U416-120: Global Physical Environments

Course Format: Online

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Course credits: 3
Pre/Corequisites: None; Appropriate for advanced high school and first-year or higher college students.

Course Description:
This course explores the breadth and complexity of Earth's environments within a framework of the four environmental spheres (atmosphere, lithosphere, hydrosphere, and biosphere). Examples of specific topics include the structure of the atmosphere, the flow of energy in the Earth-atmosphere system, tornadoes and hurricanes, the distribution of terrestrial climates, geographic distribution of flora and fauna, internal processes and plate tectonics, denudation processes, soils and water resources, as well as aeolian and glacial processes that shape arid and postglacial landscapes. The course also discusses a variety of human impacts on the natural world including global climate change, air pollution, acid rain, and desertification. Numerous animations supplied in the CD accompanying the textbook provide invaluable help in exploring the dynamics of the many phenomena discussed in the course.

Required Course Materials:

- *Physical Geography: A Landscape Appreciation*, 9th ed., by Tom L. McKnight and Darrel Hess (Upper Saddle River, New Jersey: Pearson Prentice Hall, 2008). ISBN-13: 978-0321616876
- The following three maps are required to complete the written assignments:
    - *The 7.5-minute topographic quadrangle of Big Falls Dam, Wisconsin*
    - *Landforms of Wisconsin*
    - *Ice Age Deposits of Wisconsin*

Hardware Requirements
You will need a webcam, speakers, and a microphone. You will complete your exams through an online proctor, requiring all three components.

Course Learning Objectives:

- Conceptualize Earth as a system of interacting parts that change in the course of both natural and human-induced processes.
- Link patterns of seasonal changes on Earth to their astronomical causes.
- Describe the global energy budget and factors contributing to global climate change.
- Outline the key patterns in global circulation of terrestrial air and water.
- Explain phenomena responsible for the main elements of weather (pressure systems, fronts, winds, clouds, and storms).
- Distinguish among major climate types and components of the biosphere.
- Recognize a variety of landforms and link them to a variety of external and internal processes shaping terrestrial landscapes.

- Understand formation mechanisms and risks to life and health arising due to natural phenomena such as hurricanes, tornadoes, lightning, landslides, tsunamis, rip tides, and floods.

Course Overview:

MODULE #	MODULE TOPIC	EVALUATED ACTIVITIES
1	Earth and its Representation	Written Assignment
2	Insolation and Temperature Patterns	Written Assignment
3	Atmospheric Pressure and Wind	Written Assignment
4	Atmospheric Moisture	Written Assignment
5	Precipitation and Weather Systems	Written Assignment
6	Climates of the World	Written Assignment
7	The Hydrosphere	Written Assignment
8	Human-Induced Atmospheric Change	Written Assignment
Midcourse Exam		
9	Cycles and Patterns in the Biosphere	Written Assignment
10	Terrestrial Biomes	Written Assignment
11	Geography of Soils	Written Assignment
12	Internal Processes	Written Assignment
13	Weathering, Mass Wasting, and Erosion	Written Assignment
14	Fluvial, Karst, and Coastal Processes	Written Assignment
15	Arid Landscapes and Aeolian Processes	Written Assignment
16	Glacial Processes	Written Assignment
Final Exam		

Evaluation Methods:

Your final grade will be based on your performance on the following:

1) Written Assignments (33.3%)
2) Exams (66.7%)

Written Assignments (33.3%)

Reading comprehension questions are assigned in each unit of this course and will cumulatively account for one-third or 33.3% of your final course grade.

Exams (66.7%)

A midterm and final exam, each worth one-third or 33.3% of your final grade will assess understanding of course content and will cumulatively account for two-thirds or 66.7% of your final course grade.

Exam Method: Online with Proctoring

This course requires all students to complete exams online with a proctoring service. Students receive two attempts on each exam. If you elect to take a second attempt, the average score of both exams will be recorded.

Grading Scale:

The following grading scale is used for evaluating all course requirements and determination of final grade earned:

A = 93-100	B = 83-87.9	C = 70-77.9	D = 60-69.9

AB = 88-92.9	BC = 78-82.9		F = Below 60

Pass/Fail Option

Students who enroll in an Independent Learning (IL) course under the pass/fail option will receive a final grade of S in place of a final grade equivalent to an A, AB, B, BC, or C and a final grade of U in place of a final grade equivalent to a D or F.