



**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** – 1.2

**Course Catalog Description-** This laboratory-based course accompanies GEOL 1303, Physical Geology. Laboratory activities will cover methods used to collect and analyze earth science data. Topics include mineral and rock identification, Surface Processes, Structure, and interpretation of geologic and topographic maps.

**Prerequisites/Co-requisites** – Credit for or concurrent enrollment in GEOL1303

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

**Prepared by** Danny Glenn

**Date** 05/15/2014

**Reviewed by Department Head** Danny Glenn

**Date** 05/15/2014

**Accuracy verified by Division Chair** Kevin Dees

**Date** 9/2/2014

**Approved by Dean or Vice President of Instruction** *gg hunt*

**Date**



**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):

- |                                   |   |
|-----------------------------------|---|
| 1. Introduction to Minerals       | 6. Plate Tectonics & Geologic Structure |
| 2. Properties of Minerals         | 7. Rivers & Streams                     |
| 3. The Rock Cycle & Igneous Rocks | 8. Groundwater & Karst Topography       |
| 4. Sedimentary Environments       | 9. Glaciers                             |
| 5. Metamorphics                   | 10. Intro to Mapping                    |

<b>Learning Outcomes</b>	<b>Methods of Assessment</b>
<p>Upon successful completion of this course, students will:</p> <ol style="list-style-type: none"> <li>1. Classify rocks and minerals based on chemical composition, physical properties, and origin.</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. Quizzes and Lab Practicals</li> <li>2. Quizzes and Lab Practicals</li> <li>3. Quizzes and Lab Practicals</li> <li>4. Quizzes and Lab Practicals</li> <li>5. Quizzes and Lab Practicals</li> <li>6. Quizzes and Lab Practicals</li> </ol>

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

**Physical Geology Lab Manual** by Danny Glenn, 1<sup>st</sup> edition, Kendall/Hunt Publishers, 2014

ISBN: 978-1-4652-4770-4

**IV. Suggested Course Maximum - 24**

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

A lab room will be needed that has a computer with projector, high speed internet connection and the computer must have multimedia functions for DVDs, etc. This room or (nearby storeroom) must be stocked with sufficient specimens of minerals, rocks, fossils, and geologic/topographic maps and map interpretation equipment (i.e. compasses, compass roses, straight edges, protractors, etc.

**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**

There will be three main exams each counting for 30% of the lab grade:

- |   |     |
|---|-----|
| 1. The Mineral Practical                                  | 30% |
| 2. The Rock Practical                                     | 30% |
| 3. Surface Processes, Geologic Structure and Mapping Exam | 30% |

The last 10% will be weekly quizzes, lab reports and in class lab presentations.

10%  
100% of grade

**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.

**NOTE: Lab Curricula Checklists are included in the AMS GEOL 1303**