

**CASPER COLLEGE COURSE SYLLABUS
GEOL 1100 SECTION 01, PHYSICAL GEOLOGY**

Semester/Year: Fall 2015

Lecture Hours: 3L,

Lab Hours: 2Lb

Credit Hours: 4Cr

Class Time: 9:00 –9:50p.m.

Days: MWF

Room: TM 123

LAB: As scheduled. Note: you **must attend and pass** a lab section to complete the requirements for this course.

Instructor's Name: Dr. Kent Sundell

Instructor's

Contact

Office: Tate Museum Room 103

Information:

Office Phone: 268-2498 (O) or
307-259-5258 (cell-text)
Please call prior to 10:00 p.m.

Email:
ksundell@caspercollege.edu.

Office Hours: MWF 8-9am MW
12-1pm

Course Description:

Geology 1100 is a survey course concentrating on the physical nature of the Earth. Through a series of lectures, discussions and labs, the student is introduced to the composition of the earth, the processes, which have and are shaping the earth, and the economic and social importance of natural earth processes to mankind.

Statement of Prerequisites: None

Goal:

Because not every student taking physical geology will go on to become a geologist, this course is designed to be of use to anyone desiring a broad geological education. However, many students will go on to work in geology or a related field so enough rigor will be incorporated to provide a firm basis for future study. It is also hoped that 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.

Outcomes:

- 1) Understand the scientific method, specifically, how the Law of Gravitational Attraction, Big Bang Theory and Theory of Plate Tectonics help explain formation of the Universe, Our Solar System, and Planet Earth
- 2) Be able to identify and understand the processes of forming minerals and igneous, sedimentary, and metamorphic rocks
- 3) Use the scientific method in "hands on" study of the physical properties of minerals and rocks

- 4) Recognize how tectonic induced stresses throughout geologic time have caused earthquakes, deformation and rock strain
- 5) Understand how interactions between Atmosphere, Hydrosphere, and Lithosphere shape Earth's surface through surficial processes (streams, glaciers, dunes, and landslides)

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, and discussions designed to cover the main facets of physical 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 photographs 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 both the lab and lecture portions of the class, as well as possible surprise quizzes. 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. Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work if collected.

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 section will count as approximately **25%** (approximately 200 points) of your final grade; You must, however, **pass lab to pass the class**, no matter what your final average grade is.

Field Trips: There is **one mandatory field trip** in the lab section; there will be one optional field trip to be announced, worth 25 extra credit points!

Required Text, Readings, and Materials:

Earth by Tarbuck, Lutgens, Tasa, Lab manual by Ludman & Marshak (Ed. 3rd); other instructional materials may be assigned from time to time.

Class Policies: Last Date to Change to Withdraw with a W Grade:

Nov 12th

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

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.

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 school dean, and lastly the vice president for academic affairs.

Academic Dishonesty - Cheating & 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 offense was committed or expulsion from school. See the Casper College Student Code of Conduct.

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 known accommodation in this course, please make an appointment to see me at your earliest convenience. To request academic accommodations, students must first consult with the College's disability Services councilor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu

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.

WEEK of	TOPIC		READING
Aug. 24	Introduction. Overview of geology, geologists, and Earth. Scientific Method. Formation of Solar System		Ch. 1 & 24
Aug. 31	Plate Tectonics.		Ch. 2,13,14
Sep. 7	Earth Materials (elements and minerals). No class Sep. 7 – Labor Day		Ch. 3
Sep. 14	Igneous rocks.		Ch.4
Sep. 21	Volcanoes and Volcanism. Exam I		Ch. 5
Sep. 28	Sedimentary Environments and Weathering.		Ch. 6
Oct. 5	Sedimentary Rocks		Ch. 7
Oct. 12	Metamorphic rocks. Exam II.		Ch. 8
Oct. 19	Fall Break, no class March 19 – 20th. Geologic time		Ch. 9
Oct. 26	. Geological history.		Ch. 9
Nov. 2	Deformation and Mountain building.		Ch. 10
Nov. 9	Earthquakes and Earth's interior.		Ch. 11,12
Nov. 16	Streams and Rivers. Exam III		Ch. 16
Nov. 23	Ground fluids. Caves and Karst. No Class Nov. 25-27 Thanksgiving		Ch. 17
Nov. 30	Climatic change: Glaciers and Deserts.		Ch.18,19,21
Dec 7	Shores and coastal processes.		Ch. 20
Dec 14	Finals Dec. 14-17th Final Exam as scheduled.		All Readings