

Fall 2008 GEOL 1001 Earth Science and Society

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|----------------|-----------|--|----------|-------------------|
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This course fulfills the USP "L" Information Literacy requirement. Information Literacy entails developing the skills and abilities essential for adult learning. It transcends disciplines, learning environments, and levels of education. Courses in Information Literacy teach students about general information as well as information that is specific to a given discipline. Such courses help students to effectively use library resources, evaluate information, and apply their knowledge to research assignments.

This course also fulfills the USP "I" Intellectual Community Component. Intellectual Community courses provide students with an introduction to the purpose and philosophy of higher education. Such courses focus on the critical-thinking skills necessary to understand, analyze and produce knowledge within the framework of a discipline or area of academic inquiry. Critical thinking is the process of analyzing and evaluating thinking with the view to improving it.

Course objective: This course provides students with an introduction to the purpose of higher education as well as providing an introduction to information literacy skills and resources necessary for adult learning. Geol 1001 uses the Earth Sciences as the scientific basis upon which to build the skills of critical thinking. The ability to understand, analyze and produce knowledge within the discipline of the Earth Sciences will be beneficial to geology majors and non-majors alike, because a contributing member of a global and local society requires basic knowledge about the planet upon which they live, and requires the ability to assess and question policies and procedures relevant to their world.

Specific objectives of this course include:

1. an introduction to the major intellectual areas and important questions addressed in the Earth Sciences, the educational (curricular) requirements for geoscientists, and careers in the Earth Sciences.
2. an opportunity to develop critical thinking skills needed for success in the Earth Sciences and other fields, including understanding, analyzing, and evaluating information.
3. exposure to and experience with a variety of types of information relevant to Earth Sciences, including library and internet resources, maps and charts, and mathematical geologic information.
4. experience understanding and analyzing written, graphical and numerical geological data sets.
5. an introduction to how Earth processes impact diverse populations around the world, and how Earth Scientists are involved in hazard mitigation and responsible for resource recovery globally and locally.
6. developing proficiency in formulating research questions.
7. mastering use of informational database and library resources to acquire information.
8. evaluate credibility of information, synthesize it, and reference it properly.
9. pass the Library Information Tutorial Exam (TIP) with a minimum score of 70.

Current/International Event Synopsis

One half of this class will consist of a series of reading/writing assignments based on current events (within the past year). You will choose an article from a reliable source that illustrates the relationship between Earth Science and society, and write a brief summary and critical analysis of that article. At the end of the summary you will pose two research questions about the article. In class you will read your summary and research questions and the class will discuss your topic. If additional research is required to discuss your topic, you are encouraged to conduct that research and be ready to share the information with the class. Class discussion is an important part of the course, so weekly attendance is essential.

Current/International events synopsis grading criteria (40% of total grade)

| | |
|--|-----|
| appropriate topic | 5% |
| appropriate source | 5% |
| well-written synopsis and coherent logic | 60% |
| two good research questions | 5% |
| proper referencing | 10% |
| presentation in class | 10% |
| article attached to synopsis | 5% |

Public Awareness Project

The other half of this course will comprise a public awareness project, which is geared toward educating a local audience about a societally relevant earth science topic. You will work in a group to write a newspaper article and hold GROUP panel discussion. The topic should be a geologic subject of societal relevance, ex: coalbed methane, earthquakes, groundwater, etc. Your peers will evaluate your article and presentation, and their suggestions will be passed to the group. Their opinions will not affect your grade, but they will be helpful in giving you feedback.

Since working in a group raises questions as to the division of labor, the members of each group will grade each other and themselves as to the amount of work each person has put into the project. This assessment will be incorporated into each individual's project score.

Plagiarism

Plagiarism is any intended or unintended representation of someone else's work or words as your own. The first time you submit a paper with plagiarized portions, you will have a chance to resubmit it with proper referencing. That is your one chance to make a mistake; after that you will receive 0 points for the assignment.

Example

You read an article that contains the following paragraph:

The Boston College geochemist and her colleagues have been searching for signs of hurricanes in stalagmites that rise like jagged stone fangs from the floors of caves in Latin America. In the formations' tree-ringlike growth layers, she and her colleagues have shown that stalagmites record individual hurricanes by the unique chemical fingerprints the storms leave on the rain they

dump. Buoyed by results published last April from a field trip to Belize in 2001, the team this summer has been focusing its hunt on caves on Mexico's Yucatan peninsula.

Plagiarism

A geochemist and her colleagues have been studying stalagmites for signs of hurricanes in the floors of caves in Latin America. In the formations' tree-ringlike growth layers, she and her colleagues have shown that stalagmites record individual hurricanes by the unique chemical fingerprints the storms leave on the rain they dump. The scientists have been focusing their hunt on caves on Mexico's Yucatan peninsula this summer.

Proper referencing

Research into the fingerprints of hurricanes has been conducted by a geochemist from Boston College and her colleagues, who have been studying "stalagmites that rise like jagged stone fangs from the floors of caves in Latin America" (Spotts, 2007). Stalagmites record the chemical signature of rain that falls during hurricanes, and can be used to differentiate different hurricane events.

Spotts, P. N., (2007) "Clues from hurricane fingerprints" *The Christian Science Monitor*, 16th August.

TIP

The Library Information Tutorial Exam (TIP) is available online at: <http://tip.uwyo.edu>
A 60-90 minute tutorial will lead you through techniques used to think strategically about information and the processes of investigating a topic, searching for information, locating the information in the library, evaluating the quality of information, and utilizing the information in papers, speeches, or projects. After reading the tutorial, you will complete the quiz and must receive a score over 70 to pass. Your score will be reported to the course instructor to verify the time of completion.

TIP Grade:

100% if completed by September 5

80% if completed by September 12

50% if completed by September 19

0% if completed AFTER September 26

You must pass the TIP quiz to pass the course. Students who have not passed the TIP quiz by the end of the course will receive a grade of incomplete.

Attendance

Attendance is required for this course. If you have a university-excused absence, you may make up missed work within one week of returning from your absence. All work must be made up by December 7th at 5 PM.

Expectations

You are expected to spend approximately three hours per week on this course outside of class. Late work will be devalued 10% per day (by class on the due date, 4 PM each additional day). Please remember that this is a 1-credit, 1000-level course. If you are a senior, the work may seem simple to you.

Grading

| Assignment | Possible Points | % of Grade |
|--------------------------------|-----------------|------------------|
| TIP quiz | 30 | 20% |
| (6) Current Events synopsis | 60 | 40% (6.67% each) |
| Group Project Topics | 10 | 6.6% |
| Group Project Research Sources | 10 | 6.6% |
| Group Project Outline | 10 | 6.6% |
| Group Newspaper Article | 30 | 20% |

Class syllabus

- Aug. 27 Introduction to the course and next-seat person, assign groups for public awareness project, discuss scientific literacy and formulating research questions, discuss reliable sources of information.
- Sept. 3 Due: Domestic current events synopsis (1)
Discussion of campus academic resources; Synopsis (1) discussion.
- Sept. 10 Due: GROUP Earth Science public awareness project topics.
Synopsis (1) discussion.
- Sept. 17 Due: International current event synopsis (2).
Advising week and earth science career discussion.
- Sept. 24 Due: GROUP references for project.
Synopsis (2) discussion.
- Oct. 1 Due: Current event synopsis (3)
Synopsis (3) discussion.
- Oct. 8 Due: GROUP Project outline.
Synopsis (3) discussion.
- Oct. 15 Due: GROUP Newspaper article
Group newspaper discussion.
- Oct. 22 Due: Current Event synopsis (4).
Group newspaper discussion.
- Oct. 29 Synopsis (4) discussion.
- Nov. 5 Due: Current Event synopsis (5).
Synopsis (5) discussion.
- Nov. 12 Synopsis (5) discussion.

- Nov. 19 Due: Current Event synopsis (6).
Synopsis (6) discussion.
- Nov. 26 NO CLASS: Thanksgiving break.
- Dec. 3 Synopsis (6) discussion. Final words and class evaluations.