CoSM Class Syllabus / Policy

2017 / Fall Semester
GOL 440.001
Earth Resources

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Office Hours: MW 10:00 – 12:00, 1:00 – 4:00; or by appointment
Class meeting time and place: Miller Science, Room 323

Please feel free to stop by any time to ask questions, discuss any problems you may be having with the material or to help facilitate further understanding. If these hours conflict with your schedule, please call or email to make an appointment.

Course Description:

Earth Resources (GOL 440) – Three semester hours, three hours lecture per week. This course provides an introduction to the geologic and economic factors that result in the development of commercial concentrations of mineral resources. Emphasis will be placed on the descriptive geology and origin of economic mineral concentrations within the context of their overall geologic settings. The geologic and economic nature of metallic and industrial mineral commodities in varied geologic environments will be discussed. Related topics to be discussed include importance of mineral resources to the global economy, mineral exploration and evaluation, and mineral extraction and processing. Prerequisites: GOL 101, 102, 131 or 134.

Student Learning Outcomes:

The student is expected to understand and apply the following concepts:

1. Identify the different types of Earth resources and their importance to the global economy.
2. Correlate the spatial distribution of economic minerals and their relationship to the tectonic environment.
3. Determine the processes of formation of various economic ore deposits.
4. Identify the distribution and formation of industrial and agricultural mineral resources.
5. Understand the environmental problems associated with the extraction and utilization of mineral resources.
Text and Materials:

*Introducing Natural Resources* by Graham Park (2016, Kindle and paperback ~ $20-25); Other selected readings from outside sources will be posted to d2l.

Course Requirements:

**GOL 440** Earth Resources meets for a minimum of 37.5 lecture contact hours during the semester, including the final exam. Students are required to complete assignments based on readings, periodic quizzes and exams over course content, and a final exam. Students will be required to complete in-class and out-of-class assignments that evaluate their comprehension of course materials. Successful completion of all elements for the course requires at least six additional hours of out-of-class work each week.

**The Federal Definition of the Credit Hour:** a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours out of class student work each week for approximately fifteen weeks for one semester of credit.

Course Calendar:

A brief outline of these topics will be posted on d2l as we progress through the semester. I will be pulling information from resources other than the text, so please be aware that the answer to every question is not always in your textbook.

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<thead>
<tr>
<th>Date</th>
<th>Proposed Topics</th>
<th>Text Chapter</th>
<th>Points</th>
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<tr>
<td>Aug 27, 29</td>
<td>A Brief History of Resources</td>
<td>1, Discussion post</td>
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<td>Sept 3, 5</td>
<td>Earth’s Structure and Composition</td>
<td>2, Discussion post</td>
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<td>Sept 10, 12</td>
<td>Tectonics and Distribution of Resources</td>
<td>3, Discussion post</td>
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<td>Sept 17</td>
<td>Geochemical Cycles</td>
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<td>Sept 19</td>
<td>Mineral Resources and Reserves</td>
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<td></td>
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<td>Discussion post</td>
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<td>Sept 24</td>
<td>Mineral Economics</td>
<td>External Resources</td>
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<td><strong>Sept 26</strong></td>
<td><strong>Exam 1</strong></td>
<td><strong>100</strong></td>
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<td>Oct 1, 3</td>
<td>Abundant Metals</td>
<td>4,5</td>
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<td>Oct 8, 10</td>
<td>Ferro-Alloy Metals, Base Metals</td>
<td>4,5,6, Discussion post</td>
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<td>Oct 15</td>
<td>Precious Metals, Metalloids</td>
<td>6,7, Discussion post</td>
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<td><strong>Oct 17-20</strong></td>
<td><strong>Field Trip to Arkansas!</strong></td>
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<td>Oct 22</td>
<td>Building Materials</td>
<td>8, Discussion post</td>
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<tr>
<td>Oct 24</td>
<td>Important Chemicals</td>
<td>7, External Resources,</td>
<td>10</td>
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Faulkner, Fall 2019
Tentative Examination Schedule

Exam 1: Tuesday, September 26, 2019
Exam 2: Thursday, October 31, 2019
Final Exam: Tuesday, December 10, 2019

Field Trip: This class has one required field trip, October 17-20, 2019, to examine the geologic environments associated with exploration and extraction of economic minerals and environmental issues related to economic minerals production. You will be required to keep a field notebook and collect samples to include in your final report. Excuse letters for your other classes will be available.

Grading Policy:

Three major tests of 100 points each will be given during the semester. All tests are comprehensive and basic understanding of natural resources will be emphasized. Regular attendance in lecture is necessary for full understanding of the course material.

We will use the d2l platform for discussion posts. There are ten discussion posts throughout the semester, totaling 100 points. During the final weeks of the semester, each student is responsible for a final written report (75 points) and presentation (25 points) that will be included as part of the final grade calculation.

There are a possible 500 points available, your grade will be determined by totaling the number of points earned by the possible 500 and calculated using the following scale:

Grade Scale: 90 – 100 = A, 80 – 89 = B, 70 – 79 = C, 60 – 69 = D, < 60 = F

Attendance Policy:

Attendance is mandatory for understanding the material and participating in class. Some of the material I will present in class come from a variety of sources, so attend lecture and take your own notes.

Research Opportunities:
During the fall and spring semester, the Geology Department encourages individual and group directed research projects for undergraduate and graduate students. These projects can be presented in departmental meetings, the Undergraduate Research Conference at SFA, regional, state and national academic meetings such as Texas Academy of Science, AAPG and GSA. If you are interested, please let me know.

**Academic Integrity (A-9.1)**

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**Withheld Grades Semester Grades Policy (A-54)**

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**Students with Disabilities**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), HumanServicesBuilding, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.