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

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

This course will provide an introduction to the physical processes that are at work at all times on the surface of the earth. This course provides an introduction to the processes that influence the lithosphere, atmosphere, hydrosphere and biosphere. Topics covered include earthquakes, volcanoes, tornadoes, blizzards, winds, precipitation, the Hydrological Cycle, vegetation and soil. This course includes a basic understanding of how these systems interact and how the physical landscape interacts with the human landscape. Included in this will be discussions about environmental concerns such as acid precipitation, ozone depletion, soil degradation, desertification and rainforest destruction. This course includes lab-like coursework/exams that will enhance a student's ability to make observations, form questions, pose hypotheses, make predictions and critically evaluate scientific data and results.

**B. COURSE EFFECTIVE DATES:** 08/27/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. The course covers the 4 systems of the earth: the lithosphere, atmosphere, hydrosphere and biosphere. This is a survey course. The course includes a broad, basic understanding of these processes that are interacting at all times. Each system is presented individually and then the systems are tied together or related to each other whenever possible. It is important that the concept of this interdependence be woven throughout the course material.
2. Additionally, the concepts of human/physical interactions and reactions are an important part of this course. Students should gain a broad understanding of the relationship, positive and negative, that occurs when the natural and human worlds interact. Examples can include the location of settlements, global climate change, rainforest destruction, soil degradation, acid precipitation or ozone depletion.

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

1. Distinguish the characteristics and key principles of geography (NHCC ELO 2)
2. Recognize applications of geography in everyday life (NHCC ELO 4)
3. Demonstrate an understanding of scientific theories (MnTC Goal 10, comps a, b)
4. Understand the relationship, positive and negative, between the physical environment and the cultural environment (NHCC ELO 1; MnTC Goal 3, comp. d; MnTC Goal 10, comps b, c, d)
5. Be able to interpret maps( using map legends, latitude and longitude, scale, US Land Survey grid, topographic symbols), and use them to solve geographic problems (NHCC ELO 2)
6. Be able to communicate (the ability to listen, read, comprehend, and deliver information in a variety of formats (oral, written, and visual) (NHCC ELOs 1, 2; MnTC Goal 3, comp. c)
7. Be able to analyze the controls, distribution, and classification of world climates (including, Earth-sun relationships, day/night, seasons and climate change). (NHCC ELOs 1, 2, 3, 4; MnTC Goal 3, comp. a)
8. Describe the structure of the Earth and the associated components . Describe the Theory of Plate Tectonics, provide scientific evidence in its support and explain its correlation to the creation of landforms. Students will be able to identify the landforms created by these processes (including rock types, the Rock Cycle, earthquakes, volcanoes, various faults.). (NHCC ELOs 1, 2; MnTC Goal 3, comps. a. b. c. d)
9. Describe the composition of, the function of and various components of the atmospheric weather systems. This includes local and global circulation patterns, precipitation patterns and atmospheric disturbances) (NHCC ELOs 1,2; MnTC Goal 3, comps. a, b, c, d )
10. Describe the components of the hydrosphere and the impact of each on the Earth. List and explain the fluvial, glacial and groundwater processes and landforms associated with each). (NHCC ELOs 1,2; MnTC Goal 3, comps. a, b, c, d)
11. Explain and understand the relationship of the biosphere with the lithosphere, hydrosphere and atmosphere. Identify components (flora and fauna) that are evident in individual biomes. (NHCC ELOs 1,2; MnTC Goal 3 comps. a, b, c, d)
12. Describe gradation (degradation and aggradation) processes, including weathering, and mass wasting . Identify the landforms that are created by these processes. (NHCC ELOs 1, 2; MnTC Goal 3, comps. a, b, c, d)

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

### Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.

### Goal 10 - People/Environment

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.

### Goal 03 - Natural Science

1. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
2. 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. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
2. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
3. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.

## **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.
4. Integrative and Applied Learning--Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.