2017-2018 Assessment Cycle COS_Geology BS

Mission (due 12/4/17)

University Mission

The University of Louisiana at Lafayette offers an exceptional education informed by diverse worldviews grounded in tradition, heritage, and culture. We develop leaders and innovators who advance knowledge, cultivate aesthetic sensibility, and improve the human condition.

University Values

We strive to create a community of leaders and innovators in an environment that fosters a desire to advance and disseminate knowledge. We support the mission of the university by actualizing our core values of equity, integrity, intellectual curiosity, creativity, tradition, transparency, respect, collaboration, pluralism, and sustainability.

University Vision

We strive to be included in the top 25% of our peer institutions by 2020, improving our national and international status and recognition.

College / VP and Program / Department Mission

Mission of College or VP-area
Provide the mission for the College or VP-area in the space provided. If none is available, write "None Available in 2017-2018."
Our mission is to serve our students, the citizens of Louisiana, the nation, and the world, through innovative and stimulating educational experiences and compelling research initiatives that create knowledge, deepen our basic understanding of the world around us, further economic development, and enhance quality of life. In support of our mission, The College of Sciences seeks to:

Develop broad-thinking students into mature, ethical professionals, scientists, and researchers with the necessary creativity, critical thinking, and problem solving skills required to make significant contributions to industry, government, and the academic sector.
Recruit and support top-notch teaching and research faculty engaged in scientific endeavors that are recognized nationally for their relevance and impact.
Enrich scientific research and education through on-campus collaborations, multidisciplinary programs, large-scale multi-institution initiatives, as well as partnerships with government and industry.
Foster scientific literacy within the University, the citizens of Louisiana, and the nation by providing stimulating courses for our students and by partnering with educators at the K-12 and community college level.
Provide leadership in the translation and application of research into practical solutions that will benefit our local community, the state of Louisiana, our natural environment, industries of the Gulf Coast region, and society as a whole.

The Ray P. Authement College of Sciences will emerge as a preeminent college of sciences in the Southeast and Gulf Coast region of the United States. The College will be recognized nationally for its innovative education, scholarly research activities addressing our nation's grand challenges, and for its diverse student body with exemplary academic achievements, leadership abilities, and global perspectives.

Mission of Program / Department
Provide the program / department mission in the space provided. The mission statement should concisely define the purpose, functions, and key constituents. If none is available, write "None Available in 2017-2018."
Our mission is to provide maximum value to our students, our community, and society through education and research focused on Energy and the Environment. Value for our students – Our goal is maximizing the return on investment for

undergraduate and graduate students enrolled in our programs. We strive to provide the strongest set of skills, experiences, and opportunities for students who aspire to careers (in industry or academics) within the fields of energy and/or the environment. Value for our community – Our educational and research focus areas reflect the strengths and address the challenges of our region. Louisiana is at the forefront of the petroleum exploration and production industry and also boasts more than 40% of the wetlands in the U.S. These coastal wetlands are highly-productive and represent an enormous biological and economic resource. The state of Louisiana has identified “water management” and the “next wave of oil and gas production” as target areas for development. It is estimated that in Louisiana alone between 100,000 and 195,000 jobs will be created in these areas over the next 20 years. Our program will help provide the intellectual, research, and problem-solving capacity to address these needs. Value for society – The sustainability of energy and environmental resources are two of the biggest scientific challenges we face nationally and globally. Our goal is to provide the next generation of scientists with the tools to work within these fields and a framework for addressing complex problem solving. Relationship to UL’s mission – Our mission reflects the University of Louisiana at Lafayette’s commitment to achieving excellence in undergraduate and graduate education, in research, and in public service. Our focus on value for students, community, and society, mirrors UL’s broader commitment to promote regional economic and cultural development and to find solutions to national and world issues. Relationship to FIRST Louisiana – The Fostering Innovation through Research in Science and Technology (FIRST) in Louisiana plan was adopted by the Board of Regents as the framework for research within their master plan for higher education. The plan identifies Earth Sciences (among the foundational sciences) as a target for expansion and growth. Our focus areas and mission are directly aligned with the translational research domains of Energy, Environmental Sciences (and Coastal sciences) identified in FIRST Louisiana. Vision: Excellence – We will become a preeminent institution in the Gulf Coast Region (and the U.S.) for training students in fundamental and applied research in the areas of Energy and the Environment. Our strategic plan includes goals and metrics in the areas of faculty productivity (teaching and research) and student success that are designed to evaluate our progress. Opportunity – We will offer unique educational and research opportunities to support the success of our students. These opportunities include internships, networking, research experiences, flexible degree plans, and original course content. Our strategic plan includes goals and metrics in the areas of student success (placement, time-to-degree, internship participation, research participation, etc.) that are designed to evaluate our progress. Community – We will serve the community through work in K-12 classrooms, teacher education programs, engagement with businesses, participation in philanthropic events, and local problem-solving. Our strategic plan includes goals and metrics involving employer surveys, recruiting activities, and enrollment numbers that are designed to evaluate our progress.

Attachment (optional)
Upload any documents which support the program / department assessment process.

Assessment Plan (due 12/4/17)

Assessment Plan (Goals / Objectives, Assessment Measures and Criteria for Success)

Assessment List

<table>
<tr><td>Goal/Objective</td><td>Students will be able to master field methods, including: a) taking accurate and reliable field notes, b) constructing a geologic map, a cross section and a stratigraphic column; and c) observing the geologic relations of a field area and interpreting its geologic history based on these field observations.(Imported)</td></tr>
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Goal/Objective	Students will be competent in using widely used software programs to produce quality geologic illustrations and to analyze data sets and imagery. One project from the Computer Methods in Geology class was used to assess data analysis skills using computer software: students had to analyze and represent geological data with software commonly used in the geosciences.(Imported)
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Goal/Objective	Students will be able to communicate clearly and articulately their geologic knowledge, findings, and interpretations in written and oral presentations.(Imported)
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Program / Department Assessment Narrative

The primary purpose of assessment is to use data to inform decisions and improve programs (student learning) and departments (operations); this is an on-going process of defining goals and expectations, collecting results, analyzing data, comparing current and past results and initiatives, and making decisions based on these reflections. In the space below, describe the program's or department's overall plan for improving student learning and/or operations (the "assessment plan"). Consider the following:
1) What strategies exist to assess the outcomes?
2) What does the program/department expect to achieve with the goals and objectives identified above?
3) How might prior or current initiatives (improvements) influence the anticipated outcomes this year?
4) What is the plan for using data to improve student learning and/or operations?
5) How will data be shared within the Program/Department (and, where appropriate, the College/VP-area)?

Assessment Process

1) Outcomes will be assessed annually, and discussed with faculty to improve any standards that are not met.
2) We expect to achieve new goals or strategies for obtaining stated goals.
3) One might increase the standard for the current year based on success in prior years.
4) We have not yet met to discuss a plan for using data to improve student learning and/or operations. We plan to have these discussions at a future faculty meeting. We recognize that this is an on-going process.
5) Data will be shared through electronic communication and/or faculty meetings.

Results & Improvements (due 9/15/18)

Results and Improvement Narratives

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		student's ability to use computer software applied to geological problems. At least 70% of the graduates in geology for the calendar year must meet the standard (65% or better). been met yet? Not met	competent in computer applications. 90% of the students earned a grade of at least 65% in GEOL 430. With the exception of GEOL 435, standards are being met. We will evaluate if the high rate of success seen in GEOL 337 this year translates into better success in GEOL 435 in the next year.		

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Assessment Findings

Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Presentation	Has the criterion The final exam (essay test) of our	We have no data for GEOL 339 and GEOL 341 due to		- Assessment Process: Results

			stratigraphy course was used to assess whether students are capable of communicating geologic knowledge in written form. Randomly selected presentations in the undergraduate seminar (Geol 499) will be used to assess the oral presentation skills. Essay tests in sedimentary petrology (Geol 339), carbonates (Geol 442), and stratigraphy (Geol 341) are used to assess the written communication skills of our geology majors. At least 70% of the graduates in geology for the calendar year must meet the standard (65% or better). been met yet? Met	the instructor of record no longer being in the School. 100% of the students in GEOL 442 (Carbonates) earned a grade of 65% or better on their final exam, however it was not a true essay - instead, students wrote notes on their choice of 4 topics out of 10. The lowest grade was a 71%. 100% of students in GEOL 499 achieved a grade of 65% or better. The average was 89 +/- 9% with maximum and minimum grades of 96 and 70%, respectively. Students are adequately demonstrating their capability for communicating geologic knowledge in written form.		Discussed / Shared: Results have been shared with the Director of the School of Geosciences.

Reflection (Due 9/15/18)

Reflection

The primary purpose of assessment is to use data to inform decisions and improve programs and operations; this is an on-going process of defining goals and expectations, collecting results, analyzing data, comparing current and past results and initiatives, and making decisions based on these reflections. Recalling this purpose, respond to the questions below.

1) How were assessment results shared in the program / department?
Please select all that apply. If "other", please use the text box to elaborate.

Distributed via email
Presented formally at staff / department / committee meetings (selected)
Discussed informally
Other (explain in text box below) (selected)

Results are shared with Dr. Eric Ferré (Director) via LiveText.

2) How frequently were assessment results shared?

Frequently (>4 times per cycle)
Periodically (2-4 times per cycle)
Once per cycle (selected)
Results were not shared this cycle

3) With whom were assessment results shared?
Please select all that apply.
Department Head (selected)
Dean / Asst. or Assoc. Dean
Departmental assessment committee
Other faculty / staff (selected)

4) Consider the impact of prior applied changes. Specifically, compare current results to previous results to evaluate the impact of a previously reported change. Demonstrate how the use of results improved student learning and/or operations.

Students continue to struggle most with demonstrating mastery of field methods, but continue to excel in written communication. The Director and field camp instructors are having active discussions with all School of Geoscience faculty for input on the field camp course.

5) Over the past three assessment cycles, what has been the overall impact of "closing the loop"? Provide examples of improvements in student learning, program quality, or department operations that are directly linked to assessment data and follow-up analysis.

We changed the computer applications course to a 300-level course so that students can be better prepared for upper division and be exposed to material sooner. Students excelled in this course at the 300-level this year, and we will evaluate if this affects grades in GEOL 435 in the next assessment cycle.

Field camp includes 8 mapping projects, two measured stratigraphic sections, a correlation chart, a paper, and notebook checks. Overall, students are above the standard, however, these two listed projects continue to cause student difficulty. In the coming year, we will change this assessment to use a portfolio approach to assessing students' knowledge of field methods by evaluating their course grades, rather than individual grades on 2 of 8 mapping projects.

Attachments (optional)
Upload any documents which support the program / department assessment process.