**PHYS 165 – Physical Geology**

Fall 2018

Instructor: Dr. Rebecca Butler Office: 303 Yates Hall

Class time: MWF 9:00-9:50 am Hours: MWF 10-11, MW 12-4, W 1-4

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This course is an introduction to the physical processes that affect the Earth (such as plate tectonics, earthquakes, volcanism, mountain building, glaciation, weathering, and erosion) and to the the rocks, minerals, and other materials that make up the earth’s surface and interior. PHYS 160 is a co-requisite.

This course is also intended for partial fulfillment of the Pitt State Pathway Curriculum.

**Pitt State Pathway Mission Statement:** The *Pitt State Pathway* curriculum serves as the heart of the university education by fostering interdisciplinary competencies that typify the educated person. It is designed to facilitate the development of key proficiencies including communication and information literacy. The *Pitt State Pathway* curriculum provides a transformational experience that challenges students to think creatively and critically, and to immerse themselves in the productive examination of humans in their global setting. By encouraging the development of skills that promote life-long learning, the *Pitt State Pathway* fosters a sense of personal responsibility, an appreciation of diversity, and an understanding of interconnectedness in our truly global society.

**Essential Study to be covered in this course:** **Natural World within a Global Context**

Biological, physical, and chemical systems form the context for life. Students need to understand how these systems work, how these change naturally, and how these can change as a result of human activities. The implications of these changes are essential for long-term decision-making. In this course we will:

 *Analyze* physical and chemical systems;

 *Evaluate* the implications of changes that result from interactions between natural and human systems.

**Companion Element to be covered in this course: Scientific Inquiry**

The scientific method is the systematic approach to understanding the world around us. Through experimentation and hypothesis testing, students will apply analytical skills and appropriate methods of scientific inquiry (i.e. qualitative and quantitative) to solve a variety of research questions. In this course we will:

 *Compose* appropriate research questions and hypothesis, drawing from experts, reliable sources, or

previously collected data.

 *Collect, synthesize, and analyze* data from multiple sources;

 *Draw* logical conclusions, assessing for gaps and weaknesses, and addressing potential consequences

and implications

 *Communicate* results using appropriate delivery methods or formats.

**Course Objectives and Learning Outcomes**

This course uses the Kansas Board of Regents Core Outcomes (available at <https://www.kansasregents.org/resources/PDF/Academic_Affairs/TAAC/FY_2015/2015-16_KCOG_Report.pdf>) for Geology.

Students should be able to

 1. Identify, classify, and differentiate geologic samples.

 2. Read and interpret topographic and geologic maps.

 3. Use appropriate tools to investigate and analyze geologic problems. (Milestone 2)

**Method of Assessment**

Students will turn in weekly lab reports and have a lab final covering items, principles, and processes related to the student outcomes. (Milestone 2)

**Grading**
Each lab has several pages of information, followed by some pages with tables and questions that need to be answered.  These pages will be turned in at the end of the class period.  The answers don’t need to always be in complete sentences (sometimes it will be in a table format) but they do need to be clear – understandable and legible.  As you answer the questions and identify samples, think of what the grader wants – but also think of what you want.  You will get to use the pages that you have turned in for the final.

Your overall grade will be determined as follows:

Lab Reports                 80%                           90-100               A
Final Exam                  20%                             80-89               B
Total                          100%                             70-79               C
                                                                         60-69               D
                                                                          0-59                F
**Attendance**

Your attendance is required for each lab**.**Lab reports for labs that you did not attend will not be graded.  If you anticipate an absence, become ill, family emergency, etc, talk to your instructor as soon as possible.  If possible, attend the other section of lab.

**Final**

The lab final will be comprehensive.  It will be during dead week (the week before finals week) at your regular lab time.

**You will be able to use the weekly worksheets you turned in during the final.  (YOUR worksheets.  Not other people’s, and not the manual.)**