

Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title – Historical Geology
Course Prefix and Number – GEOL 1304
Department - Geology
Course Type: (check one)

Division – Math and Natural Science

- Academic General Education Course (from ACGM – but not in WCJC Core)
 Academic WCJC Core Course
 WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours # 3:3:0

Equated Pay hours for course - 3

List Lab/ Other Hours
Lab Hours
Clinical Hours
Practicum Hours
Other (list)

Course Catalog Description - Introduction to the history of the earth and its past inhabitants. Provides a broad overview of fossil records as evidence of the various kinds of plants and animals that have existed on earth.

Prerequisites/Corequisites - THEA reading and writing requirements met. **NOTE: GEOL 1104 must be taken with this course to fulfill the 4-hr. credit for natural science in a degree plan.**

Approvals – the contents of this document have been reviewed and are found to be accurate.

Prepared by Danny Glenn	Signature 	Date 9/29/08
Department Head Danny Glenn	Signature 	Date 9/29/08
Division Chair Frank Carey	Signature 	Date 9-30-08
Vice President Dr. Ty Pate	Signature 	Date 10-1-09



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non lecture instruction):

Course Objectives:

- A. General
 1. To emphasize the importance of historical geology.
 2. To relate the acquisition of theoretical concepts to everyday life.

- B. Specific
 1. To provide an understanding of historical geology at an entry level for science majors as well as non-majors.
 2. To emphasize the relationships within historical geology and the connections between earth's beginning and the present.
 3. To show the student the dynamic physical/chemical changes that have occurred in both the continents and the oceans
 4. To allow the student to see the evolution of life on earth through the interpretation of fossil remains.

Topical Outline (major areas of coverage):

- The Dynamic Earth
- A History of the Universe and Planetary beginnings
- Geologic Time: Concepts and Principals
- Plate Tectonics: A Unifying Theory
- Rocks, Fossils, and Time
- Origin and Interpretation of Sedimentary Rocks
- Fossils "Revisited"
- Evolution
- Origins of life
- Precambrian History: The Archean Eon (and the Hadean)
- Precambrian History: The Proterozoic Eon
- Life of the Precambrian
- Geology of the Early Paleozoic Era
- Geology of the Late Paleozoic Era
- Life of the Paleozoic Era: Invertebrates
- Life of the Paleozoic Era: Vertebrates and Plants
- Geology of the Mesozoic Era
- Life of the Mesozoic Era
- Cenozoic Geologic History: Tertiary Period
- Cenozoic Geologic History: Quaternary Period
- Life of the Cenozoic Era
- Evolution of the Primates and Humans

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
<ul style="list-style-type: none">• Be able to demonstrate a basic knowledge of the history of the earth throughout geologic time.• Realize the importance of historical geology as it relates to everyday life such as acquisition of coal, oil and other fossil fuels.• Relate the acquisition of theoretical concepts to problem solving situations in everyday life.• Have an understanding of historical geology at an entry level upon which the student can build if he or she decides to pursue a career in the sciences.• Recognize the relationships within historical geology and the connections between earth's beginning and the present, emphasizing the evolution of life on earth.	<ol style="list-style-type: none">1. Exams and term papers are based upon concepts of geological time, the formation of the earth, and the development of life on earth.2. Exams and term papers center on current topics of geological events of today.3. The student is tested over the Scientific Method of investigation of problem solving that is used in all of the aspects of our world.4. The student's assignments reflect all branches of geology, providing a foundation upon which to build.5. The student's exams and term paper reflect basic concepts including the connections between earth's beginning and the present. .

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Visualizing Earth History by Babcock 2009 edition published by John Wiley. The ISBN is 9780471724902.

IV. Suggested Course Maximum - 40

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Lecture classroom & designated geology storage/housing of specimens of rocks, fossils, minerals, and geologic maps/charts.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

A. Examinations

Major lecture exams may be in the form of essay questions, fill in the blank, multiple-choice, matching, or any combination of these formats. The number of major examinations, quizzes, and outside projects are to be as follows:

1. There will be 3 major lecture examinations spaced throughout the semester
2. Other grades during the semester may consist of a term paper, multiple quizzes, or other department approved projects. The numerical grade(s) averaged together will carry the weight of a 4th lecture exam.
3. Items 1 and 2 above carry the weight of 75% of the students lecture average for the semester.
4. The comprehensive final examination alone will constitute 25% of the student's grade for the semester.
5. Items 3 and 4 above constitute 100% of the student's grade for the semester.

B. The instructor will record numerical grades of the student's exam/quiz/project scores. Student's grades will never be recorded by the instructor as only letter grades such as A+, B, C-, etc. The actual numerical grade will be put on each item the student turns in to the instructor. After showing the grade(s) to the student(s), the only grade that the instructor will record in the numerical grade.

C. No instructor shall at any time allow a student access to another student's grade, visually or verbally.

D. There will be no deviance from the following grading scale for exams or semester grades.

Grade Scale

90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

Below 60 = F

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**
Attach the following:

- Program SCANS Matrix
- Course SCANS Competencies Checklist



Page 1: Competencies

Course Prefix & Number: GEOL 1304 Historical Geology Lecture	
Competency	Method of Assessment
READING: Reading at the college level means the ability to analyze and interpret a variety of printed materials – books, articles, and documents.	Reading assignments are made at the end of the semester in the EXIT exam, whereby the student must read a short selection and answer questions pertaining to it.
WRITING: Competency in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience.	Writing assignments in geology lecture includes a formal term research paper over a topic pertinent to geology as a whole or specifically to today's world.
SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience.	N/A
LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication.	N/A
CRITICAL THINKING: Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies.	The scientific method of investigation is utilized in all lectures allowing students the opportunity to assess varying evidences.
COMPUTER LITERACY: Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information.	N/A



Page 2: Perspectives

Course Prefix & Number: GEOL 1304 Historical Geology Lecture	
Perspective	Method of Assessment
1. Individual and society/world; cultural and ethnic diversity	N/A
2. Individual, political, economic, and social aspects of life; being a responsible member of society	N/A
3. Health and wellness	N/A
4. Technology and science: use and understanding	The student list, contrast, and identify geologic processes by utilizing the "Scientific Method" during practical exams. These exams involve the use of geological techniques for specimen identification.
5. Personal values for ethical behavior	N/A
6. Ability to make aesthetic judgments	N/A
7. Logical reasoning in problem solving	Students must demonstrate their competency in "puzzle-like" cross-sections of strata, particularly during exams covering Mapping and Geochronological problems, which to correctly solve, the student must utilize logical thought processes.
8. Integrate knowledge from and understand interrelationships of the scholarly disciplines	The student must demonstrate their knowledge of rocks and minerals by being able to remember the physical, chemical, and mathematical techniques used on lab exams that reflect the eclectic nature of Geology .



Page 3: Exemplary Educational Objectives

Course Prefix & Number: GEOL 1304 Historical Geology Lecture	
Component Area: Natural Sciences	
Exemplary Educational Objective	Method of Assessment
1. Understand and apply method and appropriate technology to the study of natural science.	The student will be tested over several aspects of the tools used by geologists today as well as in the past . Focus is on the Scientific Method of problem solving. This method is used by the student to identify specimens of minerals, rocks, and fossils. Practical examinations over specimens, as well as lecture exams and the student's term paper reflect this.
2. Recognize scientific and quantitative methods and the difference between these approaches and other methods of inquiry; and communicate findings, analyses, and interpretations both orally and in writing.	The student will be tested over several aspects of the Scientific Method of problem solving. This method is used by the student to identify specimens of minerals, rocks, and fossils. Practical examinations over specimens, as well as lecture exams and the student's term paper reflect this.
3. Identify and recognize the differences among competing scientific theories.	The student's exams and term papers expose the student to the various competing theories of aspects of the earth.
4. Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.	Current topics such as fuel availabilities, natural resource utilization, and secular mistakes such as the so-called "global warming misunderstanding" are an integral part of the student's exams and term paper topics.
5. Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.	Again, the student's exams and term paper topics reflect their being exposed to the foundational concepts, and how these concepts influence their daily lives.