SYLLABUS

DATE OF LAST REVIEW:  02/2013

CIP CODE: 24.0101

SEMESTER: July, 13

COURSE TITLE: Physical Geology

COURSE NUMBER: NASC-0185

CREDIT HOURS: 4

INSTRUCTOR: DEPARTMENTAL SYLLABUS

OFFICE LOCATION: DEPARTMENTAL SYLLABUS

OFFICE HOURS: DEPARTMENTAL SYLLABUS

TELEPHONE: DEPARTMENTAL SYLLABUS

PREREQUISITES: College Algebra, MATH-0105, is recommended.

REQUIRED TEXT AND MATERIALS FOR COURSE:
See KCKCC Bookstore for current textbook.

COURSE DESCRIPTION:
This course provides students with a comprehensive study of the principles of geology while simultaneously providing classroom and laboratory applications. The course is a study of the structural and dynamic features of the Earth. Rock-forming minerals, rocks and their decay. A short history of the Earth are included.

METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

Online Sections: Online courses rely on the use of the Internet and a course management system for content delivery. Courses are accessible both on campus and from most remote sites. Specific information regarding computer skills and system requirements can be found at http://helpdesk.kckcc.edu/helpdesk/

Honors Sections: An honors section of this course provides a non-traditional environment for learning that incorporates active student participation, critical reflection, use of primary sources and
innovative teaching methods. Classes are designated as honors on the transcript. Enrollment in the honors section of this class requires the permission of the Director of Honors Education.

**COURSE OUTLINE:**
The course outline is indicated below and is subject to change as course development dictates. Most topics listed will be discussed.

1. Structure of the Earth and plate tectonics
2. Earth’s dynamic systems
3. Minerals
4. Igneous rocks and volcanism
5. Sedimentary rocks; types, structures, and origins
6. Metamorphic rocks and the rock cycle
7. Weathering
8. River systems
9. Processes of stream erosion and deposition
10. Evolution of landforms
11. Ground water systems
12. Glacier systems
13. Crustal deformation
14. Evolution of the ocean basins
15. Evolution of the continents

**EXPECTED LEARNER OUTCOMES:**
1. The learner will be able to demonstrate a knowledge of the materials comprising the Earth.
2. The learner will be able to demonstrate a knowledge of the internal processes that shape the Earth.
3. The learner will be able to demonstrate a knowledge of the internal structure of the Earth.
4. The learner will be able to demonstrate a knowledge of the external (surface) processes that shape the surface of Earth.
5. The learner will be able to demonstrate a knowledge of the surface features and what they indicate.
6. The learner will be able to demonstrate a knowledge of a brief outline of the geologic history of the Earth.
7. The learner will be able demonstrate a knowledge of how Geologists have learned about Earth.

**COURSE COMPETENCIES:**

(1) The learner will be able to recognize the names and characteristics for the common rock-forming minerals and the common sedimentary, igneous, and metamorphic rocks.
(2) The learner will be able to identify the various igneous structures.
(3) The learner will be able to distinguish among the various seismic waves and their importance.
(4) The learner will be able to identify the basic internal layers comprising the Earth.
(5) The learner will be able to identify the basic internal materials comprising the Earth.
(6) The learner will be able to distinguish among the various weathering processes.
(7) The learner will be able to distinguish among the various erosive processes.
(8) The learner will be able to identify the key terms and processes associated with tectonics.
(9) The learner will be able to identify the key terms and structures associated with folding and faulting.
(10) The learner will be able to identify or illustrate historical plant and animal evolution periods.
(11) The learner will be able to identify or illustrate historical plant and animal eras.
(12) The learner will be able to identify or illustrate historical plant and animal periods.
(13) The learner will be able to describe how fossils record geologic history.
(14) The learner will be able to describe how rocks record geologic history.
(15) The learner will be able to describe how radioactivity record geologic history.
(16) The learner will be able to describe how structures record geologic history.

F General Competencies:
(1) The learner will be able to identify the Scientific method as a process of science.
(2) The learner will be able to make measurements using the metric system.
(3) The learner will be able to gather the data and present it in a form showing their analysis.
(4) The learner will be able to produce graphs of data provided by the instructor or gathered by the learner.
(5) The learner will be able to interpret graphs of data provided by the instructor or gathered by the learner.
(6) The learner will demonstrate knowledge of the use of models in science.
(7) The learner will be able to make predictions based on the use of models.
(8) The learner will demonstrate the use of math as a tool of science.
(9) The learner will be able to convert between the units of the metric and customary English units.
(10) The learner will demonstrate ability their in problem solving as it relates to physical science.
(11) The learner will be able to understand and use the vocabulary customary in physical science.
(12) The learner will be able to critically review selected science writings.
(13) The learner will be able to apply the concepts of physical science to real life situations.
(14) The learner will be able to recognize key concepts and/or principles of physical science.

**ASSESSMENT OF LEARNER OUTCOMES:**
Student assessment is evaluated by means of:
1. Classroom participation and daily preparation
2. Unit tests (probably 4 or 5)
3. A two hour final exam.

**SPECIAL NOTES:** This syllabus is subject to change at the discretion of the instructor. Material included is meant to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact Valerie Webb, Room 3354 or 288-7670 V/TDD.
Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding and tolerance.