

OGLALA LAKOTA COLLEGE
COURSE SYLLABUS & ADMINISTRATION
Spring 2014
Rebuilding the Lakota Nation through Education
Wounspe Ihuniyan Hci Lakota Oyate Kin Akta Ic'icakagapi Kte lo

Name of Course: Physical Geology

Course Number: Geol 143

Department: Math and Science

Credit Hours: 3 (yamni)

Location: He Sapa Center

Time & Day: Wed 9 - 12

Instructor's Name: Charles Jason Tinant

Email: jtinant@olc.edu

Phones: 605-455-6003 MST Office

Mobile: 605-209-9974

Office: Area 51 at Piya Wiconi (Math and Science Bdg)

Office Hours: Tue 12:30 -2:30 CC
Wed 12:30 -2:30 CC
Thurs 10 – 12 PW

Course Description (Waunspe Oyakapi): This course surveys the physical properties of the Earth and geological materials. Topics will include: plate tectonics, minerals and rocks, the rock cycle, stratigraphy, earthquakes, and volcanoes. Field trips to the Black Hills and hands on laboratories complement topics covered in lecture.

Prerequisites: None (but see expectations below)

Required Text and Materials: **Earth: An Introduction to Physical Geology** (10th Edition) Edward J. Tarbuck, Frederick K. Lutgens, Dennis Tasa, ISBN: 9780321663047/0321663047

Course Goal: Students will gain a better understanding of their physical environment by understanding geological processes.

Learning Objectives (Wounspe Taku Unspepi Kte Kin He Le E): Upon completion of this course students will be able to:

1. Explain the scientific method as applied to geological evidence;
2. Describe in general terms the properties of rocks and minerals, and the rock cycle;
3. Describe in general terms plate tectonics and the causes of volcanism and earthquakes;
4. Interpret in general terms Black Hills geology

This course meets the following OLC general education learning outcome goals:

- Goal 1: Outcome 1, Outcome 2;
- Goal 2: Outcome 1;
- Goal 4: Outcome 1, Outcome 4;
- Goal 6: Outcome 2.

Assessment: The course will be assessed using a midterm and a final exam.

Instructional Methodology: The course will be taught face-to-face. Weekly instruction includes a lecture discussion format, and cooperative learning (team building). Field trips to the Black Hills and hands-on laboratories will reinforce classroom concepts.

Course Rationale: This course is a core requirement for the environmental science degree and meets general education requirements for science. Physical geology provides the student with knowledge of the physical environment, which is necessary to succeed in a baccalaureate degree in environmental science.

Homework: Each student should expect to spend two (nunpa) to three (yamni) hours out of class on reading and homework assignments each week, for every hour of class time (each credit hour), in order to perform satisfactorily. Therefore, if a course is three (yamni) credit hours you should spend approximately six (sakpe) hours outside of the course room on required readings and homework. However, every student differs in their individual skills, educational background, experience, capability and personal goals; so the amount of time you must dedicate to out of class work can vary significantly from this national average.

Reading Load: Students are expected to read the one (wanji) textbook chapter per week or its equivalent.

Type & Amount of Writing Load: Most weekly assignments are answering questions in complete sentences. However, two laboratory reports and one field report write-ups will be of three to five pages

Lakota Perspective Provided Through: This course stresses **Wolakotakiciapi** of “learning Lakota ways of life in the community”. This course is based on the values of mutual respect and generosity (woohola na wochantognakapi), seeking to advance each individual’s knowledge through their continuing hard work (fortitude- wowalitake) and willingness to learn new information and viewpoints, as well as to demonstrate it, by speaking in front of the group (bravery-woohitike); all undertaken in an environment of truthfulness, trust, integrity and humility. We will do this by embracing the teaching of our ancestors as we learn new ways. (Waunspe wicakiyapi ki iglutanyan ihani unpi kun hena itan waunspe tokeca uha ayin kte.)

Evaluation and Grading: Student performance will be evaluated with short weekly quizzes, individual and group homework, a midterm and a final exam. Students will also be required to participate in two all-day field trips scheduled on Fridays, each in lieu of the weekly lecture.

Weekly Homework	45% of Final Grade
Midterm Exam	25% of Final Grade
Final Exam	30% of Final Grade

A = Superior Quality Work = Demonstrated concept mastery by scoring 90% or better.

B = Good Quality Work = Demonstrated concept mastery by scoring 80-89%.

C = Satisfactory Quality Work = Demonstrated concept mastery by scoring 70-79%.

D = Marginal Quality Work = Demonstrated weak concept mastery by scoring 60-69%

F = Demonstrated concept mastery below the acceptable mark of 59%, which is well below what may be required in the business world.

W = Withdrawal = A student may withdraw from a course by filling out a Drop Card to be recorded by the Registrar. The student must sign this form if you drop yourself. A Drop Card may/can be filled out and signed by a counselor/instructor for lack of attendance.

College Policy on Grading and Change of Grades:

http://www.olec.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see pages 10 and 11

Course Requirements, Expectations or Students: Because OLC offers classes in three-hour blocks once per week, (for everyone’s travel convenience), if you are absent from one OLC class session, it’s like missing three classes at another college. (See student handbook).

- Unannounced quizzes and graded in-class exercises will be given; content can include any course material assigned, up to and including the current session.
- Your homework assignments must be turned in on the dates due to get full credit.
- You are expected to participate in class discussion; this provides evidence of your interest in and preparation for the class. It also helps gauge the effectiveness of the instruction and everyone’s level

of comprehension of the material presented. Most importantly, fellow class members benefit from your opinions and insights; in addition, the questions you ask may be about the same topic with which other students are having difficulty, so by helping yourself you also help them.

If the Instructor is not present at the beginning of the class, and the College Center Staff has not heard from the Instructor, you should wait at least 30 minutes past the normal start-time and then if the Instructor has still not arrived, you may leave.

Attendance and Tardiness

http://www.olc.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see pages 7 and 8

Policies on Academic Honesty

http://www.olc.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see page 46

Standards of Conduct Policy

http://www.olc.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see page 38

ADA Policy

http://www.olc.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see pages 37 and 38

Electronic Information Resources Acceptable Use Guidelines

http://www.olc.edu/~jchasinghawk/registrar/docs/student_handbook.pdf see page 41-46

TOPICAL CONTENT

<i>Date</i>	<i>Objectives by Chapter</i>	<i>Assignments</i>
Oko Wanci	Chapter 1: Introduction to Geology Objectives: A) Describe history of geology; B) Describe scientific method; C) Discuss earth's four spheres and the Earth system; E) Present the <i>nebular hypothesis</i> and earth's formation.	Read Chapter 1 Homework – Chapter 1 Review Questions View the GEODe Earth Ch. 1 website Take the Chapter 1 Quiz
Oko Nunpa	Chapter 2: Plate Tectonics Objectives: A) Generally describe <i>plate tectonics</i> ; B) Distinguish properties of lithosphere and asthenosphere; C) Discuss properties and locations of plate boundaries; D) Discuss mechanisms of plate tectonics	
Oko Yamni	Laboratory over igneous, sedimentary, and metamorphic rocks Objectives: 1) Relate geologic theory with examples of tertiary fluvial sediments; 2) Complete a field trip report	
Oko Topa	Chapter 3: Matter and Minerals Objectives: A) Distinguish rocks from minerals; B) Generally describe atomic structure and how subatomic particles allow for the formation of <i>compounds</i> ; C) Discuss <i>isotopes</i> ; D) Discuss properties of crystals and minerals; E) Describe general properties of mineral groups	
Oko Zaptan	Chapter 4: Magma Objectives: A) Describe general properties of igneous rocks; B) Discuss general mineral composition of <i>felsic</i> , <i>intermediate</i> , and <i>mafic</i> rocks; C) Discuss textures of igneous rocks; D) Describe <i>Bowen's reaction series</i> ; Describe process	

	of igneous rock formation; E) Discuss general types of igneous intrusions.	
Oko Sakpe	Chapter 5: Volcanoes Objectives: A) Describe primary factors determining nature of volcanic eruptions; B) Describe materials associated with volcanic eruptions; C) Discuss geologic features resulting from volcanic eruptions; D) Relate locations of active volcanoes to plate boundaries and plate tectonic theory; E) Describe natural hazards associated with volcanoes.	
Oko Sakowin	Chapter 6: Weathering and Soil Objectives: A) Generally describe internal and external rock weathering processes; B) Discuss mechanical and chemical weathering; C) Describe how weathering rate is dependent on intrinsic and extrinsic factors; D) Generally describe soil composition and soil forming processes; E) Relate natural to anthropogenic soil erosion.	
Oko Saglogan	Laboratory Number 2: Topographic and Geologic Maps	
Oko Napcinyunka	Midterm Exam	
Oko Wikcemna	Chapter 7: Sedimentary Rocks Objectives: A) Discuss the location and importance of sedimentary rocks; B) Describe how sedimentary rocks form; C) Relate particle size with sedimentary transport mechanisms; D) Contrast chemical sedimentation processes; E) Classify sedimentary rocks and sedimentary environments	
Oko Ake Wanci	Field Trip 1: Black Hills Objectives: 1) Relate geologic theory with examples of sedimentary, metamorphic, and igneous rock; 2) Complete a field trip report	
Oko Ake Nunpa	Chapter 8: Metamorphic Rocks	
Oko Ake Yamni	Chapter 9: Global Climate Change	
Oko Ake Topa	Comprehensive Review	
Oko Ake Zaptan	Final Exam	

Disclaimer: Information contained in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed for use at the beginning of the semester. However, this syllabus should not be considered a contract between Oglala Lakota College and any student. The instructor reserves the right to make changes in course content or instructional techniques without notice or obligation. Students will be informed of any such changes. Additional student rights and responsibilities are outlined in the Student Handbook. http://www.olc.edu/~wwhitedress/studentservices/Docs/OLC_Handbook.pdf