Analysis Questions and Analysis Answers

For Academic Programs

Informed by your assessment activities related to student learning, what changes have you made in your degree program in the last three to five years? Describe the changes (e.g., curriculum revision, new courses, faculty development), the general results that prompted the changes (e.g., student performance on an assessment measure), and any impact on student learning that you might attribute to these changes.

Geological Sciences has made two significant changes to its graduate curriculum: 1) The addition of a required course for all students (MS and Ph.D.) regardless of research area that focuses on effective communication of scientific ideas. 2) A new requirement that all Ph.D. students must submit one paper to a peer-reviewed journal prior to candidacy, and at least 3 papers must be submitted prior to the student's final dissertation defense. At the MS level, students are required to make at least one professional conference presentation before graduating.

These changes grew from faculty interpretation of formal assessment data as well as general observations of student performance over recent years related to public speaking, scientific writing, and conference presentations. The impact of these changes is yet to be determined as both changes will not take full effect until Fall 2014.

Mission / Purpose

1. Department Mission Statement:
   The Department of Geological Sciences is committed to providing strong educational and research programs that benefit students, the science, society, and the state of Alabama. Our mission is to:
   • Maintain quality educational programs that provide basic geologic instruction to nonmajors.
   • Maintain quality undergraduate programs that prepare students for graduate education or careers in the geological sciences.
   • Maintain a quality graduate program that provides M.S. and Ph.D. students with the skills necessary to carry out independent research and obtain employment in a specialized area of the geological sciences.
   • Develop and maintain research programs that contribute new knowledge to the geological sciences.
   • Provide service to the scientific community and the public.
   Assist in the sound and sustainable economic development

Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Independent Scientific Research
Students will demonstrate the knowledge and skills to conduct independent scientific research

Connected Document
PhD Geology Curriculum Maps

Relevant Associations:

Standard Associations
SACs 3.3.1
3.3.1.1 Educational programs, to include student learning outcomes
3.3.1.4 Research within its educational mission

General Education/Core Curriculum Associations
9 Natural Science - SLO is related to a hands-on laboratory or field experience that emphasizes the scientific method and analysis of data
11 Writing - SLO is related to building on students’ competency in academic writing skills and aims to extend those skills

Strategic Plan Associations
University of Alabama
1.1 Promote and enhance areas of academic, scholarship, and research excellence.
4.3 Produce scholars who will become academic and civic leaders in their disciplines.
4.4 Produce graduates who will serve as effective leaders in Alabama's government, businesses, educational systems, health care, the arts, and other professions, and who will be leaders in their communities.

Related Measures

M 1: Writing of a Dissertation Proposal
40% of Ph.D. students will successfully write a dissertation proposal with the approval of all committee members by the end of their third semester in residence.

Source of Evidence: Writing exam to assure certain proficiency level

Target:
No Target Established
Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making grea...

M 2: Presentation of Dissertation Proposal
40% of Ph.D. students will successfully complete their dissertation with the approval of all committee members by the end of their third semester in residence.
Source of Evidence: Presentation, either individual or group
Target:
No Target Established

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
Currently DGS record keeping does not distinguish proposal submission from defense. This is being worked on. The DGS is putting ...

SLO 2: Presentation Skills
Students will be able to present their results to groups of their peers and the public.

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PhD Geology Curriculum Maps

Relevant Associations:
Standard Associations
SACS 3.3.1
3.3.1.1 Educational programs, to include student learning outcomes
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Related Measures

M 3: Students will have presented their research results
By the end of their degree program 90% of students will successfully complete two external presentations.
Source of Evidence: Presentation, either individual or group
Target:
No Target Established

M 4: Departmental Presentations (GEO-634/5)
By the end of their degree program all students will have completed two departmental presentations (GEO-634/5)
Source of Evidence: Presentation, either individual or group
Target:
No Target Established

SLO 3: Critical Thinking Skills
Students will display excellent critical thinking skills through an examination of a broad knowledge of the geological sciences and an ability to solve problems under pressure

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PhD Geology Curriculum Maps

Relevant Associations:
Standard Associations
SACS 3.3.1
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General Education/Core Curriculum Associations
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Strategic Plan Associations
University of Alabama
1.1 Promote and enhance areas of academic, scholarship, and research excellence.
Related Measures

M 5: Completion of Oral Preliminary Examination
50% of Ph.D. students will complete an oral comprehensive exam by the end of their fifth semester with the approval of all student committee members.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target: No Target Established

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline th...

M 6: Solving A Geological Problem from First Principles
When presented with an unfamiliar geological problem, 50% of students will be able to solve the problem from first principles.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target: No Target Established

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Development of rubrics
Established in Cycle: 2011-2012
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be on...

SLO 4: Written and Oral Presentation of Final Results
Students will be able present and defend their final research results in both a written and oral form to groups of their peers, departmental faculty, and experts within their discipline.

Connected Document
PhD Geology Curriculum Maps

Relevant Associations:

Standard Associations
SACS 3.3.1
3.3.1.1 Educational programs, to include student learning outcomes
3.3.1.4 Research within its educational mission

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4.4 Produce graduates who will serve as effective leaders in Alabama’s government, businesses, educational systems, health care, the arts, and other professions, and who will be leaders in their communities.

Related Measures

M 7: Defense of Final Results
50% of students will defend their results successfully to a highly interdisciplinary departmental audience by the end of their eighth semester in residence.

Source of Evidence: Senior thesis or culminating major project

Target: No Target Established

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included ent...

M 8: Journal Article Submission
Within 6 months of their final defense, 50% of students will have submitted three papers to refereed journals.

Source of Evidence: Senior thesis or culminating major project

Target: No Target Established
Details of Action Plans for This Cycle (by Established cycle, then alpha)

**Development of rubrics**
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be only to provide assessment information and to justify committee decisions if required. This rubric will be discussed during an upcoming departmental retreat.

*Established in Cycle:* 2011-2012  
*Implementation Status:* Planned  
*Priority:* High

*Relationships (Measure | Outcome/Objective):*  
*Measure:* Solving A Geological Problem from First Principles | *Outcome/Objective:* Critical Thinking Skills

**Enforcement of timeline**
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline through the withholding of scholarships and assistantships.

*Established in Cycle:* 2011-2012  
*Implementation Status:* In-Progress  
*Priority:* High

*Relationships (Measure | Outcome/Objective):*  
*Measure:* Completion of Oral Preliminary Examination | *Outcome/Objective:* Critical Thinking Skills

**Enforcement of timeline**
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included enforcement of rules restricting access to scholarships and assistantships for students who do not keep to the timeline.

In light of our failure to meet this goal, the graduate program committee will examine average time to completion for Ph.D. degrees in comparable programs throughout the country.

*Established in Cycle:* 2011-2012  
*Implementation Status:* Planned  
*Priority:* High

*Relationships (Measure | Outcome/Objective):*  
*Measure:* Defense of Final Results | *Outcome/Objective:* Written and Oral Presentation of Final Results

**Enforcement of timeline**
Currently DGS record keeping does not distinguish proposal submission from defense. This is being worked on. The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

*Established in Cycle:* 2011-2012  
*Implementation Status:* In-Progress  
*Priority:* High

*Relationships (Measure | Outcome/Objective):*  
*Measure:* Presentation of Dissertation Proposal | *Outcome/Objective:* Independent Scientific Research

**Enforcement of timeline**
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

In addition, the DGS is looking into possibly rearranging the proposal and preliminary exam. This will be a topic of discussion at an upcoming retreat.

*Established in Cycle:* 2011-2012  
*Implementation Status:* In-Progress  
*Priority:* High

*Relationships (Measure | Outcome/Objective):*  
*Measure:* Writing of a Dissertation Proposal | *Outcome/Objective:* Independent Scientific Research
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I. Department Mission Statement:
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Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

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Relevant Associations:
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Related Measures
M 1: Writing of a Dissertation Proposal
40% of Ph.D. students will successfully write a dissertation proposal with the approval of all committee members by the end of their third semester in residence.

Source of Evidence: Writing exam to assure certain proficiency level

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making grea...

M 2: Presentation of Dissertation Proposal
40% of Ph.D. students will successfully complete their dissertation with the approval of all committee members by the end of their third semester in residence.

Source of Evidence: Presentation, either individual or group

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.
Related Action Plans (by Established cycle, then alpha):
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Related Measures

M 3: Students will have presented their research results
By the end of their degree program 90% of students will successfully complete two external presentations.

Source of Evidence: Presentation, either individual or group

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.

M 4: Departmental Presentations (GEO-634/5)
By the end of their degree program all students will have completed two departmental presentations (GEO-634/5)

Source of Evidence: Presentation, either individual or group

Target:
No Target Established

Finding (2012-2013) - Target: Met
100% of students in this category made presentations.

SLO 3: Critical Thinking Skills
Students will display excellent critical thinking skills through an examination of a broad knowledge of the geological sciences and an ability to solve problems under pressure

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Related Measures

M 5: Completion of Oral Preliminary Examination
50% of Ph.D. students will complete an oral comprehensive exam by the end of their fifth semester with the approval of all student committee members.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:
No Target Established
Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline th...

M 6: Solving A Geological Problem from First Principles
When presented with an unfamiliar geological problem, 50% of students will be able to solve the problem from first principles.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
The rubric necessary for this measure is still being developed.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Development of rubrics
Established in Cycle: 2011-2012
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be on...

SLO 4: Written and Oral Presentation of Final Results
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Related Measures

M 7: Defense of Final Results
50% of students will defend their results successfully to a highly interdisciplinary departmental audience by the end of their eighth semester in residence.

Source of Evidence: Senior thesis or culminating major project

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included ent...

M 8: Journal Article Submission
Within 6 months of their final defense, 50% of students will have submitted three papers to refereed journals.

Source of Evidence: Senior thesis or culminating major project

Target:
No Target Established

Finding (2012-2013) - Target: Not Reported This Cycle
No data are available for this time period.
Details of Action Plans for This Cycle (by Established cycle, then alpha)

Development of rubrics
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be to provide assessment information and to justify committee decisions if required. This rubric will be discussed during an upcoming departmental retreat.

Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Solving A Geological Problem from First Principles | Outcome/Objective: Critical Thinking Skills

enforcement of timeline
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline through the withholding of scholarships and assistantships.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Completion of Oral Preliminary Examination | Outcome/Objective: Critical Thinking Skills

Enforcement of timeline
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included enforcement of rules restricting access to scholarships and assistantships for students who do not keep to the timeline.

In light of our failure to meet this goal, the graduate program committee will examine average time to completion for Ph.D. degrees in comparable programs throughout the country.

Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Defense of Final Results | Outcome/Objective: Written and Oral Presentation of Final Results

Enforcement of timeline
Currently DGS record keeping does not distinguish proposal submission from defense. This is being worked on. The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Presentation of Dissertation Proposal | Outcome/Objective: Independent Scientific Research

Enforcement of timeline
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

In addition, the DGS is looking into possibly rearranging the proposal and preliminary exam. This will be a topic of discussion at an upcoming retreat.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Writing of a Dissertation Proposal | Outcome/Objective: Independent Scientific Research
Mission / Purpose

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- Maintain quality undergraduate programs that prepare students for graduate education or careers in the geological sciences.
- Maintain a quality graduate program that provides M.S. and Ph.D. students with the skills necessary to carry out independent research and obtain employment in a specialized area of the geological sciences.
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Assist in the sound and sustainable economic development

Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Independent Scientific Research
Students will demonstrate the knowledge and skills to conduct independent scientific research

Connected Document
PhD Geology Curriculum Maps

Relevant Associations:

Standard Associations
SACS 3.3.1
3.3.1.1 Educational programs, to include student learning outcomes
3.3.1.4 Research within its educational mission

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Related Measures

M 1: Writing of a Dissertation Proposal
40% of Ph.D. students will successfully write a dissertation proposal with the approval of all committee members by the end of their third semester in residence.

Source of Evidence: Writing exam to assure certain proficiency level

Target:
No Target Established

Finding (2011-2012) - Target: Met
Of the 12 Ph.D. students in their 3rd semester or later at the end of the 2011/12 semester (May 2012), 1 (8%) defended their dissertation proposal by the end of their 3rd semester.

This result is well below the goal of 40%. The department is actively discussing this issue and is enforcing methods that we hope will encourage students to complete this goal on time (including losing eligibility for scholarships and assistantships).

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making grea...

M 2: Presentation of Dissertation Proposal
40% of Ph.D. students will successfully complete their dissertation with the approval of all committee members by the end of their third semester in residence.

Source of Evidence: Presentation, either individual or group
Target: No Target Established

**Finding (2011-2012) - Target: Met**

Of the 12 Ph.D. students in their 3rd semester or later at the end of the 2011/12 semester (May 2012), 1 (8%) defended their dissertation proposal by the end of their 3rd semester.

This result is well below our goal of 40%. Please see measure 1 (and related goal) for a discussion.

**Related Action Plans (by Established cycle, then alpha):**

For full information, see the Details of Action Plans section of this report.

**Enforcement of timeline**

*Established in Cycle: 2011-2012*

Currently DGS record keeping does not distinguish proposal submission from defense. This is being worked on. The DGS is putting ...

**SLO 2: Presentation Skills**

Students will be able to present their results to groups of their peers and the public.

**Connected Document**

PhD Geology Curriculum Maps

**Relevant Associations:**

**Standard Associations**

*SACS 3.3.1*

3.3.1.1 Educational programs, to include student learning outcomes
3.3.1.4 Research within its educational mission

**General Education/Core Curriculum Associations**

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University of Alabama

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**Related Measures**

**M 3: Students will have presented their research results**

By the end of their degree program 90% of students will successfully complete two external presentations.

Source of Evidence: Presentation, either individual or group

**Target:**

No Target Established

**Finding (2011-2012) - Target: Not Met**

Of the 3 Ph.D. students who graduated during this period, 2 (66%) gave at least two presentations external to The University of Alabama during their degree program. This falls short of our goal of 90%.

It is essential for the health of our program that our Ph.D. students are presenting at external meetings. New student orientations will emphasize the need to present. It must be made clear to Ph.D. students that if they aim to go into academia or to a government research lab, a lack of exposure will greatly hinder this. If this is not their goal, they should consider their reasons for being in a Ph.D. program.

**M 4: Departmental Presentations (GEO-634/5)**

By the end of their degree program all students will have completed two departmental presentations (GEO-634/5)

Source of Evidence: Presentation, either individual or group

**Target:**

No Target Established

**Finding (2011-2012) - Target: Met**

All (100%, 3 out of 3) students who completed their Ph.D. degrees in Aug. 2011, Dec. 2011, and May 2012 semesters successfully completed four presentations to the department. This goal has been met.

**SLO 3: Critical Thinking Skills**

Students will display excellent critical thinking skills through an examination of a broad knowledge of the geological sciences and an ability to solve problems under pressure

**Connected Document**

PhD Geology Curriculum Maps

**Relevant Associations:**

**Standard Associations**

*SACS 3.3.1*

3.3.1.1 Educational programs, to include student learning outcomes
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Related Measures

M 5: Completion of Oral Preliminary Examination
50% of Ph.D. students will complete an oral comprehensive exam by the end of their fifth semester with the approval of all student committee members.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:
No Target Established

Finding (2011-2012) - Target: Not Met
Of the 10 Ph.D. students who were in their 5th semester or later at the end of the 2011/12 academic year (May 2012), 1 (10%) successfully passed their preliminary exam before the end of the 5th semester.

This result falls well short of our goal of 50%. The department is discussion the possibility of moving an exam similar to the preliminary exam to a point earlier in the program so that students are more fully prepared to meet this goal in a timely fashion. This will be the topic of an upcoming retreat.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline th...

M 6: Solving A Geological Problem from First Principles
When presented with an unfamiliar geological problem, 50% of students will be able to solve the problem from first principles.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:
No Target Established

Finding (2011-2012) - Target: Not Reported This Cycle
This finding is not reported this cycle.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Development of rubrics
Established in Cycle: 2011-2012
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be on...

SLO 4: Written and Oral Presentation of Final Results
Students will be able present and defend their final research results in both a written and oral form to groups of their peers, departmental faculty, and experts within their discipline.

Connected Document
PhD Geology Curriculum Maps

Relevant Associations:

Standard Associations
SACS 3.3.1
3.3.1.1 Educational programs, to include student learning outcomes
3.3.1.4 Research within its educational mission

General Education/Core Curriculum Associations
9 Natural Science - SLO is related to a hands-on laboratory or field experience that emphasizes the scientific method and analysis of data
11 Writing - SLO is related to building on students’ competency in academic writing skills and aims to extend those skills

Strategic Plan Associations
University of Alabama
1.1 Promote and enhance areas of academic, scholarship, and research excellence.
4.3 Produce scholars who will become academic and civic leaders in their disciplines.
4.4 Produce graduates who will serve as effective leaders in Alabama's government, businesses, educational systems, health care, the arts, and other professions, and who will be leaders in their communities.

Related Measures

M 7: Defense of Final Results
50% of students will defend their results successfully to a highly interdisciplinary departmental audience by the end of their eighth semester in residence.

Source of Evidence: Senior thesis or culminating major project

Target:
No Target Established

Finding (2011-2012) - Target: Not Met
Of the 3 Ph.D. students who graduated in the last year (Aug. 2011, Dec. 2011, and May 2012), none (0%) graduated in eight semesters. This percentage of 0% falls short of our goal of 50%.

The department must explore the reality of this goal.

Related Action Plans (by Established cycle, then alpha):
For full information, see the Details of Action Plans section of this report.

Enforcement of timeline
Established in Cycle: 2011-2012
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included enf...

M 8: Journal Article Submission
Within 6 months of their final defense, 50% of students will have submitted three papers to refereed journals.

Source of Evidence: Senior thesis or culminating major project

Target:
No Target Established

Finding (2011-2012) - Target: Met
Of the 3 Ph.D. students who graduated during the last year (May 2011, Aug. 2011, Dec. 2011) 1 (33%) had submitted at least three papers within 6 months of their final defense. This falls short of our assessment goal of 50%.

The department is attempting to put more emphasis on students completing dissertations that comprise at least three submitted papers. Students are being told the importance of published papers for their future career. Unfortunately, due to the availability of high-paying jobs in the oil's industry, where publications are not important, students lack motivation to publish.

Finding (2011-2012) - Target: Met
No finding

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Development of rubrics
A rubric is being developed that can be completed by faculty taking part in preliminary exams. The goal of the rubric will be only to provide assessment information and to justify committee decisions if required. This rubric will be discussed during an upcoming departmental retreat.

Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Solving A Geological Problem from First Principles | Outcome/Objective: Critical Thinking Skills

enforcement of timeline
A greater emphasis is being placed on the timeline for Ph.D. students. This includes enforcement of the departmental timeline through the withholding of scholarships and assistantships.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Completion of Oral Preliminary Examination | Outcome/Objective: Critical Thinking Skills

Enforcement of timeline
A greater emphasis is being placed on keeping to the departmental timeline for Ph.D. completion at all stages. This included enforcement of rules restricting access to scholarships and assistantships for students who do not keep to the timeline.

In light of our failure to meet this goal, the graduate program committee will examine average time to completion for Ph.D. degrees in comparable programs throughout the country.

Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Defense of Final Results | Outcome/Objective: Written and Oral Presentation of Final Results

Enforcement of timeline
Currently DGS record keeping does not distinguish proposal submission from defense. This is being worked on. The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Presentation of Dissertation Proposal | Outcome/Objective: Independent Scientific Research

Enforcement of timeline
The DGS is putting a greater emphasis on completing program requirements in a timely fashion. In addition to faculty
making greater efforts to academically encourage students to meet these goals, the DGS is enforcing the requirement that this goal must be met in order for a student to be eligible for DGS scholarships and continued assistantship funding.

In addition, the DGS is looking into possibly rearranging the proposal and preliminary exam. This will be a topic of discussion at an upcoming retreat.

**Established in Cycle:** 2011-2012  
**Implementation Status:** In-Progress  
**Priority:** High

**Relationships (Measure | Outcome/Objective):**  
**Measure:** Writing of a Dissertation Proposal  
**Outcome/Objective:** Independent Scientific Research
### Curriculum Maps #1 (In which courses or in what activities or assignments are Student Learning Outcomes Addressed)

Use “Introduce” when outcome is first address; “Reinforce” when outcome is reinforced; and “Master” when outcome is expected to be mastered. Note that you do not need to obtain a measure from every course in which an outcome is addressed (see Map #2)

<table>
<thead>
<tr>
<th>Course 1</th>
<th>GEO634/5</th>
<th>Reinforced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 2</td>
<td>Dissertation</td>
<td>Mastery</td>
</tr>
<tr>
<td>Course 3</td>
<td>Comprehensive Exam</td>
<td>Mastery</td>
</tr>
<tr>
<td>Activity 1</td>
<td>Conference presentations</td>
<td>Mastery</td>
</tr>
<tr>
<td>Activity 3</td>
<td>Paper submission</td>
<td>Mastery</td>
</tr>
</tbody>
</table>

### Curriculum Map II (What assessment measures will be employed in which courses/activities/assignments for each Student learning Outcome)

Indicate which measure is being obtained in which course by typing “Measure n.n” in the appropriate cell. If you’d rather use a description of the measure, that is fine. Also, indicate the year/semester in which the measure will be obtained (e.g., Fall 2011). Student learning outcomes must be assessed at least once within a 2 ½ year period. Note that a measure does not need to be obtained from every course in which an outcome is covered (see Map #1).

<table>
<thead>
<tr>
<th>Course 1</th>
<th>GEO634/5</th>
<th>departmental presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 2</td>
<td>Dissertation</td>
<td>Write dissertation proposal; complete dissertation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>defend their results to highly interdisciplinary departmental audience</td>
</tr>
<tr>
<td>Course 3</td>
<td>Comprehensive Exam</td>
<td>oral comprehensive exam</td>
</tr>
<tr>
<td>Activity 1</td>
<td>Conference presentations</td>
<td>external presentations</td>
</tr>
<tr>
<td>Activity 3</td>
<td>Paper submission</td>
<td>submit papers to refereed journals</td>
</tr>
</tbody>
</table>
Optional Additional Narrative: Use this space to provide any additional detail concerning the 2011-12 Department Assessment Plan