North Central
Michigan College

LAST DATE REVISED: 10/18/04

DIVISION/AREA: Liberal Arts DEPARTMENT: Science

DIVISION DIRECTOR: Mark Gaylord ORIGINATOR: Kurt Yuengling

DEAN OF INSTRUCTION: Timothy Dykstra, PhD

TOTAL HOURS OF INSTRUCTION: LECTURE:3 LAB: 2 TOTAL CONTACT HOURS: 88

COURSE NUMBER: GEOL 102 CREDIT HOURS: 4(3-2)

COURSE TITLE: Historical Geology

TRANSFERABLE YES: NO: TO: Inquiries have been sent to Ferris State, LSSU, CMU, MSU

PREREQUISITE(S)/COREQUISITE(S)/ADVISORY:

None

CATALOG DESCRIPTION:

This course is intended as an introduction to Earth history. Students will learn to interpret rock and fossil evidence. Topics include the origin and evolution of life, using fossils to organize the geologic time scale, determining past environments and environmental changes, and methods for determining ages of rocks and timing of geologic events.

GENERAL EDUCATION OUTCOMES:

The purpose of General Education requirements in our degree programs is to enable students to develop their ability to reason, to communicate effectively in both oral and written form, and to acquire sufficient knowledge of their heritage to participate fully in society and the world.

COURSE OBJECTIVES & OUTCOMES:

Upon successfully completing this course, you should be able to: (1) interpret your observations of the world around you in terms of fundamental geologic processes, (2) explain the creation and organization of the geologic time scale, (3) demonstrate understanding of the timing of major geologic events and climate changes throughout Earth's history , and (4) effectively use selected laboratory instruments and techniques to collect, analyze, and interpret geologic data.

METHODS OF INSTRUCTION: Lecture, discussion, lab, field trips

METHODS OF EVALUATION: Labs, projects, exams

REQUIRED TEXTS:

Historical Geology, 4th ed. Wicander and Monroe, Thompson, Brooks/Cole Publishing. 0-534-39287-3

Reasonable accommodations may be provided for students with documented physical, sensory, cognitive, systemic, and/or psychiatric disabilities. Please contact Learning Support Services at (231) 348-6682 to arrange services for this course.

TIME ALLOWANCE AND SEQUENCE OF INSTRUCTION:

COURSE CONTENT

This course is scheduled to include the following general topics:

A. Earth Materials and Processes

1. Rocks and Minerals
2. Sedimentary Environments
3. Fossil Preservation

B. Geologic Time and Evolution

1. Correlation and Relative Dating Techniques
2. The Structure of the Geologic Time Scale
3. Absolute Dating Techniques
4. Evolution

C. History of the Earth and Life

1. Precambrian Time
2. Paleozoic Era
3. Mesozoic Era
4. Cenozoic Era

APPROVED FOR ADOPTION BY THE CRD/AP COMMITTEE ON: **10/18/04**