Semester/Year: Fall 2006

Lecture Hours: 3  Lab Hours: 2  Credit Hours: 4

Class Time: 10-10:50 AM  Days: MWF  Room: TM 121

SEMINAR: Alternate Wednesdays, 10:00 - 11:50 a.m.
(You must be registered for a separate class EDCI 1450 sec. 1 with Dr. Terry Logue)

Instructor's name: Dr. Kent Sundell

Instructor’s Contact Information: Office Phone: 268-2498
Office Number: Tate Museum Room 103
Email: ksundell@caspercollege.edu
Home Phone: 473-2299 Please call prior to 10 p.m.
Office hours: MWF: 8:00 - 9:00 a.m., and
MW: 3:00 - 4:00 p.m.

Course description:
Geology 1070 is a broad general education course combining the physical nature of the Earth with the history of the Earth. Through a series of lectures, discussions, and labs the student is introduced to the origin and composition of the earth, the processes which have and are shaping the earth, the economic and social importance of natural processes to mankind, and the history of physical and biological changes on the Earth.

Statement of prerequisites: None

COREQUISITE:
You are required to register in EDCI 1450 with Dr. Terry Logue (This is a seminar on classroom applications of the geologic data presented)

Goals:
This course is designed to give students of elementary education a thorough broad background in Earth Science education, including a combination of astronomy, climate, physical and historical geology.

Outcomes:
Geologists are directly involved in the search for new energy and mineral, and water supplies, as well as mitigating the environmental impact of such activity. All members of society are affected by these activities. It is hoped that this course will provide a basis of knowledge for those who must make important decisions in the future, both the producers and the consumers (society). Additionally, the student will gain an awareness and understanding of their natural surroundings and will be able to see their dynamic, changing earth in a new way. Furthermore due to the current heighten public interest in such topics as paleontology and volcanology the student should learn new methods of motivating elementary students to learn about science in general through exciting geological phenomena. The outcomes will be assessed by testing, problem solving, writing, pictorial, and oral dialogue between the instructor and student throughout the course.

Methodology:
This course will consist of a series of lectures, demonstrations, discussions, and laboratory exercises designed to cover the main facets of physical and historical geology. The lectures will explain and expand upon the material in the text and will provide up-to-date coverage of what is known in the field of geology, including gray areas in which knowledge is limited and in which theory is king. Because geology is a physical science, students will get an opportunity in lab to examine at first hand the materials making up the earth. Through the use of aerial photo-
graphs and topographic maps, the students will be able to examine some of the processes which are shaping the earth. Students are expected to make every effort to attend class meetings, to carefully read all assigned material, and, above all, ask questions when confused or unsure.

**Evaluation criteria:**
Student evaluation will be as objectively as possible through the use of regularly scheduled exams in the class, as well as lab exercises. Participation in the day to day give and take of the classroom is an important aspect of a college education. Therefore, students will be expected to attend each and every class meeting and enter into discussions and question-and-answer sessions.

**APPROXIMATE POINT DISTRIBUTION**
Lecture is Approximately 75% of your final grade

- Exam I: 150 points
- Exam II: 150 points
- Exam III: 150 points
- Exam IV, Final: 150 points
- Lab Grade: 200 points

**TOTAL POINTS POSSIBLE:** Approximately 800 points

**Grade Cutoffs:** A: 90%+; B: 80-89%; C: 70-79%; D: 60-69%; F: <60%

**Exams:** The exams will be some combination of multiple choice, short answer, and essay. If you have difficulty writing essay answers on exams please contact the Casper College Writing Center for help as soon as possible (before the first exam). Some questions will ask for simple facts. Others will concentrate on solving problems through the application of geological knowledge. I do not take points off for missing classes, mainly because that problem takes care of itself: if you miss too many classes, you will not do well on my exams. It is incumbent upon the student to get class notes from someone, and ask me for clarification if you must miss class. I reserve the right to curve exam scores if I decide it is necessary.

**Make-up Exams:** If you must miss an exam, you will be allowed to make it up only if you contact me prior to your absence with a believable, significant excuse or have an official Casper College excuse for medical or emergency absences. I return all exams to students, so make-up exams will consist of mainly essay questions, which I will write separately from the regular exam.

**Lab:** The lab exercises will count as approximately 25% (approximately 200 points) of your final grade.

**Field Trips:** There will be several short Casper field trips during scheduled lab time; there will be one optional weekend field trip near the end of the semester to be announced, worth 25 extra credit points!

**Required Text, Readings, and Materials:**
*Earth Science Today* by Murphy and Nance; other reading materials may be assigned from time to time.

**Lab manual:** *Physical Geology* by Hamblin and Howard.

**Class Policies: Last date to change to Audit Status or to Withdraws with a W Grade:**
Please refer to the current Casper College catalog.

**Student rights and responsibilities:** Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

**Academic dishonesty- Cheating and Plagiarism:** Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offence was committed or expulsion from school. See the Casper College Student Code of Conduct.
Chain of Command: If you have any problems with this class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take your problem through the appropriate chain of command starting with the department head, then the division chair, and lastly the vice president for academic affairs.

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment to see me at your earliest convenience.

Calendar or schedule indicating course content:
WEEKLY SCHEDULE: The topics below are listed in the order in which we will study them. You will be responsible for material covered up to the date of the exam. Asterisk * indicates the weeks EDCI 1450 will be taught on Weds. 10-12 am.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
<th>READING</th>
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<tbody>
<tr>
<td>Aug. 28*</td>
<td>Introduction. Scientific method. Astronomy.</td>
<td>Ch. 1, 16</td>
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<tr>
<td>Sept. 4</td>
<td>Origin of Universe, Solar System &amp; Earth. No class Sept. 4 (Labor Day)</td>
<td>Ch. 15 &amp; 16</td>
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<tr>
<td>Sept. 11*</td>
<td>Earth’s interior and Plate Tectonics.</td>
<td>Ch. 4, 5</td>
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<td>Sept. 18</td>
<td>Earthquakes, structural geology, and mountain building. Exam I</td>
<td>Ch. 6, 7</td>
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<td>Sept. 25*</td>
<td>Minerals and Rocks.</td>
<td>Ch. 2</td>
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<td>Oct. 2</td>
<td>Igneous rocks and volcanoes.</td>
<td>Ch. 2, 6</td>
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<td>Oct. 9*</td>
<td>Sedimentary rocks and weathering (coal).</td>
<td>Ch. 2</td>
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<td>Oct. 16</td>
<td>Metamorphic rocks. Exam II.</td>
<td>Ch. 2</td>
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<td>Oct. 23*</td>
<td>Landslides and mass wasting. No class Oct. 23-24 (Fall Vacation)</td>
<td>Ch. notes</td>
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<td>Oct. 30*</td>
<td>Atmosphere &amp; weather.</td>
<td>Ch. 11, 12, 20</td>
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<td>Date</td>
<td>Topic</td>
<td>Chapters</td>
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<td>Nov. 6</td>
<td>Oceans, waves, tides and coastal processes.</td>
<td>Ch. 8, 9</td>
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<td>Nov. 13</td>
<td>Streams, and Ground fluids (water, oil and gas). <strong>Advising Day Nov. 17th</strong></td>
<td>Ch. 9, 10</td>
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<tr>
<td>Nov. 20</td>
<td>Glaciers, Deserts and climatic change. <strong>Exam III. No Class Nov. 22-24 (Thanksgiving)</strong></td>
<td>Ch. 20, 14</td>
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<td>Nov. 27</td>
<td>Geologic time, Fossils and Evolution.</td>
<td>Ch. 3</td>
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<td>Dec. 4</td>
<td>Precambrian &amp; Paleozoic eras.</td>
<td>13, 14</td>
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<td>Dec. 11</td>
<td>Mesozoic &amp; Cenozoic eras.</td>
<td>14</td>
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<td>Dec. 18</td>
<td>Finals Dec. 18-21. <strong>Final Exam as scheduled.</strong></td>
<td>All Readings</td>
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