Weber State University
Annual Assessment of Evidence of Learning

DEPARTMENT OF GEOSCIENCES
College of Science
2014-2015 Academic Year

Department/Program: GEOSCIENCES
Academic Year of Report: 2014-2015
Date Submitted: January 25, 2016
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I. Verification of Information at the Assessment Site

A. Brief Introductory Statement:

Please review the Introductory Statement and contact information for your department displayed on the assessment site: **http://www.weber.edu/portfolio/departments.html** - if this information is current, please indicate as much. No further information is needed. We will indicate "Last Reviewed: [current date]" on the page.
If the information is not current, please provide an update:

Information on the assessment site is current (January 18, 2016).

B. Mission Statement

Please review the Mission Statement for your department displayed on the assessment site: **http://www.weber.edu/portfolio/departments.html** - if it is current, please indicate as much; we will mark the web page as "Last Reviewed [current date]". No further information is needed.
If the information is not current, please provide an update:

Information on the assessment site is current (January 18, 2016).

C. Student Learning Outcomes

Please review the Student Learning Outcomes for your department displayed on the assessment site: **http://www.weber.edu/portfolio/departments.html** - if they are current, please indicate as much; we will mark the web page as "Last Reviewed [current date]". No further information is needed.
If they are not current, please provide an update:

Information on the assessment site is current (January 18, 2016).

D. Curriculum

Please review the Curriculum Grid for your department displayed on the assessment site: **http://www.weber.edu/portfolio/departments.html** - if it is current, please indicate as much; we will mark the web page as "Last Reviewed: [current data]". No further information is needed. If the curriculum grid is not current, please provide an update:

Information on the assessment site is current (January 18, 2016).

E. Assessment Plan

Please review the Assessment Plan for your department displayed on the assessment site: http://www.weber.edu/portfolio/departments.html - if the plan current, please indicate as much; we will mark the web page as "Last Reviewed [current date]". No further information is needed.

If the plan is not current, please provide an update:

The site should contain an up-to-date assessment plan with planning going out a minimum of three years beyond the current year. Please review the plan displayed for your department at the above site. The plan should include a list of courses from which data will be gathered and the schedule, as well as an overview of the assessment strategy the department is using (for example, portfolios, or a combination of Chi assessment data and student survey information, or industry certification exams, etc.).

Please be sure to include your planned assessment of any general education courses taught within your department. This information will be used to update the General Education Improvement and Assessment Committee's planning documentation.

Department of Geosciences Assessment Plan
4-Year Cycle presented below was updated and approved in January 2015

Persons Responsible for Collecting and Analyzing the Data: The tenure-track faculty of the Department of Geosciences will serve as the Assessment Committee to oversee and implement the department's assessment plan, with the Chair of Geosciences serving as the committee chair.

Assessment Measures to be Used: The Geosciences assessment plan examines the Physical Science (PS) outcomes in each of the general education courses offered by the department. The plan also examines the program-level learning outcomes for geoscience majors, including a separate assessment of the high-impact learning practices utilized in the department's various curricula. Each general-education and department-level intended learning outcome (ILO) will be assessed by at least one direct measure (DM), typically a course-specific assessment instrument or assignment. In some cases, indirect measures, such as exit surveys of program graduates, will be used to supplement the direct measures.

Four-Year Assessment Cycle:

1. 2013-2014 (data collected); report submitted January 2015
   General Education: Physical Science Intended Learning Outcomes (ILOs) 5-8
   Courses: GEO 1030; 1060; 1110, 1130; 1350

2. 2014-2015 (data collected); **subject report submitted January 2016**
   Program-Level Learning Outcomes 1-9
   Courses: GEO 1110, 1220, 2050, 3150, 3550, 4210, 4060
   Summary of exit interviews

3. 2015-2016 (data collected); report to be submitted Fall 2016
   High-Impact Learning Experiences: Undergraduate Research; Internships; Study Abroad; Capstone courses (GEO 4060, 4510)

4. 2016-2017 (data collected); report to be submitted Fall 2017
   General Education: Physical Science Intended Learning Outcomes (ILOs) 1-4
   Courses: GEO 1030; 1060; 1110, 1130; 1350

Repeat beginning 2017-2018.

This proposed assessment cycle is meant to be flexible and can change as needed. For example, if data from one year indicated a need to improve student learning with respect to a particular set of ILOs, the plan would be adjusted in such a way to allow the department to collect and analyze data shortly after making changes to course materials or assessment instruments related to the ILOs in question. We can and will be nimble, as we continually strive to improve learning and teaching in the Department of Geoscience.

II. Report of Assessment Results for the 2014-2015 Academic Year:

There are a variety of ways in which departments can choose to show evidence of learning. This is one example. The critical pieces to include are 1) what learning outcome is being assessed, 2) what method of measurement was used, 3) what the threshold for 'acceptable performance' is for that measurement, 4) what the actual results of the assessment were, 5) how those findings are interpreted, and 6) what is the course of action to be taken based upon the interpretation.

Evidence of Learning: Program-Level Learning Outcomes

During the 2014-2015 academic year the Department of Geosciences collected assessment data related to its nine (9) program-level learning outcomes. The relationships among the learning outcomes and the required core courses are shown in the curriculum map on the next page. The assessment data collected in 2014-2015 are summarized in narrative form on the following pages under each learning outcome.

Curriculum Map

Core Courses in the Geosciences Department	Program-Level Learning Outcomes (PLLOs)								
	LO 1: Problem-solving Skills	L0 2: Communication Skills	LO 3: Technology Skills	LO 4: Earth Materials	LO 5: Earth History	LO 6: Surface Processes	LO 7: Tectonic Processes	LO 8: Earth Systems	LO 9: Capstone
GEO 1110 Dynamic Earth: Physical Geology	I	I		I	I	I	I, A	I	
GEO 1115 Physical Geology Lab	I			E		I	I		
GEO 1220 Historical Geology	I	I	I		E, A		R	E, A	I
GEO 2050 Earth Materials		I	I	E, A					
GEO 3150 Geomorphology	R	E	I		R	E, A	R	R	I
GEO 3550 Sedimentology & Stratigraphy	E	E, A	R	E	R		R	R	I
GEO 4210 Computer Mapping & GIS	R	R	E, A						
GEO 4060 Geoscience Field Methods	E, A	R	R	R	R	R	E, A		E, A

Note: I = introduced; E = emphasized; R = reinforced; A = comprehensively assessed

Measureable Program-Level Learning Outcomes:

At the end of their program of study in the Department of Geosciences, our graduates will have a set of basic intellectual skills that they can apply to a variety of situations and will have a knowledge and understanding of core concepts in the geosciences.

• BASIC SKILLS

1. Problem-Solving Skills: Geoscience graduates will be able to collect data, apply algebraic and graphical techniques to analyze data, and interpret results.

2014-2015 Data: Problem-solving skills were assessed in two exercises in GEO 4060 (Geoscience Field Methods): (1) interpretation of Quaternary geologic history based on geologic mapping and analysis of cross-cutting relations, deposit characteristics, and landforms; and (2) siting of a potential water well based on geologic mapping, analysis of fracture sets, constructing cross sections, and relations to stream flow and spring locations. These assessments where specifically designed to emulate the types of problems or investigations a practicing geoscientist may need to address. Most students (>80%) successfully interpreted the timing of landslides, debris flows, and ground-surface rupturing in exercise 1, and provided reasonable sites for water wells based on rock characteristics and structural reasoning for exercise 2.

Interpretation: No curricular or pedagogical changes needed at this time.

2. Communication Skills: Geoscience graduates will be able to clearly express geoscience concepts orally and in writing, present results from laboratory and field investigations, and effectively incorporate appropriate maps and graphs into presentations and reports.

2014-2015 Data: Students in GEO 3550 (Sedimentology & Stratigraphy) are required to complete a term project that includes a technical paper and corresponding oral presentation that entails the collection and integration of field data and information from the scientific literature. The paper's format is to follow that used for typical geoscience journal articles. Appropriate figures, graphs, and tables are included. All 14 students completed the assessment with a minimum 70% proficiency (avg. = 87%).

Interpretation: No curricular or pedagogical changes needed at this time.

3. Technology Skills: Geoscience graduates will be proficient in the use of appropriate technologies – including basic computer skills (word processing, spread sheets), geospatial skills (GPS, accessing geospatial databases), and information technology (search, compile, and evaluate information from scientific literature and web resources).

2014-2015 Data: The focus of GEO 4210 (Introduction to Computer Mapping & Geographic Information Systems) is teaching the GIS technical skills that are expected for an entry-level geospatial technician. Geospatial concepts are emphasized in lecture followed by demonstration of associated skills in lab. Students then individually accomplish the skills two to three times for each lab through completion of the lab-manual tutorial, lab-manual exercises and, in select labs, additional exercises

using local data. Students completed nine (9) labs that introduced students to various GIS skills using the industry- and government-standard GIS software suite, ArcGIS.

The final project focused on students completing a capstone experience that demonstrates the geospatial skills used by technicians on a daily basis. The GIS mapping project is based on a recent Utah Geological Survey mapping project using real-world data that ensures students must accomplish many of the geospatial skills using ArcGIS learned throughout the previous labs and lectures. Previous student feedback from the course indicated a real-world geospatial technician-level capstone would further enhance their opportunities in the marketplace. Prior final projects had students develop their own topic for demonstrating these skills. This was the first year the instructor implemented the current version of the assessment. The students provided mostly positive feedback about the project. They felt it prepared them for an interview where prospective employers have them demonstrate their geospatial skills during the interview process. The students demonstrated their grasp the problem and produced suitable maps based on the specified standards (85.8 %; range: 50% – 98.25%).

Interpretation: No major curricular or pedagogical changes needed at this time. A couple of students had difficulty with developing a GIS-based process to complete the map from scratch. Based on their comments, the instructor will incorporate additional instruction that reviews the GIS-based mapping process during the last month of class.

• GEOSCIENCE SKILLS

4. Earth Materials: Geoscience graduates will be able to identify common minerals and rocks, describe rock characteristics, and interpret the environments/conditions (igneous, sedimentary, or metamorphic) in which rocks formed.

Mineral identification skills were assessed in four (4) lab assignments and a lab exam in GEO 2050 (Earth Materials). In Labs 1 and 2, the students were given a series of unknown minerals to identify and the majority of the students (>90%) were able to correctly identify the majority of the minerals (>90% of the minerals) by their second attempt at identification. In Labs 3 and 4, the students were given a series of mineral types that they had previously identified, but now with samples of either different or similar habits and approximately 80% of the students were able to correctly identify more than 70% of the minerals. As part of a summative lab midterm exam, students were required to identify minerals and/or various properties of the minerals. The results were that 90% of the students were able to identify more than 70% of the minerals or the mineral properties correctly.

Assessment	**Percent of students who had 70% or higher accuracy**
Unknown mineral identification labs, students had two attempts to determine the proper mineral name (Mineral Lab 1 and 2).	90% of the students were able to properly identify 90% or more of the mineral by their second attempt
Identifying previously learned minerals, but with a different habit (Mineral Lab 3 and 4)	80% of the students were able to identify the minerals with 70% accuracy

Mineral identification exam, where students had to properly identify mineral properties and mineral names	90% of the students were able to identify the mineral or property more than 70% of the time.
Rock Identification exam, students had to identify rock properties and/or determine the rock identification	90% of the students were able to identify the rock or property more than 70% of the time.

Rock identification skills were assessed in the summative lab final exam. The exam assessed the students' skills in identifying sedimentary, metamorphic, and igneous rocks, as well as minerals associated with certain rocks and various rock properties. Ninety percent (90%) of the students were able to identify the either the rocks or the properties of the rocks correctly more than 70% of the time.

Interpretation: No curricular or pedagogical changes needed at this time.

5. Earth History: Geoscience graduates will be able to identify major physical and biological events in Earth history and describe the methods used to interpret this history, including radiometric dating, fossil succession, and stratigraphic correlation.

2014-2015 Data: The instructor (since retired) for Historical Geology (GEO 1220) used a subset of questions from midterm exams 1 and 2 and the final exam to assess whether students could identify the timing and characteristics of major events in Earth's geologic history. Approximately 64% of the students scored at least 70% on this set of questions, which was below the target of having 70+% of the students score at a 70% proficiency. The instructor did not note this as part of a longer-term trend (it may just be a group of students who have difficulty retaining chronological factoids). We now have a new instructor teaching this course with whom these data will be shared.

The hands-on laboratory exercises for this class are designed to develop the students' skill at using basic geological principles to unravel Earth history, based largely on the interpretation of sedimentary rocks and fossils. Ninety-five percent (95%) of the students had an average greater than 70% for this set of assessments.

Interpretation: No curricular or pedagogical changes needed at this time.

6. Surface Processes: Geoscience graduates will be able to identify landforms from maps and imagery, construct topographic profiles, and interpret the development of landforms in terms of common surface processes.

2014-2015 Data: Near the end of Fall semester 2014 the students taking Geomorphology (GEO 3150) were given an assessment of learning that evaluated their basic map skills and their ability to identify common landforms from imagery and topographic maps and relate them to their formative geomorphic process. Seventy-eight percent (78%) of the students demonstrated competency (≥70%). The class average for this assessment was 74.4%. Several students commented on the end-of-semester course

evaluation that they would prefer a series of assessments through the semester instead of the summative assessment at the end of the term. The instructor is working to make that change.

Interpretation: No curricular or pedagogical changes needed at this time.

7. Tectonic Processes: Geoscience graduates will be able to identify the different types of lithospheric plate boundaries based on types of activity, estimate rates of plate motion, describe the driving mechanisms for plate tectonics, and interpret geologic structures and construct cross sections from geologic map data.

2014-2015 Data: Understanding of tectonic processes was assessed in two exercises in GEO 4060 (Geoscience Field Methods): (1) measurement, plotting, and analysis of minor faults and fracture sets; and (2) geologic mapping and construction of a regional cross section across a major thrust fault and fold. These assessments where specifically designed to emulate the types of problems or investigations a practicing geoscientist may need to address. Most students (>90%) successfully measured and plotted fault data, and many students (>70%) constructed viable cross sections of the thrust fault, imbricate fault, and fold relations. However, some students had difficulties with mapping and understanding the geometry of an imbricate fault to the main thrust.

Interpretation: Additional background information on typical imbricate fault and fold structural styles will be included prior to this project in the future.

8. Earth Systems: Geoscience graduates will be able to describe key geological cycles – including the hydrologic cycle, rock cycle, and carbon cycle.

2014-2015 Data: The instructor (since retired) for Historical Geology (GEO 1220) used a subset of questions from three (3) lab exercises to assess whether students' understanding of the systems approach to investigating Earth history and processes, as well as knowledge of specific biogeochemical cycles. Most students (80%) successfully completed these portions of the laboratory exercises at a minimum 70% proficiency.

Collectively, the Geoscience faculty recognize that this program-level learning outcome may be the most difficult to assess and may need greater emphasis in several required courses in our curricula.

Interpretation: No curricular or pedagogical changes needed at this time. However, this leaning outcome will be given special attention during upcoming curriculum evaluation and revision.

9. Capstone Experience: Geoscience graduates will have demonstrated an integrative understanding of scientific methodology and the interdisciplinary nature of the geosciences, culminating in a capstone experience involving collection and analysis of multiple data sets to interpret Earth processes.

2014-2015 Data: The final project for GEO 4060 (Geoscience Field Methods) uses project-based instruction and served as a capstone experience, in which students individually mapped bedrock and surficial deposits and landforms in a geologically complex area and developed a correlation diagram of the geologic history, and were then assigned to groups to prepare a geotechnical report with

recommendations and give a multimedia presentation, simulating what they might do for a geologic consulting firm. All student groups (100%) successfully completed the geotechnical report and presentation. However, some presentations could be improved by including more technical information, which will be emphasized in the future.

Interpretation: No curricular or pedagogical changes needed at this time.

Indirect Measures of Program-Level Learning Outcomes: Exit Interviews:

The Department of Geosciences routinely conducts exit interviews with all of its graduating seniors. During the interviews the graduates are asked about their satisfaction with college- and department-level advising and their perceptions of the strengths and weaknesses of our programs. In addition, they are asked to self-report, using a Likert-type scale, on their level of mastery of the nine (9) program-level learning outcomes. Data from all graduates going back to AY 2013-2103 are presented in Appendix A. The average of all responses is a robust 4.22, on a scale of 1-5. The averages for the individual learning outcomes range from a low of 3.99 (PLLO #3: Technology Skills) to a high of 4.46 (PLLO #6: Surface Processes). Overall, these data support the direct measures of student learning from course-level assessments summarized above. However, in the near future we will conduct an analysis of variance (ANOVA) to determine if the differences among the nine learning outcomes are statistically significant.

"Next-Step" Success of Geoscience Graduates

Arguably, the best assessment of program-level learning outcomes is the "next-step" success of program graduates, in terms of their ability to enter the workforce and/or their acceptance into graduate programs. Beginning in 2012, the Department of Geosciences began compiling an alumni database to determine where (both in terms of geography and subspecialty) in the geoscience workforce our graduates landed. We now have data (Table 1) on the majority (>90%) of our graduates going back to 2003. Over this time period, Geoscience graduates have been very successful in finding employment within the geoscience workforce and/or being accepted into geoscience graduate programs. We are very proud of the 80+% placement. The data summarized in Table 1 also indicate that a WSU Geoscience degree has provided entry into a wide variety of geoscience positions. The top two employment sectors (other than secondary science education, where our graduates have had essentially 100% placement) are mineral resources/mining and environmental geoscience. We recognize that with the downturn in oil and mineral-commodity prices some of our graduates who found work in these areas shortly after graduation may be now looking for employment in other geoscience sectors. In addition, we were surprised to learn that only 10% of our recent graduates went on to graduate programs. This statistic will be addressed during future program-level strategic planning, as we all would like to see this number increase for the long-term success of our graduates over their careers.

Table 1: Dept of Geosciences: Demographics & Graduate Data (updated 9/14/2015)

Geoscience Majors: Fall Semester 2015 (9/2/2015)			
Degree Program	**Total**	**Males**	**Females**
Geology BS/BA	84	51	33
Applied Environmental Geosciences BS	54	37	17
Earth Science Teaching BS	16	9	7
TOTAL	**154**	**97**	**57**
Enrolled Fall 2015	112		

Geosciences Graduates 2003-Summer 2015 / Placement After Graduation		
Employment Sector	**#**	**Percent**
Teaching/Science Education (K-12)	20	19.8%
Mining geologist/mining support services	19	18.8%
Environmental geologist/scientist/professional	14	13.9%
Geologist/Hydrologist (non-mining)	10	9.9%
Petroleum geology/O & G service	9	8.9%
GIS Analyst/Technician	7	6.9%
Presently in graduate school (geosciences)	3	3.0%
Higher Education (geosciences)	1	1.0%
post-BS studies; will apply to grad school	2	2.0%
Subtotal (Geoscience Positions)	**85**	**84%**
Presently looking for geoscience position	6	5.9%
Employed in a non-geoscience position	8	7.9%
Not working outside the home	2	2.0%
TOTAL	**101**	**100%**
Attended graduate school	10	9.9%
Unknown	5	

Geoscience Degrees Awarded: 2003-2015		
Geology	46	43.4%
Applied Environmental Geoscience	38	35.8%
Earth Science Teaching	22	20.8%
Total	106	100%

III. Summary of Artifact Collection Procedure

Artifact	Learning Outcome Measured	When/How Collected?	Where Stored?
Sample field reports and calculations (GEO 4060)	DLO 1: Problem-solving	End of semester	Faculty's course files
Sample term papers (GEO 1220)	DLO 2: Communication	End of semester	Faculty's course files
Sample project proposals and final reports (GEO 4210)	DLO 3: Technology	End of semester	Faculty's digital course database
Mineral identification results & sample rock descriptions	DLO 4: Earth Materials	End of semester	Faculty's course files
Data from GEO 1220 exam questions	DLO 5: Earth History	2-3 times per semester	Faculty's course files
Data from GEO 3150 Lab Final Exam	DLO 6: Surface Processes	End of semester	Faculty's course files
Data from GEO 1110 exam questions	DLO 7: Tectonic Processes	2-3 times per semester	Faculty's course files
Sample cross sections and calculations (GEO 4060)	DLO 7: Tectonic Processes	End of semester	Faculty's course files
Data from GEO 1220 exam questions	DLO 8: Earth Systems	2-3 times per semester	Faculty's course files
Final Project rubric and samples (GEO 4060)	DLO 9: Capstone Experience	End of semester	Faculty's course files
Data from General Education (PS) exam questions and problem sets	Physical Science ILOs (1-8)	2-3 times per semester	Faculty's course files

DLO = Department Learning Outcome (see section C.)

IV. Summary (Responses to the following questions):

1) *Reflecting on this year's assessment(s), how does the evidence of student learning impact your faculty's confidence in the program being reviewed; how does that analysis change when compared with previous assessment evidence?*

   Taken together, the combination of direct measures of student learning at the course level, indirect measures of student learning via exit interviews, and data on the placement of program graduates in the geoscience workforce and graduate programs all indicate that our students are mastering program-level learning outcomes at a high level and are achieving "next-step" success upon graduation. The faculty are confident that our courses and curricula are well designed and effective in training future geoscientists and in helping our students achieve academic and career goals. However, this is not to say that we are not constantly trying to improve our teaching and learning outcomes based on new data about active-teaching methods, learning in the discipline, and employers' reported need for enhanced "soft" skill development in our graduates (e.g. ability to work in a team setting, experience with modelling software, and knowledge of the basic principles of project management). Nationally, the geoscience community has been engaged in a comprehensive evaluation, sponsored by the National Science Foundation, of the future of undergraduate geoscience education (http://www.jsg.utexas.edu/events/future-of-geoscience-undergraduate-education/). The Department of Geosciences has been represented at each of the meetings during this process and is committed to using the results of this national effort to evaluate and revise its courses and curricula to better prepare our students. One of the most import aspects of this work is that geoscience employers, in all sectors, have be engaged in the process and we how have a broad consensus on the content knowledge and skills that a 21st-century geoscientist needs.

2) *With whom did you share the results of the year's assessment efforts?*

   This report will be shared with all members of the Geosciences faculty and David Matty, Dean of the College of Science. In addition, this report will be given to the newest member of the Geoscience faculty expected to be on staff for Fall semester 2016.

3) *Based on your program's assessment findings, what subsequent action will your program take?*

   The faculty will discuss this report at a departmental meeting during spring 2105 and it will become essential background data for a planned faculty retreat during the fall of 2016. The planned retreat will focus on long-term strategic planning and curriculum evaluation – and related curriculum updates and reform. With the recent retirement of a third of the Geosciences faculty (2 out of 6) and the hiring of new faculty with new expertise and perspectives, combined with the national-level work described above, we have wonderful opportunity with respect to the evaluation and revision of our program-level learning outcomes, curricula, and teaching methods to better prepare our graduates.

APPENDIX A: Graduation Exit Interview Data

Department of Geosciences

1/27/16

Date	Program	BA or BS	Problem-solving Skills	Communication Skills	Technology Skills	Earth Materials	Earth History	Surface Processes	Tectonic Processes	Earth Systems/Cycles	Scientific Method/Capstone
10/04/12	Geol	BS	4	3.5	3.5	4	4	3.5	4.5	4	3.5
10/04/12	Geol	BS	4	4.5	3	3.5	3.5	4	4.5	4.5	4
10/11/12	AEG	BS	5	5	3	4.5	4	5	5	4	5
10/11/12	Geol	BS	5	4	5	4	5	5	4	5	5
01/14/13	AEG	BS	4	5	4	3	4	5	5	4	4
01/15/13	Geol	BS	4	5	4	3.5	4.5	5	5	5	5
01/17/13	AEG	BS	4	4	4	4	4	5	4	5	4
01/29/13	Geol	BA	3	4	3	4	4	5	4	3	3
02/04/13	AEG	BS	4	3	5	3.5	4	4	5	4	5
02/08/13	AEG	BS	4	3	4	3	3	4	4	5	4
03/25/13	EST	BS	4	3	2	4	4	4	5	5	4
04/02/13	EST	BS	5	5	3	3.5	3	4.5	5	5	4
04/09/13	EST	BS	5	5	5	5	5	4.5	5	5	5
08/14/13	AEG	BS	5	4	5	5	5	5	5	5	5
08/30/13	AEG	BS	3.5	3	4	4	3	4.5	2	4	3.5
09/05/13	AEG	BS	3.5	4	4	5	4.5	4	4.5	5	4
10/24/13	AEG	BS	5	4	5	4	5	5	5	5	5
01/15/14	Geol	BS	4.5	4	4	5	4	5	4	4	5
01/15/14	Geol	BS	4	5	5	5	4	5	5	2	5
01/27/14	Geol	BS	4.5	4	3	5	3.5	4	4.5	3.5	5
03/03/14	Geol	BS	4	4	3	3	4	4.5	4	3.5	4
03/19/14	Geol	BS	4	4	5	4	4.5	4	5	4.5	4
03/25/14	Geol	BS	5	4	4	4	4	4	3	4	4
11/25/14	Geol	BS	4	4	2.5	4	3.5	4	4	4	4.5
01/21/15	AEG	BS	4	5	3	4	3.5	5	4.5	5	3.5
01/21/15	Geol	BS	5	4.5	5	5	5	4.5	5	4	4
02/12/15	Geol	BS	4.5	4	5	4	4	4	4	4	4
02/17/15	AEG	BS	5	4	4	4	3.5	4	4	4	4
03/04/15	Geol	BS	4.5	4	3.5	5	4.5	5	4.5	5	4
03/06/15	Geol	BS	5	4	4	4	4.5	5	5	4	5
03/06/15	Geol	BS	4	4	5	4	4	5	4.5	5	4.5
03/24/15	Geol	BS	4	3.5	3.5	4	4	3.5	3.5	5	4
04/28/15	AEG	BS	4	4	4.5	4	4	4.5	3.5	4.5	4
04/28/15	AEG	BS	5	5	5	5	5	5	4.5	5	5
04/28/15	Geol	BS	4	4	5	4	3	4	3.5	4	4
04/29/15	Geol	BS	5	4.5	3.5	4.5	4.5	5	5	4	4.5
07/20/15	EST	BS	5	5	4.5	5	4.5	4.5	5	4	4.5
09/08/15	Geol	BA	4	5	3	4	5	4	3	5	n/a
09/09/15	AEG	BS	4.5	4	5	3.5	4	4	3	5	3
09/23/15	Geol	BS	4	4	3	5	5	5	5	4	5
10/07/15	AEG	BS	3	4.5	4	4	3.5	3.5	3.5	4	3
Averages			**4.30**	**4.17**	**3.99**	**4.16**	**4.11**	**4.46**	**4.32**	**4.35**	**4.16**

Appendix B

Please provide the following information about the full-time and adjunct faculty contracted by your department during the last academic year (summer through spring). Gathering this information each year will help with the headcount reporting that must be done for the final
5-Year Program Review document that is shared with the State Board of Regents.

Faculty: **Department of Geosciences** College of Science	2014-2015
Headcount	
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)	6
Full-time Tenured	5
Full-time Non-Tenured (includes tenure-track)	0
Part-time	1
With Master's Degrees	3
Full-time Tenured	0
Full-time Non-Tenured	1
Part-time	2
With Bachelor's Degrees	0
Full-time Tenured	0
Full-time Non-tenured	0
Part-time	0
Other	0
Full-time Tenured	0
Full-time Non-tenured	0
Part-time	0
Total Headcount Faculty	9
Full-time Tenured	5
Full-time Non-tenured	1
Part-time	3

END