Fond du Lac Tribal and Community College
COURSE OUTLINE FORM
Outline Form Created: 03/19/19
Form Updated 12/2/24

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by: Cathy Podeszwa

2. Date submitted:

3. Date approved: Date revised ~~3/24/25~~ 11/7/2025

4. Department/discipline: Geology

5. Department(s) endorsement(s):
   (Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Introductory Geology
   Abbreviated course title for Transcripts (25 characters or less):

7. Course Designator: GEOL 8. Course Level: 1001

9. Number of Credits: Lecture 3 Lab 1

10. Control Number (on site) 24 Control Number (online)

11. Catalog/Course description:
    An introduction to the structure and evolution of Earth and its landforms, including the study of minerals and rocks, volcanic activity, earthquakes, and the theory of plate tectonics. Course material includes impacts of geological processes on human communities. The geology of Minnesota is emphasized.

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses
    Prerequisite(s): None
    Co-requisite:

13. **Course Materials (**Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

    Marshak, Stephen. Essentials of Geology. 7th Edition. W.W. Norton. 2022 with digital access.
    Hand lenses, Rock kits, other Earth materials.
    Handouts, PowerPoints and Videos.

14. **Course Content** (Provide an outline of major topics covered in course)

    1. Structure of the Earth
    2. Minerals
    3. Igneous Rocks and Processes
    4. Plate Tectonics
    5. Volcanism
    6. Earthquakes
    7. Sedimentary Rocks and Processes

8. Glaciers
9. Metamorphic Rocks and Processes
10. Geologic Time and Principles
11. Energy and Mineral Resources
12. Oceans and Freshwater Resources
13. Local Rocks and Landforms

15. **Learning Goals, Outcomes, and Assessment**

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information.)
B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Upon completion of this course, the student will be able to:

Learning Outcomes	**Competencies (CAC)**	**Cultural Standards**
1. Analyze and explain connections between plate tectonics and volcanism, earthquakes, island-building and mountain-building.	A, B	1, 3
2. Identify sedimentary, igneous, and metamorphic rocks, including local rocks of the Thomson Formation and Duluth Complex.	C, D	6
3. Demonstrate methods used to identify the eight most common rock forming minerals.	B, C	
4. Analyze and demonstrate how agents of weathering and erosion (such as water, ice, and wind) change landforms.	A, C	1
5. Examine the impacts of geological processes on human communities.	A, D	2

WINHEC Cultural Standards:

1. **GIKENDAASOWIN – *Knowing knowledge:*** To develop human beings who value knowledge, learning, and critical thinking and are able to effectively use the language, knowledge, and skills central to an Ojibwe-Anishinaabe way of knowing.
2. **GWAYAKWAADIZIWIN – *Living a balanced way:*** To develop balanced human beings who are reflective, informed learners who understand the interrelatedness of human society and the natural environment, recognize the importance of living in

harmony with creation, and are able to apply a systems approach to understanding and deciding on a course of action.

3. **ZOONGIDE'EWIN – *Strong hearted:*** To increase the students' capacity to live and walk with a strong heart, humble and open to new ideas and courageous enough to confront the accepted truths of history and society.
4. **AANGWAAMIZIWIN – *Diligence and caution:*** To develop students' capacity to proceed carefully, after identifying, discussing, and reflecting on the logical and ethical dimensions of political, social, and personal life.
5. **DEBWEWIN – *Honesty and integrity:*** To increase students' capacity to think and act with honesty and integrity as they understand and face the realities of increasingly interdependent nations and people.
6. **ZAAGI' IDIWIN – *Loving and Caring:*** To encourage students' acceptance of the diversity within their school, community, and environment by developing healthy, caring relationships built on respect for all.
7. **ZHAWENINDIWIN – *Compassion:*** To expand students' knowledge of the human condition and human cultures and the importance of compassion especially in relation to behavior, ideas, and values expressed in the works of human imagination and thought.

16. **Minnesota Transfer Curriculum (MnTC):** List which goal area(s) – up to two – this course fulfills.

See www.mntransfer.org

Goal Area(s): 3 & 10

Goals & Outcomes: Natural Sciences
Goal: To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

Students will be able to:

- Demonstrate understanding of scientific theories.
- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
- Communicate their experimental findings, analyses, and interpretations both orally and in writing.
- Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Goal 10: People and the Environment
Goal: To improve students' understanding of today's complex environmental challenges. Students will examine the inter-relatedness of human society and the natural environment.

Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.

Students will be able to:

- Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
- Discern patterns and interrelationships of bio-physical and socio-cultural systems.
- Describe the basic institutional arrangements (social, legal, political, economic, and religious) that are evolving to deal with environmental and natural resource challenges.
- Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
- Propose and assess alternative solutions to environmental problems.
- Articulate and defend the actions they would take on various environmental issues.

17. Are there any additional licensing/certification requirements involved?

_____Yes__X___No

Provide the required documentation to show course meets required licensing/certification standards.