

Follow-up (How have you used or how will you use the data to improve student learning?)

Individual instructors will receive the analysis of exam results to see areas of weakness and determine best way to emphasize those areas. One suggestion is to look at more current events and make connections to what they are learning. Instructors will also include more graphing assignments into the coursework. Continued use of and more emphasis will be placed on the geologic hazard problem solving assignments.

One section of the course was taught online in spring 2013 and the exam results from the two sections seem fairly comparable. The online homework systems and the online Hazard City Program seem to be effective for introducing technology into the course as well as, emphasizing the content of the course.

We will continue to evaluate the online course and laboratory component over the next year.

Since these courses, 107 and 108, are taught by adjuncts, it is sometimes difficult to collect necessary data. We will work on developing a computerized database for easier collection.

There seems to be a pattern, just like in chemistry, the spring semester scores are lower than the fall semester scores. We are not sure of why that is true. For the year 2016-2017, it appears that the face-to-face section without the lab course, CHM107, has achieved higher common final exam scores than the online course with the online lab, CHM108. We will continue to monitor the scores and determine what works best and modify the courses.

Spring 17 COG revision is the first time we have split the data for 107 and 108. All the past years are combined totals for the two courses. We will continue to update the data as individual courses in the future.

Budget Justification (What resources are necessary to improve student learning?)

We will need resources to purchase any standardized exams we decided to use.

Science Gen Ed Course __ PHS107/108 – Introductory Physical Geology

General Education Outcomes for Science	Explain how your course achieves each outcome
Relate a basic core of scientific principles to an open-ended framework	** Course SLO's – 1, 2, 4 Hazard City assignments Quiz and test questions Essay questions on exams Dimension Stone Activity
Demonstrate observational and analytical skills in a structured situation	SLO's – 1, 2, 3 Hazard City assignments Plate Tectonic Assignment Mineral and Rock identification activities Quiz and test essay questions Various worksheets completed in class Laboratory work
Formulate conclusions based on observations and information	SLO's – 1, 3, 4 Hazard City assignments Geology and Human Health written paper assignment Essay questions on exams Laboratory reports Standardized Physical Geology final exam
Use technology to access scientific information, generate and analyze empirical data, and solve problems	SLO's – 1, 3, 4 Hazard City assignments Google Earth assignments Use of Blackboard for course Use of various website for real-time data on earthquake, volcanoes, and floods On-line mineral and rock identification keys Various laboratories – GIS lab

**** STUDENT LEARNING OUTCOMES:**

At the completion of this course, students should be able to:

1. Demonstrate knowledge of the scientific method by investigating and solving real-world geologic problems.
2. Discover the role of the various spheres of our earth's system and learn how the interactions between these components and the composition of the earth affect the world around us.
3. Use technology to learn about geological processes and monitor real-time events such as volcanoes, earthquakes, and floods.
4. Apply course content to environmental and human health related issues (e.g. earthquakes, volcanoes, and air and water pollution.)

Data Table 2

Course: PHS107/108

SLOA Data

Faculty Team: N. Thorpe

	SU 2012	FA 2012	SP 2013	SU 2013	FA 2013	SP 2014	SU 2014	FA 2014	SP 2015	FA 2015	SP 2016
# Active students		35	31		40	32		33	34		
%W		0	3.2			6.3					
*% walk-away Fs No final exam/grade = F		4.3	9.7			15.6		12.1	5.9		
% Success (A,B,C)		97.8	76.0			78.2					
Mean Common Lab Practical Score								82.5	75.8	84.1	86.1
Common Comprehensive Final Exam Score		77.6	89.8		79.5	77.0		74.5	81.7	75.0	84.4
Gen Ed Assessment		8.21/10	8.5/10			9.1/10		91.1	85.8	74.1	86.1
Mean course grade		83.8	76.12		74.5	78.0					
Item Analysis Weakest Content Areas		**	**								

*% Walk-away Fs = Did not take the final exam and received a grade of F.

Content Areas

**Weak area: interpolation of graph to access data; math analysis of data. Same areas for each semester.

Data Table 3

Course: PHS107

SLOA Data

Faculty Team: N. Thorpe and adjuncts

	FA 2016	SP 2017	SU	FA	SP	SU	FA	SP	FA	SP
# Active students										
%W										
*% walk-away Fs No final exam/grade = F	16.7	0								
% Success (A,B,C)										
Common Comprehensive Final Exam Score	86.7	85.4								
Gen Ed Assessment	75.6	76.7								
Item Analysis Weakest Content Areas										

*% Walk-away Fs = Did not take the final exam and received a grade of F.

Content Areas

**Weak area: interpolation of graph to access data; math analysis of data. Same areas for each semester.

Data Table 4

Course: PHS108

SLOA Data

Faculty Team: N. Thorpe and adjuncts

	FA 2016	SP 2017	FA	SP							
# Active students											
%W											
*% walk-away Fs	6.23	5.6									
% Success (A,B,C)											
Mean Lab Score	81.7	75.5									
Common Comprehensive Final Exam Score	74.4	68.3									
Gen Ed Assessment	81.9	75									
Item Analysis Weakest Content Areas											

*% Walk-away Fs = Did not take the final exam and received a grade of F.

Content Areas