

## **Environmental Geology**

### ENV 3130 Course Outline and Syllabus – Fall 2019

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Course web pages: <http://kanat.nvu.vsc.edu> (numerous resources)  
<http://kanat.nvu.vsc.edu/env3130> (class resources)

**Office hours:** Scheduled office hours are from 8:30 to 9:30 a.m. on Tuesday and Thursday, and 8:30 to 11:30 a.m. on Wednesday; otherwise, stop in anytime or schedule an appointment. My office is Bentley 332. If you require extra help, have any concerns or questions about the course or course content, need advice, or just want to talk, then my door is always open. If the office hours listed above, do not work with your schedule then please contact me and we will find a time to meet. We could set up regular meeting times if you so choose.

**Sessions:** Meeting on Tuesday and Thursday, 10:00 – 11:15, Bentley 108  
Meeting on Monday, 1:00 – 4:00, Bentley 108  
This course is listed as a lecture and lab sequence, yet we will use the class meeting times as appropriate for our needs.

### **Course description and objectives**

Environmental geology is a branch of applied geology that focuses on the relationship between people and the physical environment—this relationship is interactive. The broad field of environmental geology includes population, medical geology, hazardous earth processes (such as floods, seismic activity, landslides, volcanic activity, coastal threats, and more), soils (formation and loss), groundwater (porosity, permeability, quality, and consumption), waste disposal, energy, oceans, climate change (desertification and glaciation), air pollution, land use, extreme weather events, and of course, basic geology. The list is vast—it is too broad to cover all topics in one semester.

We will focus primarily on landslides, surface water, groundwater, and climate change this semester. The knowledge gained in this course should help one assess risk, make intelligent decisions about development in geologically reasonable regions, and make connections between human safety and geological conditions. The assigned articles will be used in conjunction with the Internet, newspapers, and journal articles to develop papers on the topics relevant to this course.

### **Quantitative reasoning**

Numbers are everywhere and numbers have meaning. Each of us must be competent in using and reading quantitative data, understanding quantitative evidence, and applying basic quantitative skills to solve today's problems. We will develop and apply the following quantitative skills throughout the semester: read data tables; develop and interpret graphs; calculate percentages and ratios; use scientific notation, exponential growth and linear equations; and communicate information. This course meets the NVUJ requirements for a quantitatively enhanced course.

### **Writing intensive nature of this course**

It is important that scientists clearly communicate with others. A component of this course will focus on the spoken word, the written word, and presentation style (on paper and in the classroom). We will focus on the following types of writing: email, research papers, reports, methods, and explanatory papers. Opportunities will exist to develop skills in the development of a thesis, abstract, structure of a document, use of technology, grammar, spelling, punctuation, and presentation style. Class time will be devoted to writing and speaking.

### **Oral presentation**

One oral presentation will be required in this course. The presentation may be used to meet one of the VSC Oral Communication Standards needed to graduate from NVUJ.

### **Assessment**

20%	Assignments and papers
35%	Laboratory work and field work
10%	Oral presentation
10%	Quizzes (surprise and announced)
5%	Effort (class participation, helping others, attitude, and attendance)
20%	Final exam: ** December 2019 at ** a.m. in B108 (date yet to be assigned by NVUJ)

### **Class management**

- The course is structured as a four-credit lecture, laboratory, and field-based course. We will use the meeting times as appropriate for our needs.
- Please come to class a few minutes early so that everyone is ready to start on time.
- I expect a lot out of you and I place a great deal of responsibility on you – I cannot do your learning for you.
- You will have several opportunities, during class, to work in small groups.
- I do not usually take attendance, but I do expect you to make up all work prior to the next class. Find out from another student what you missed and learn the material.
- A textbook is not required for this course, yet supplemental texts are available in the library; additional literature can be signed out from my office.
- Read the appropriate articles prior to attending class, be ready to discuss the content in class, keep good notes, ask questions in class, and come see me when difficulties arise.
- Do not use the following words in class: 'you know' and 'like'; do not say 'there is' when 'there are' is correct – I will interrupt the speaker and help identify the problem (each time). Please be prepared to be interrupted and then re-focus on the question or comment. We will attempt to break poor speaking habits – it will be difficult for all of us involved, so please help.

### **Exams, quizzes, and homework**

- All exams and quizzes are cumulative; no grades are dropped.
- Unannounced two-minute quizzes will be given throughout the semester at the start of the class period; missed quizzes cannot be taken later.
- All material submitted for a grade, including email, must be presented in professional form – use the technology.
- All activities, assignments, and brief lecture summaries will be posted online.
- Assignments are due at the beginning of the class period (according to the clock in the classroom) – otherwise they are late. For each calendar day (24-hour period – including weekends and holidays) an assignment is late it will be reduced by 10%. If you come to class late, then the paper is late. I do not need to know why the paper was submitted after the start of class (for example, long print queues) – accommodations, however, will be made for extraordinary circumstances.
- There are no opportunities to make-up missed laboratories or missed field work.
- I will be glad to help you with any assignment at any time except the day before the assignment is due – do not procrastinate.

## **Writing, library, and references**

- See the course web page for writing guidelines and suggestions.
- Numerous books and journal articles will be placed on reserve in the library – please see appropriate list on the course web page and spend time in the library.
- All referencing of electronic sources will follow the style presented by:  
American Psychological Association (2019). APA Style, Quick Answers—References. Retrieved 5 June 2019 from <https://www.apastyle.org/learn/quick-guide-on-references>

## **Prerequisites for this course**

- Satisfactory completion of ENV 1050: Introduction to Earth Science.
- Satisfactory completion of ENG 1051: College Writing.
- Satisfactory completion of MAT 1080: Introduction to Quantitative Reasoning (or passing the Quantitative Reasoning Assessment).

## **Plagiarism**

Students at Northern Vermont University–Johnson are expected to be honest in their academic work. Acts of dishonesty for which a student may be disciplined include, but are not limited to, receiving or providing unauthorized assistance on coursework or plagiarizing the work of others in assignments. The American Heritage Dictionary defines plagiarism in the following way: “To steal or use (the ideas or writings of another) as one’s own.” You are responsible for knowing what specific acts constitute plagiarism. If you are unsure, then consult me, or read the Undergraduate Catalogue. Academic dishonesty in any form is prohibited and unacceptable.

## **Accommodations**

Students with disabilities who would like to set up accommodations in their classes should contact Michele Feiner ([michele.feiner@northernvermont.edu](mailto:michele.feiner@northernvermont.edu)), Coordinator of Disability Services Students, at NVU-J Academic Support Services (Dewey 123, phone 802-635-1264).

## **Order of topics to be presented**

There are many topics relevant to environmental geology that would be interesting to investigate. We have limited time and therefore we must make some hard choices to determine the topics that will help develop new skills and build marketable skills. We will focus primarily on landslides, surface water, groundwater, and climate change this semester. The sequence and timing for work on these topics will be posted on the class web page.