



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

Division – Math and Science

Course Type: (check one)

- 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

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. GEOL 1104 must be taken with this course to fulfill the 4-semester credit hour requirement for natural science in a degree plan.

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

Prerequisites/Co requisites – THEA Reading and Writing requirement met

Type: ACAD

Prepared by Danny Glenn

Date 02/20/2012

Reviewed by department head Danny Glenn

Date 02/20/2012

Accuracy verified by Division Chair Kevin Dees

Date 4/12/12

Approved by Dean of Vocational Instruction or Vice President of Instruction Lac

Date 11-9-12



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):

- Introduction to Earth System History
- Earth Materials and Features
- Geologic Time
- Life on Earth and its Fossil Record
- Biologic Evolution
- Interpreting Sedimentary Environments and Global Change
- Plate Tectonics and Earth History
- Archean World - Geology and Life Forms, especially the development of Life

- Proterozoic World - Geology and Life Forms, with emphasis on the expansion of types of soft-bodied life forms
- Paleozoic World - Geology and Life Forms with emphasis on the development of Terrestrial Plants and Terrestrial Vertebrate Organisms
- Mesozoic World - Geology and Life Forms - Thr Rise of Dinosaurs and development of Mammals

- Cenozoic World - Geology and Life Forms with emphasis on the Rise of Primates and the Evolution of 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.

(Required) *Visualizing Earth History* by Babcock 2009 edition published by John Wiley. The ISBN is 978-0-471-72490-2.

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 to 4 major lecture examinations spaced throughout the semester
2. A term paper of an approved geological topic will be assigned. Multiple quizzes, or other department approved projects may also be assigned but these (paper, quizzes, etc.) numerical grade(s) averaged together will carry the weight of a lecture exam.
3. Items 1 and 2 above carry the weight of 75% of the students lecture average for the semester as is designated as the LECTURE AVERAGE.
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 OVERALL AVERAGE and 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**
If needed, revise the Program SCANS Matrix & Competencies Checklist.

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Page 1: Competencies

Course Prefix & Number: GEOL 1304	
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.	
WRITING: Competency in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience.	Each student is required to write a term paper in geology lecture over an assigned, current, topic and the paper counts as a major exam grade.
SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience.	
LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication.	
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.	Some exams deal with “puzzle-like” diagrams to solve geochronology problems. Logical thought must be used.
COMPUTER LITERACY: Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information.	



Page 2: Perspectives

Course Prefix & Number: GEOL 1304	
Perspective	Method of Assessment
1. Establish broad and multiple perspectives of the individual in relationship to the larger society and world in which he or she lives, and help the student to understand the responsibilities of living in a culturally- and ethically-diversified world;	
2. Stimulate a capacity to discuss and reflect upon individual, political, economic, and social aspects of life to understand ways to be a responsible member of society;	
3. Recognize the importance of maintaining health and wellness;	
4. Develop a capacity to use knowledge of how technology and science affect lives;	
5. Develop personal values for ethical behavior;	
6. Develop the ability to make aesthetic judgments;	
7. Use logical reasoning in problem solving;	Exam questions cover the use of technology for the acquisition of knowledge using the "Scientific Method" that is based on empirical logic.
8. Integrate knowledge and understanding of the interrelationships of the scholarly disciplines	All exams reflect the eclectic nature of geology, drawing upon many scientific disciplines.

Page 3: Exemplary Educational Objectives

Course Prefix & Number: GEOL 1304	
Component Area: Natural Sciences	
Exemplary Educational Objective	Method of Assessment
1. Understand and apply method and appropriate technology to the study of natural science.	Use of "Scientific Method" is stressed in discussion and exam questions.
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.	Dimensional analysis, logic problems, and other quantitative approaches are used to emphasize uses of scientific methods and approaches of problem solving. Exams and term papers reflect this.
3. Identify and recognize the differences among competing scientific theories.	All pertinent opposing theories are presented (ie. evolution vs creationism) and many students opt to use this for term paper topics. Exam questions exemplify contrasting theories.
4. Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.	Current topics in World Geology are discussed and incorporated into exam questions.
5. Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.	The eclectic nature of Geology allows for the exam questions to be taken from many different scientific disciplines.