

GEOL 1070 The Earth: Its Physical Environment FALL 20xx

Central Wyoming College

<http://www.cwc.edu/faculty/ssmaglik>

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CW 114 T & TH 4-6pm

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or by appointment

Lecture & Lab: TTH 11:00 am - 1:50 pm CW 117

Required Materials: *Earth Science Made Simple* by Edward F. Albin
Broadway, ISBN 978-0767917032, \$12.95
Astronomy Made Simple by Kevin B. Marvel
Broadway, ISBN 978-0767917049, \$12.95
4 x 6 index cards (white with lines)

Course Description: This course is a broad introductory-level course in earth and space science, covering topics from physical and historical geology, meteorology, oceanography, planetary astronomy and stellar astronomy. It illustrates fundamental concepts, processes, products, and the relationships between selected topics and society. This course serves elementary education majors (who should also enroll in EDEL 1450 concurrently, or the next semester), as well as other non-science majors and general studies students. Students enrolling in this course may not also receive credit in ASTR 1070. A field trip is required. Prerequisites: MATH 0500 or equivalent, college-level reading and composition. (3 lect., 3 lab) **LSCI**

Course goals:

- To help the student understand why science is important and how the scientific method can be applied to their lives.
- To excite the student about the world around us.
- To help the student gain a better understanding of the way Earth works and its place in the Universe.
- To explain earth science in an integrated format that allows the student to develop critical thinking skills.
- To encourage the student to become an informed and responsible citizen of our planet.

Student Attributes: Central Wyoming College wants students completing course work to possess particular student attributes. (For definitions of attributes, see p. x of CWC 2007-2009 Catalog). This course contributes the following to these attributes.

- A. **Critical Thinking:** GEOL 1070 students are required to formulate and submit critical thinking questions weekly. They are also required to analyze and synthesize data collected in laboratory settings and to draw appropriate conclusions regarding the nature of the experiment.

- B. **Self-directed learning:** GEOL 1070 students must direct their learning of course materials by establishing a learning strategy, based on options provided by the instructor. The instructor provides a framework for learning, while students build the necessary steps for their own success in the course.
- C. **Communication:** GEOL 1070 students learn to communicate using both written and oral formats. Team-building exercises provide students the ability to communicate and work in a group. Student teams will lead class discussions for the last third of the course.
- D. **Technological literacy:** GEOL 1070 students use the technology of the Internet to acquire necessary course materials. Laboratory problems may be computer-based. Computer software is used by students to analyze data and produce written reports.

Expectations: You are expected to **attend all** lecture and lab sessions and to **be on time**. Class will start on time and any announcements or changes to the syllabus will be given at the beginning. If you arrive late it is your responsibility to find out what you missed by asking your peers. If you do miss class, any handouts will be available in the class folder in CW 117. You are expected to pay attention in class and to respect your instructor and classmates by not "chatting" during class time or by not using electronics devices (except calculators) during class time. If you have a question, please ask, politely. Join the class discussion. You are encouraged to utilize office hours, e-mail or study groups for further discussion. Excused absences must be arranged ahead of time and in accordance with the CWC Student Handbook. Giving advance notice for absences makes you eligible for make-up privileges. Do not expect to make up missed work if no advance notice is provided. Assignments are due on the given date. Assignments are considered late when graded papers have been returned in class. Late assignments may be penalized. You may arrange for no penalty on late assignments ahead of time, if you have a compelling reason.

You are required to use a computer in this class but you do not have to own one. They are available for you to use in several locations on this campus but especially, CW 117, Library, CW 103 and the CALL. Please **ask for help** if you need it. Not knowing how to use a computer and the Internet is not an excuse for not completing your class assignments on time.

It is to your benefit to keep in contact with your classmates and the instructor during this course. You must learn how to use e-mail if you do not already know how. We will review this during our first lab meeting. If you would like a question answered or want to set up an appointment you can send me a message by phone or e-mail. I will check my e-mail and return messages every evening. You may also call my voice-mail and leave a message anytime or call during office hours. I will respond as soon as I can, either by e-mail or phone.

Lectures: Assigned material must be read before coming to class. The course material is separated into Units. Each of these Units represents material with a common theme. There will not be much traditional lecture in this class. Being prepared by reading ahead will lead to more informative in-class discussions. Earth Science is very visual. Lectures will also include CD-ROM animations, videos and slides. Take notes and review them soon after each class and before the next. Specific **Course Objectives** are available on the course website (or separate handout) and will be updated as necessary.

Homework: Read the assigned material before coming to class (see suggestions below). Come prepared to ask questions and join the discussion. There are two types of homework assignments that will be done on a regular basis: reading questions (RQs) and question cards (Q-cards).

1) RQs: There will be several questions (up to 10) for each Unit that you must answer **by 9AM each assigned day**. These will be submitted on-line and will not be accepted on paper or during class. Instructions on where to find them and how to submit them will be presented in class. Your first assignment will pertain to this syllabus. *Each RQ will be worth 10 points.*

2) Q-cards: Each Thursday you must turn in a **4x6 card** as follows. (Loose paper or other size cards are NOT acceptable.)

Name	GEOL 1070	Date
1) This week in the news I heard about ... [some current Earth Science event].		
-News Source (e.g. Time Magazine)& date		
2) A thoughtful question pertaining to what you are learning in this class (using full sentences and Standard English).		

Asking good questions is a learned skill. This takes practice and you will improve with time. These questions must not be trivial or of the type that are easily answered by your books/readings or “the web,” nor may they be copied from the reading questions. You do not have to ask questions dealing only with the readings; you may ask questions about events or observations. Cards are due at the beginning of class. Late cards will not be accepted for credit. If you come to class late you must bring your card to the front table immediately (even if you find it embarrassing or impolite). *Each card is worth 10 points.*

NOTE that we are NOT USING WebCT! The course website is listed at the top of this syllabus. If you try to find this course on WebCT it will not be there!

How to Study for this class:

I. Preview the reading, paying specific attention to topic headings, figure and table captions, and interest boxes. There will also be supplemental readings posted on the website or handed out during class.

II. Use the Website. Study Objectives for each topic are provided. Make sure you understand them.

III. Review the Reading Questions. You will be required to answer these on the website. This way you will read with purpose rather than ingest random words.

IV. Read the assigned material. Do not try to read and comprehend every word. Read, instead, to answer the questions. Outline the reading or use another note-taking procedure. Your book should be treated as resource material, not something to memorize.

V. Go back to the Website. Submit your answers to the reading questions BEFORE coming to class (DUE by 9AM on assigned day). Deadlines for each set of questions will be given on the website. This will be a good review for weekly quizzes.

VI. Create your Q-card. Just because they are due on Thursday doesn't mean you should wait until then! "Gitter done!"

Testing: There will be 3-4 1-hour exams during the semester. These will consist of a variety of short questions and essays. Study guides will be available on the website at least one week before each test.

There will be an **in-class comprehensive 2-hour final exam**, consisting of questions from the previous tests and an essay question presented to you ahead of time. **The final exam is scheduled for [date & time], during your regularly scheduled lab time.**

Labs: Labs are integrated with lecture during this course so you can consider every day a lab day. You must read any assignments (in text, web or other) before coming to class. Data sheets will be due at the end of the lab period, unless specifically directed by the instructor. You may work together with a lab partner but each of you must submit a separate report (i.e., put your observations in your own words, not your partner's). Labs received with identical answers (except for those that should be) receive scores of zero (for both parties involved). Materials for most labs will be provided for you. There is no required lab manual. **You should bring the following to lab with you: textbook, writing paper (white only; with lines; no rough edges (trim!)), pencils (not ink pens) both carbon and colored, and a good (white) eraser. Many of these lab exercises will be done outside. Please dress appropriately.**

Extra Credit: There will be a *limited* amount of extra credit available. You may take the opportunity to earn extra credit only if all other assignments are complete. Missing assignments (including weekly cards and field trip report) may negate any extra credit work. IOW you cannot substitute extra credit for missed work.

Portfolio: You must keep an organized portfolio of you work in this class up-to-date at all times. It will be collected twice during the semester. Once toward the beginning so that you can receive advice on organization and then at the end of the course for final evaluation. You must include a typed Table of Contents. The rest of the organization is up to you. A grading rubric is available on the course website.

Class project: You will be assigned a team presentation topic. Each team (2-3 students) will be prepare a poster on the topic (poster board provided). We will have a poster session during the last week of the course. During this session each team member will be responsible for orally presenting part of the topic in front of the poster.

Start as soon as you receive your assignment - don't leave it until the last minute!! A grading rubric is available on the course website.

Field Trip: You are **required** to attend a field trip and file a report on that trip. A few opportunities will be available during the semester, depending on the weather. Any one not able to attend the trip must consult with the instructor ahead of time and must have a valid excuse. Except in unusual cases, having "to work" is not a valid excuse; enough time will be given for you to make appropriate arrangements. Accommodations will be made for the less-mobile student. Please see discuss any concerns with the instructor.

Grading: Graded papers that are not reclaimed when returned in class, will be left in the unclaimed assignments folder in CW 117. If you do not want your assignments left there, inform the instructor and make arrangements to claim them.

Letter grades will be assigned based on total class performance with the approximate provisions (determined statistically): >90% A, >80% B, >70% C, >60% D, <60% F.

Testing, HW & Portfolio	40%
Labs* (Field Trip)	40%
Poster Project	10%
Motivation & Attitude**	10%
TOTAL	100%

Final Grades will be available on WebAdvisor no earlier than [date & time]. A class summary of grades and statistics used to assign grades will be posted on the course website.

***Laboratory work will be graded using the following \sqrt scale. Total points assigned will vary depending on the difficulty and length of each assignment.**

$\sqrt{++}$ Excellent work. Correct, complete, and neat. Perfect with regard to the questions asked. Conclusions are logical both quantitatively and qualitatively. Also the conclusions are *shown* to follow from the data. Extraordinary analysis of questions and hypotheses. (100% poss pts)

$\sqrt{+}$ Proficient work. Correct, complete and readable. There may be a few minor errors. Conclusions are logical both quantitatively and qualitatively. Also the conclusions are *shown* to follow from the data. All places where a quantitative analysis is possible must include errorless, thorough quantitative analysis. (90% poss pts)

\sqrt Adequate work. Qualitative analyses are logical. Some of the data or interpretations may be incorrect. Most quantitative analyses are good, however, some incomplete, inaccurate or inappropriate work may be apparent (math errors, or some conclusions and equations are not shown to fit the data). (75% poss pts)

$\sqrt{-}$ Marginal work. Data analysis is logical on the qualitative level but much of the quantitative analysis is done sloppily or is full of errors. Weak analysis of

questions and hypotheses. Some interpretations may be incorrect or there may be evidence of misconceptions. (60% poss pts)

√-- Unsatisfactory work. May be incorrect, incomplete or unreadable. Poor analysis of questions and hypotheses. Although all questions may be answered, the answers show no evidence of understanding. (40% poss pts)

0 Failed to do the assignment or the assignment is exceptionally late. (0%)

**** Scoring for Motivation and Attitude (M&A):**

10% (A) Excellent attendance record. [No unexcused absences. Timely arrival to lecture and lab.] Completes all assignments on time or arranges for later due date ahead of time (and only occasionally). Has a truthful, enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Shows higher-order thinking skills, independence and creativity. Is alert during demonstrations and videos, taking complete notes. Participates in class discussions and assists peers in a friendly manner. Consistent and precise; stays on task and offers useful ideas.

8% (B) Above-average attendance record. [Few unexcused absences. Timely arrival to lecture and lab.] Completes all assignments on time or arranges for later due date ahead of time (and only occasionally). Has a truthful, enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Shows limited higher-order thinking skills, independence and creativity. Is usually alert during demonstrations and videos, taking complete notes. Participates in class discussions and assists peers in a friendly manner. Consistent with minor flaws; stays mostly on task and offers some useful ideas.

6% (C) Adequate attendance record. [Several unexcused absences. Often late arrival to lecture and lab.] Completes most assignments on time or arranges for later due date ahead of time. Has a truthful, somewhat enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Is sometimes alert during demonstrations and videos, taking minimal notes. Infrequently participates in class discussions and rarely assists peers. Needs teacher's help or is overly dependent on peers (needs some prompting); offers few useful ideas.

4% (D) Marginal attendance record. [Many unexcused absences. Often late arrival to lecture and lab.] Completes many assignments on time but has a ready excuse for most late work. Has a somewhat enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Is rarely alert during demonstrations and videos, taking minimal notes. Rarely participates in class discussions and relies somewhat peers. Needs constant attention, offers very few useful ideas and is marginally involved in the task.

2% (E /F) Unsatisfactory attendance record. [Many unexcused absences. Mostly late arrival to lecture and lab.] Rarely completes many assignments on time but has little or excuse for most late work. May not turn in some assignments. Has very little enthusiasm, or a negative attitude, toward computer work, homework, lab exercises and outside assignments. Needs constant attention, offers no useful ideas

and is not involved in the task. Finds fault for personal inadequacies everywhere but within.

0% (F) Unprepared for college-level work. Poor attendance record. [Many unexcused absences. Mostly late arrival to lecture and lab. Leaves room frequently.] Rarely completes many assignments on time but has little or excuse for most late work. May not turn in many assignments. Has very little (or false) enthusiasm, or a negative attitude, toward computer work, homework, lab exercises and outside assignments. Is rarely alert during demonstrations and videos, taking no notes. Does not participate in class discussions and relies heavily on peers. Needs constant attention, offers no useful ideas and is not involved in the task. Finds fault for personal inadequacies everywhere but within.

Other:

If you drop, you must follow the appropriate procedure. If you just stop coming to class, you will be assigned an "F" for the course. Instructor Withdrawals (WI) will be considered only under unusual circumstances. Incomplete grades (X) will be given at the discretion of the instructor and only when the student is passing the class at the time of the request.

Students desiring reasonable accommodation under the Americans with Disabilities Act or who have serious medical conditions must notify the instructor to discuss their needs. All information will be held confidential.

All other academic issues shall follow the procedures outlined in the CWC college catalog or CWC student handbook.

sms: 4/08