

**CASPER COLLEGE COURSE SYLLABUS
GEOL 1020, 01 – Geology of Wyoming**

Semester/Year: Fall 2015

Lecture Hours: 1

Lab Hours: 0

Credit Hours: 1

Class Time: 6:00-7:50 pm

Days: TH alternate weeks

Room: 123 Tate Museum

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 of Wyoming is designed as a local interest course in geology. The topic will vary each semester but the broad concepts learned will be applied to the local geology of Wyoming. This semester the topic will be Natural Disasters. A great variety of geological and atmospheric processes can produce rapid large-scale changes that cause local, regional, and global disasters, effecting mankind and other life forms. Lectures, slides, and film clips will depict the many varied natural disasters of Wyoming and the world.

PREREQUISITES:

None, but some previous or simultaneous geology instruction is preferred. GEOL 1021 is designed as a field trip to observe as many natural disaster features as possible in NW Wyoming.

OBJECTIVES:

This course gives college students and the interested public, a general understanding of how and why most natural disasters occur. Details of numerous specific disasters will help the student understand past, present, and future effects of natural disasters on mankind. By the end of the course, the student will understand how much of the regional geology of Wyoming was shaped by a great variety of rapid, large-scale geologic processes often associated with catastrophic effects on existing life forms.

OUTCOMES: CC gen. ed.

1. Demonstrate effective oral communication
2. Use the scientific method
5. Appreciate aesthetic and creative activities

The student should acquire a local and global understanding of many different natural disasters that have affected humans and other life forms. This course is designed to give students of earth science

the opportunity to explore, research, and discuss with their peers a variety of natural disasters in Wyoming and on Earth. The student will at the end of the course understand the scientific evidence supporting each topic and how it fits into the local, regional, and worldwide perspectives. The student will gain skills in researching topics, critically reading papers, oral and written presentation of ideas, and social discussion of complex scientific ideas.

METHODOLOGY:

This course will consist of a series of lectures, slides, films, demonstrations, discussions and field trips designed to cover natural disasters worldwide and apply this knowledge to the past, present, and future geology in Wyoming. Students are expected to attend class meetings, participate in field trips, carefully read any assigned material and, above all, ask questions when confused or unsure.

Evaluation Criteria:

Student evaluation will be based on attendance and one term paper. Each student will be required to write a paper or do a power point presentation of their choosing, about a specific natural disaster event. The deadline for the paper will be December 10th, 2015 Grade Cutoffs: A: 90%+; B: 80-89%; C: 70-79%; D: 60-69%; F: <60%.

Field Trips:

There will be an optional weekend field trip to Yellowstone and Grand Teton National Parks on Sep. 11-13 (GEOL 1021) that will look at Wyoming natural disasters up close and personal in northwest Wyoming.

Required Text, Readings, and Materials: Natural Hazards and Disasters by Hyndman & Hyndman

Other readings as provided by instructor.

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

No drop slips will be signed after the official deadline! Nov. 12th.

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 division chair, 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 and/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

Calendar or schedule indicating course content:

WEEK	TOPIC		READING
Aug. 27	Introduction and Earthquakes – Occurrence, size, hazards, and prediction (Japan 2011, Alaska 1964, Yellowstone 1959, Teton Fault future)		Ch. 1, 2, 3, & 4
Sept. 10	Landslides and Avalanches– Mechanics and Triggers. (Vaiont 1963, Castle Rocks Chaos 43Ma, Heart Mountain/ Absarokas)		Ch. 8
Sept. 24	Volcanoes - Occurrence, types, hazards, and prediction (Heimaey 1973, Mt. St. Helens 1980, Krakatoa 1883, Yellowstone)		Ch. 6 & 7
Oct. 8	Tsunamis and Meteorite impacts - (Japan 2011, Sumatra, 2005, Krakatoa 1883, Chixulub 65Ma)		Ch. 5 & 17
Oct. 22	Floods – Precipitation, saturation and levees. (Mississippi River, Big Thompson 1976, Lake Missoula Pleistocene)		Ch. 12, 13
Nov. 5	Hurricanes and Tornados – Wind and weather (Katrina 2005)		Ch. 10 & 15
Nov. 19	Drought, Fires, and Deserts (Yellowstone 1988, Wyoming during the Altithermal 8,000 years ago)		Ch. 16
	Thanksgiving Nov. 26		
Dec. 10	Climatic Change - Global warming or Global cooling: where are we headed and which disasters should we prepare for.		Ch. 11
	Final Week December 14-17. Term paper due by last class December 10, 2015.		