



**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 – Physical Geology Laboratory**

**Course Prefix and Number - GEOL 1103**

**Department - Geology**

**Division – Math & 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 #**    1:0:2

**Equated Pay hours for course – 1.6**

**Course Catalog Description -** Laboratory exercises involving the study of rocks, minerals and map interpretations.

**Prerequisites/Co-requisites -** Credit for or concurrent enrollment in GEOL 1303

List Lab/ Other Hours
Lab Hours 2
Clinical Hours
Practicum Hours
Other (list)

**Prepared by** Danny Glenn

**Date** 09/08/2013

**Reviewed by Department Head** Danny Glenn

**Date** 09/08/2013

**Accuracy Verified by Division Chair** Kevin Dees

**Date** 09/08/2013

**Approved by Dean or Vice President of Instruction** *gghunt*

**Date** 09/08/2013



**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):

- Introduction to Minerals, Mineral Properties, & Mineral Identification.
- Carbonates and Sulfates through Sulfides
- Silicates – Isolated Tetrahedra through Cryptocrystalline
- Mineral I.D. Native Minerals and Review for Practical
- \*Practical Examination I. over Mineral Names, Economic Uses, & Properties\***
- Introduction to the Rock Cycle and Igneous Rocks: Chemistry, Facies & Textures
- Sedimentary Rocks – Types, Facies, & Textures
- Metamorphic Rocks – Facies, Occurrences, Parent Rocks & Review for Practical
- \*Practical Examination II. over Rock Types, Facies and Occurrences\***
- Geologic Structure and Tectonics
- Introduction to Mapping and Compass Use
- Longitude, Latitude & Coordinate Systems; Map Scales; Interpreting Topography  
Topo Map Interpretation, Compass Bearings, & Review for Exam
- \*Practical Examination III. over Map Orientation, Map Scale Conversions, Reading Topography, Coordinate Systems, Bearings, & Determining Geologic Structures from Map Information\***

**II. Course Learning Outcomes**

<b>Learning Outcomes</b>	<b>Methods of Assessment</b>
<p><b>Upon successful completion of this course, students will:</b></p> <ol style="list-style-type: none"> <li>1. Classify rocks and minerals based on chemical composition, physical properties and origins.</li> <li>2. Apply knowledge of topographic maps to quantify geometrical aspects of topography</li> <li>3. Identify landforms on maps, diagrams, and/or photographs and explain the processes that created them.</li> <li>4. Differentiate the types of plate boundaries and their associated features on maps and profiles and explain the processes that occur at each type of boundary.</li> <li>5. Identify basic structural features on maps, block diagrams and cross sections and infer how they were created.</li> <li>6. Demonstrate the collection, analysis, and reporting of data.</li> </ol>	<ol style="list-style-type: none"> <li>1. Exams and Quizzes, Discussions, Labs</li> <li>2. Exams and Quizzes, Discussions, Labs</li> <li>3. Exams and Quizzes, Discussions, Labs</li> <li>4. Exams and Quizzes, Discussions, Labs</li> <li>5. Exams and Quizzes, Discussions, Labs</li> <li>6. Group Project, Exams and Quizzes, Discussions, Labs</li> </ol>

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

Lab Book: **Laboratory Manual for Introductory Geology**, Norton Publishing, Ludman & Marshak (2010 edition). ISBN: 978-0-393-92814-3

**IV. Suggested Course Maximum - 24**

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

Lab room with collections of specimens of minerals, rocks, fossils, maps and other geological materials for presentation and student learning.

**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**

Practical Exam over Minerals	25%
Practical Exam over Rocks	25%
Practical Exam over Mapping	25%
7 – Quizzes (Average of highest 5)	<u>25%</u>
	100%

A= 90-100

B= 80-89

C= 70-79

D= 60-69

F= 59 and below

**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 Review Forms

- Critical Thinking
- Communication
- Empirical & Quantitative Skills
- Teamwork
- Social Responsibility
- Personal Responsibility

- **WECM Courses**  
If needed, revise the Program SCANS Matrix & Competencies Checklist.



**Core Curriculum Review Form**

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: \_\_\_\_\_

Core Objective: **Critical Thinking Skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

*Student Learning Outcome supporting core objective:*

*For each core objective, there must be at least two different methods of assessment.*

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
The SLO is:	Insert SLO (from Administrative Master Syllabi) below	Provide a brief name and description of the sample learning activity:	Provide a brief name and description of the sample quiz, exam, rubric, assignment, etc. for assessing the objective:
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			

Department Head: \_\_\_\_\_

Date: \_\_\_\_\_



**Core Curriculum Review Form**

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: \_\_\_\_\_

Core Objective: **Communication Skills**—to include effective development, interpretation and expression of ideas through written, oral and visual communication

*Student Learning Outcome supporting core objective:*

*For each core objective, there must be at least two different methods of assessment.*

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
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**Core Curriculum Review Form**

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: \_\_\_\_\_

Core Objective: **Empirical and Quantitative Skills**—to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

*Student Learning Outcome supporting core objective:*

*For each core objective, there must be at least two different methods of assessment.*

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
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Date: \_\_\_\_\_



**Core Curriculum Review Form**

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: \_\_\_\_\_

Core Objective: **Teamwork**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

*Student Learning Outcome supporting core objective:*

*For each core objective, there must be at least two different methods of assessment.*

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
The SLO is:	Insert SLO (from Administrative Master Syllabi) below	Provide a brief name and description of the sample learning activity:	Provide a brief name and description of the sample quiz, exam, rubric, assignment, etc. for assessing the objective:
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Department Head: \_\_\_\_\_

Date: \_\_\_\_\_