

ENV/UST 259 Natural History of Cleveland

Fall 2008

UR 241

Instructor: Erica Matheny

Office Hours: by appointment

Phone: 330-285-4790

Email: e.matheny@csuohio.edu

Section 470

Meetings: 8/23, 9/6, 9/20, 10/4, 10/18, 11/1, 11/15, 12/6

(Alternate Saturdays, 9am-5pm)

COURSE DESCRIPTION

This course is designed to introduce students to the natural history of the Cleveland metropolitan area. General geology, ecology, flora, and fauna of the Cleveland area; field trips to parks and museums to study local rock formation, forest types, and plant and animal identification will be included. This course is designed primarily for non-science majors and includes a laboratory component.

This course will focus on the characteristics of Ohio land, climate, and water, along with the natural landscapes present within the region, and finally we will examine the impact of humans on the region. We will use an interdisciplinary approach to explore spatial, geological, ecological and physical aspects of the region.

COURSE GOALS

A primary objective of this course is to improve understanding of Ohio's unique heritage and the complex factors that have influenced and created its natural history.

A second objective of this course is to create a participatory environment, through the laboratory component of the course, where students can experience and see first-hand northeast Ohio's rich natural heritage. Both course readings and field trips will encourage greater appreciation and improved conservation/ resource management of our environment for both current and future generations. Students will gain practical experience in use of the scientific method in hypothesis testing and deductive reasoning.

Talk to the instructor as soon as possible if you are having trouble keeping pace with the class.

By participating in this course, the student is expected to gain a better understanding of:

- * past and present state of the ecology of Northeast Ohio
- * geological and glacial history of the region
- * relationship between natural cycles and patterns and the influence of humans on the region
- * introduction to the scientific method and its applications

GENERAL EDUCATION REQUIREMENTS

This is a *Natural Sciences* course that fulfills the *General Education Breadth of Knowledge Skill Area* requirements in **WRITING** and **CRITICAL THINKING**.

A course approved for the Natural Sciences requirement must meet all of the following criteria:

1. Courses must foster general breadth of knowledge and develop foundational skills and abilities. The courses must be at the 100-200 level offered by one or more of the departments in the natural sciences.
2. Courses must expose the student to all facets of the general scientific method used in natural sciences to build scientific principles in an effort to understand the natural world around us in a systematic and coherent fashion.
3. Courses must also contain components emphasizing tools and approaches that are critical in science inquiry including general experimentation design, precision, observation, data-driven reasoning and analysis, logic, and deduction.
4. Laboratory courses must translate the broad concepts of the scientific method addressed in lecture courses into practice; courses in this category should provide opportunities for students to approach scientific problems, critically analyze preliminary data, formulate hypotheses, and test them with appropriate experiments.

To qualify in the skill area of writing a course must:

1. Designate that at least 15% of the student's grade in the course is based on an evaluation of writing.
2. Include writing assignments that directly relate to the course goals.
3. Include instruction in writing-to-learn and/or writing-to-communicate. While writing-to-learn emphasizes the student's experience, writing-to-communicate highlights the reader's experience. Both are necessary to produce a thoughtful text that observes academic writing's conventions.¹
4. Require that students write a total of 2,000 words (8 pages, double-spaced, in 12-point font, with 1" margins) in multiple assignments.
5. Assign writing throughout the semester.

To qualify in the skill area of critical thinking a course must:

1. Designate that at least 15% of the student's grade in the course is based on an evaluation of critical thinking.
2. Require students to attain skills beyond lower-level knowledge, thereby requiring:

¹ Writing-to-learn helps students use writing to explore many aspects of the course as well as their own reflections; these activities should foster learning at deeper levels than memorization or recitation. Writing-to-communicate emphasizes aspects of writing (style, grammatical correctness, coherence, focus) that allow a reader to navigate the writing as he or she wishes.

- a. higher-order thinking (analysis, synthesis, evaluation); **OR**
- b. skills that involve the use of content knowledge (e.g. finding information to solve a problem); **OR**
- c. the recognition of the importance and usefulness of knowledge and skills gained in the course (e.g. recognize the ability to and importance of working with others to solve intellectual problems).

COURSE FORMAT, ASSIGNMENTS, AND GRADING

COURSE FORMAT/ ATTENDANCE. Although this class may include lectures, multi-media presentations, field trips, guest speakers, class discussion, and group exercises, an emphasis will be placed on “active learning” techniques that cultivate a high level of student involvement. As such, regular attendance is required and is essential. Unless otherwise specified on the syllabus or assignment sheet, you will need to attend class—and *show up on time*—to receive full credit for all assignments. Please inform the instructor in advance of missing a class (by phone or email).

ASSIGNMENTS/ GRADING. Satisfactory performance will need to be demonstrated in the writing assignments in order to receive a passing grade for the class. All writing assignments must be submitted in person or emailed in Microsoft Word or similar word processing format as attachments, **double-spaced, using 12 point Times New Roman font and standard 1” margins. Also note that paper length requirements do NOT include cover page or references. If you do not have or use Microsoft Word, please submit emailed assignments in .rtf (rich text format) so that they will be readable.**

Students are expected to complete the following assignments:

1. Complete assigned readings each week, and attend all required class sessions, including field trips.
2. Keep and turn in a field notebook, containing notes from readings, sketches, notes, observations from field trips and reflections. This field notebook may be used during your final exam, so it is to your benefit to make it as complete and organized as possible!
3. Complete written homework assignments as assigned by the Instructor.
4. Write a 5-6 page research paper following the guidelines below.
5. Complete a final exam (short answer and short essay) based upon the readings, assignments, and discussion.
6. **NO** assignments will be accepted more than one class period past their due date. 10% will be taken off for assignments submitted one class period late.

RESEARCH PAPER GUIDELINES

For this assignment, you may select one topic of interest discussed in the text to explore further. This assignment is purposely open-ended to give you some freedom in choosing a topic of interest, but please choose your topic carefully. Narrow your topic down to a very specific issue (e.g. “The Impact of Human Settlement in the 20th century on Doan Brook” rather than “The Impact of Humans on Ohio”). Maintaining a very narrow focus will greatly improve your ability to comply with the assignment’s length.

This paper will conclude with a references page, consisting of no less than 5 different sources (articles, books, reports, book chapters, etc). Of the references cited, only one may come from our required class readings. Of special note: when using internet sources during your research, only choose those which are reputable and scholarly. If it isn't something that can be found in the CSU library, it probably isn't a good source. For example, an online version of an article from the American Planning Association (APA) is a good source, but a citation from www.janesbookreports.net is probably a terrible source for research information! If you need additional guidance regarding how to construct a research paper, please access the resources provided below under *Optional Readings* and/or contact the CSU Writing Center. Please use APA formatting for all references in your paper. See <http://library.csuohio.edu/research/vrd/citations.html> for more info on APA formatting and citations.

YOUR FINAL GRADE WILL BE BASED UPON:

Class participation/Attendance	112 points
Field notebook	120 points
Homework assignments	100 points
Research Paper	100 points
Final Exam	100 points
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	532 points

Grading scale is as follows:

A	94—100
A-	90—93
B+	86—89
B	80—89
B-	75—79
C	70—74
D	60—69
F	59 or less

Last day to add a course: Aug. 29.

Last day to drop a course: Sept. 5.

Last day to Withdraw with a grade of “W” : Oct. 31.

Academic Misconduct. Cheating or collaborating on examinations, plagiarism (copying others work in any form without proper reference and citation), or any other form of academic misconduct is strictly prohibited and will not be tolerated. Consequences for academic misconduct are based on university regulations, and are grounds for the grade of “F” for the course. Please refer to the university student handbook for further information.

Students with special needs. “Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at 216-687-2015. The Office is located in UC304. Accommodations need to be requested in advance and will not be granted retroactively.” Students should notify the instructor

as soon as possible if they have been granted an accommodation through the Office of Disability Services.

Required and Optional reading Materials

The following *required text* can be purchased at the CSU bookstore, or online. Please ask or email me if you are having trouble finding the text.

Ohio's Natural Heritage. Michael B. Lafferty, Editor. Published by The Ohio Academy of Science, Columbus, Ohio. ISBN: 0-933128-02-9.

If deemed necessary by the instructor, other required course readings may be found on CSU's *Electronic Course Reserve* at: http://scholar.csuohio.edu/screens/m_course.html.

Optional readings that may help you polish your writing skills are available at CSU's University library Virtual Reference desk, available at: <http://library.csuohio.edu/research/vrd/index.html>

Course Schedule and Weekly Reading Assignments *with tentative field trips*

ECR means reading is available on the CSU Library's Electronic Course Reserve.

Saturday, AUG. 23 – Course introduction ~ UR 241

Reading: Overview of Chapter 1

Saturday, SEPT. 6 – History of the land, geology ~ UR 241

Reading: pp. 1-57 (Ch.1-4) Geology, Glaciation, Landform regions

Field Trip:

Saturday, SEPT. 20 – Climate, flora, fauna ~ UR 241

Reading: pp. 58-109 (Ch. 5-7) Climate, Topography, Soils, Forests

Field Trip:

Saturday, OCT. 4– Water, historical landscapes ~ UR 241

Reading: pp. 110-157 (Ch. 8-9) Water, Prairies, Bogs, Fens, & Caves

Field Trip:

Saturday, OCT. 18 – Ohio land forms ~ UR 241

Reading: pp. 158-213 (Ch. 10-12) Hill country, Glaciated Plateau, & Till Plains

Field Trip:

Saturday, NOV. 1 – Ohio land forms ~ UR 241

Reading: pp. 214-259 (Ch. 13-15) Lake Erie, Lake Plains, & Bluegrass

Field Trip:

Saturday, NOV. 15 – Impact of humans ~ UR 241

Reading: pp. 260-313 (Ch. 16-19)

Field Trip: Cleveland Museum of Natural History

Saturday, DEC. 6 – Final Exam ~ UR 241