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## Course Overview

<b>Course Title</b>	Environmental Geology
<b>Course and Section Number</b>	AGR-430-ONL
<b>Number of Credits</b>	4 Semester Credits
<b>Term</b>	21/AUTM
<b>Course/Section Dates</b>	08/16/2021 – 10/09/2021
<b>Meeting Time</b>	Class meets online via Canvas
<b>Instructor</b>	Dick Ehrman
<b>Doane Email Address</b>	richard.ehrman@doane.edu
<b>Textbook Information: (e.g. title, edition, publisher, ISBN)</b>	<p>Keller, Edward A. 2012. Introduction to Environmental Geology (5th ed.). Upper Saddle River, NJ: Pearson Prentice Hall. 705 p. plus appendices. ISBN-13: 978-0-321-72751-0</p> <p>Link to Doane Bookstore: <a href="https://www.bkstr.com/doaneuniversitystore/shop/textbooks-and-course-materials">https://www.bkstr.com/doaneuniversitystore/shop/textbooks-and-course-materials</a></p>
<b>Additional Course Materials</b>	You will need to join FlipGrid (free!) for student roundtable discussions. Instructions for doing so will be provided to you in the first week of class.
<b>Course Description</b>	An examination of how geologic processes and hazards influence human activities. The geologic aspects of earth resources and environmental issues related to water, soils, minerals, and fossil fuels are investigated. Hazards such as earthquakes, landslides, flooding, volcanism, and surface deformation are included. A geologic framework for environmental issues, including rocks and minerals, tectonic processes, and geologic time is provided. Upon successful completion of this course, student will demonstrate an understanding of the structure and dynamism of geology as well as the natural and human-induced changes in geologic systems. Lecture and Laboratory.



### **Foundational Area of Knowledge**

#### **Scientific Perspectives**

Students will gain a greater understanding of scientific thinking and applications using core ideas in courses that include laboratory or field experience. Students will consider the complexities of scientific methodologies in one or more disciplines of the natural sciences, the scientific context of issues they will confront as informed citizens, and the scientific impact on the global community. Students will work to

- employ methods of science for inquiry in a scientific discipline
- develop their scientific literacy and ability to critically evaluate scientific information
- consider the ethical and social implications of scientific study

### **Course Learning Outcomes/Objectives**

1. Describe the scientific method and apply its basic tenets to geology, other sciences, and life in general;
2. Identify the most typical characteristics and properties of earth materials like minerals, rocks, and ores, and assess how these properties impact the environment;
3. Discuss the role of geology in the production, consumption, and management of energy and mineral resources and apply that knowledge to various real-world examples in class as well as in modern life;
4. Explain the major features and history of modern plate tectonic theory as a controlling element in Earth's environment and how those features affect environmental events;
5. Analyze and evaluate various potentially hazardous geologic phenomena such as earthquakes, tsunamis, landslides, volcanoes, and mass wasting, and suggest strategies for dealing with them;
6. Describe the basic geologic factors which contribute to the occurrence of water resources, discuss what modern society can/should do to affect the use and conservation of water, and apply that knowledge to daily life as a water consumer;
7. Summarize the general history of the Earth and what that tells us about issues such as climate and environmental change;
8. Integrate all of the above information into a coherent outlook regarding what modern society can/should do (socially, politically, fiscally, etc.) to address issues involving geology and the environment;
9. More confidently discuss, consider, and evaluate scientific ideas; and



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10. Utilize her/his basic knowledge of geology and the environment to live a more fulfilling and effective life as an individual, parent, spouse, employer/employee, and citizen.

### Technology Requirements

For the successful use of Canvas please refer to Doane University's [minimum computer requirements](#). This may also include:

- Reliable computer and internet connection
- A web browser (Chrome or Mozilla Firefox)
- Adobe Acrobat Reader (free)
- Word processing software -Microsoft or Google Docs
- Webcam and mic

### Syllabus Addendum

[www.doane.edu/syllabus](http://www.doane.edu/syllabus) includes information regarding:

- Academic Support
- Military Friendliness & Services
- Study Time
- Credit Hour Definition
- Catalog and Policies

### Technological Support

If you are in need of technical assistance, please contact the help desk at 402-826-8411 or by email at [helpdesk@doane.edu](mailto:helpdesk@doane.edu).

### Learning Management System

Canvas: <https://doane.instructure.com>

### Campus Network or Canvas Outage

When access to Canvas is not available for an extended period of time (greater than one entire evening - 6pm till 11pm) you can reasonably expect that the due date for assignments will be changed to the next day (assignment still due by midnight).