

**Student Learning Summary Form AY2015-16**

**Due to your dean by June 1**

**Due from dean to assessment office by June 15**

**Degree Program Name:** Earth & Environmental Sciences Major      **Contact Name and Email** Steve Aldrich (steve.aldrich@indstate.edu)

Before you complete the form below, review your outcomes library and curriculum map to ensure that they are accurate and up to date. If not, you may submit a new version along with this summary.

**Note:** This year assessment efforts in the Earth & Environmental Sciences Major focused primarily on the “Geoscience” concentration given the relative size of the major in comparison with the “Atmospheric & Surface Processes” concentration.

**Part One**

<p><b>a. What learning outcomes did you assess this year?</b></p> <p>If this is a graduate program, indicate the <a href="#">Graduate Student Learning Outcome*</a> each outcome aligns with.</p>	<p><b>b. (1) What method(s) did you use to determine how well your students attained the outcome? (2) In what course or other required experience did the assessment occur?</b></p>	<p><b>c. What expectations did you establish for achievement of the outcome?</b></p>	<p><b>d. What were the actual results?</b></p>	<p><b>e. (1) Who was responsible for collecting and analyzing the results? (2) How were they shared with the program’s faculty?</b></p>
<p>1. Demonstrate comprehension of geological principles, facts, and concepts</p>	<p>(1) Courses of concentration core, required exit exam.</p>	<p>Learning gain on pre-and-post-core exit exam/test.</p>	<p>All students more than doubled their percent correct on exit exam when compared with entry to the program. Average upon entry was 39% correct, and average upon application to graduate was 88%.</p>	<p>(1) Geoscience concentration advisor and Assessment Coordinator Aldrich. (2) Via circulation of this assessment report.</p>
<p>2. Identify, describe, and classify earth materials, formation, and structures, and interpret them in the context of geologic processes</p>	<p>(1) Courses of concentration core, required exit exam.</p>	<p>Learning gain on pre-and-post-core exit exam/test.</p>	<p>All students more than doubled their percent correct on exit exam when compared with entry to the program. Average upon entry was 39% correct, and average upon application to graduate was 88%.</p>	<p>(1) Geoscience concentration advisor and Assessment Coordinator Aldrich. (2) Via circulation of this assessment report.</p>
<p>3. Synthesize the geologic history of Earth as evidenced by the rock record</p>	<p>(1) Courses of concentration core, required exit exam.</p>	<p>Learning gain on pre-and-post-core exit exam/test.</p>	<p>All students more than doubled their percent correct on exit exam when compared with entry to the program. Average upon entry was 39% correct, and average upon application to graduate was 88%.</p>	<p>(1) Geoscience concentration advisor and Assessment Coordinator Aldrich. (2) Via circulation of this assessment report.</p>

## Part Two

**In no more than one page, summarize 1) the discoveries assessment has enabled you to make about your students' learning, the curriculum, departmental processes, and/or the assessment plan itself; 2) the changes and improvements you have made or will make in response to these discoveries and/or the coordinator's feedback on the previous summary; and 3) what your assessment plan will focus on in the coming year.**

*If you would like to reference any supporting materials (departmental meeting minutes, detailed assessment results, etc.), please provide the URL at which they can be found.*

While our overall findings are that the learning outcomes assessed during this cycle are being adequately met, and that students are gaining skills they need to be successful in the job market and/or post-graduate education, we have come to realize a few things about our curriculum as we currently offer it. These realizations come, in at least a small part, from our assessment efforts.

First, we would like to make it clear that students very clearly exceed our learning outcomes, and our curriculum does educate competent professionals. Though the Earth & Environmental Sciences does a good job making its core focus visible through degree headings, course names, etc. we plan on some minor-to-moderate changes to the curriculum over the next academic year (2016-2017). The changes will be meant to make the degree path somewhat more flexible, and allow students to take a few more topic-specific courses to broaden their expertise before graduation. We plan a significant curricular overhaul to respond to these issues, and will also be completely rewriting our assessment plan to correspond to that new curriculum.

As is the case with the likely more significant overhaul of our department's other major (Human and Environmental Systems), one goal of a new curriculum and accompanying learning outcomes and assessment plan (which we are currently working on only in concept, rather than specifics) is to integrate assessment activities more directly in our curricular process. As the plan is currently designed, outside of the Geoscience concentration, there are too many measures and too many assessment-specific (rather than education experience that can contribute to assessment) activities to generate these reports. The reports also rely on the actions of a very few department personnel. We hope to broaden the number of people actively involved in assessment in the department by integrating more assessment items explicitly into our curriculum.

Given the changes likely to be put into place over the 2016-2017 academic year (to be in effect for 2017-2018, hopefully), we will focus assessment efforts for the coming year on what is currently termed the "Geoscience" concentration. Though we may be reconfiguring our programs such that our "concentrations" go away, the continuity of strong assessment data in this area means focusing on this part of our curriculum for assessment reporting purposes during a year of curricular change, and afterward, will allow us to (perhaps) complete a pre- and post-revision evaluation of our changes further down the line.

**Student Learning Summary Report Rubric :: Office of Assessment & Accreditation :: Indiana State University**

Degree Program: BS in Earth and Environmental Systems Date: 8.22.16

	<b>Level 0 – Undeveloped</b>	<b>Level 1 – Developing</b>	<b>Level 2 – Mature</b>	<b>Level 3 – Exemplary</b>
<b>1. Student Learning Outcomes</b>	<input type="checkbox"/> No outcomes are identified.  <input type="checkbox"/> No Curriculum Map was provided.	<input type="checkbox"/> Outcomes were identified.  <input type="checkbox"/> Some of the outcomes are specific, measurable, student-centered, program-level outcomes.  <input type="checkbox"/> A Curriculum Map was provided.	<input type="checkbox"/> Outcomes are specific, measurable, student-centered, program-level outcomes.  <input checked="" type="checkbox"/> Outcomes at least indirectly support Foundational Studies Learning Outcomes or the Graduate Learning Goals.  <input type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed.  <input type="checkbox"/> At least one outcome was assessed in this cycle.	<input checked="" type="checkbox"/> Outcomes are specific, measurable, student-centered program-level outcomes that span multiple learning domains.  <input type="checkbox"/> Outcomes directly integrate with Foundational Studies Learning Outcomes or the Graduate Learning Goals.  <input type="checkbox"/> Outcomes reflect the most important results of program completion (as established by an accreditor or other professional organization).  <input type="checkbox"/> Learning outcomes are consistent across different modes of delivery (face-to-face and online.)  <input type="checkbox"/> Outcomes are regularly reviewed (and revised, if necessary) by the faculty and other stakeholders.  <input checked="" type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed and offers evidence that students have sufficient opportunity to master the associated learning outcomes.  <input checked="" type="checkbox"/> Two or more outcomes were

				assessed in this cycle.
<p><b>2. Measures &amp; Performance Goals</b></p>	<input type="checkbox"/> No measures are provided.  <input type="checkbox"/> No goals for student performance are identified.	<input type="checkbox"/> Measures are provided, but some are vague and/or do not clearly assess the associated outcomes.  <input type="checkbox"/> Measures are primarily indirect.  <input type="checkbox"/> Measures include course and/or assignment grades, but there is no evidence that grades are calibrated to the outcomes.  <input checked="" type="checkbox"/> Performance goals are identified, but they are unclear or inappropriate.	<input checked="" type="checkbox"/> At least one direct measure was provided for each outcome.  <input checked="" type="checkbox"/> Some information is provided to suggest that measures are appropriate to the outcomes being assessed.  <input type="checkbox"/> Measures include course and/or assignment grades, and general information is provided to indicate that grades are calibrated to the outcomes.  <input type="checkbox"/> Clear and appropriate standards for performance are identified.  <input type="checkbox"/> Mechanisms (rubrics, checklists, criterion-referenced exams, etc.) were provided.	<input type="checkbox"/> Multiple measures were provided, and a majority are direct.  <input type="checkbox"/> Detailed information is provided to show that measures are appropriate to the outcomes being assessed.  <input type="checkbox"/> Measures include course and/or assignment grades, and specific evidence is provided to demonstrate that grades are calibrated to the outcomes.  <input type="checkbox"/> Clear and appropriate standards for performance are identified and justified.  <input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, this was included as a measure.  <input type="checkbox"/> Measures assess some <a href="#">high impact practices</a> (internships, capstone course projects, undergraduate research, etc.)  <input type="checkbox"/> Some measures allow performance to be gauged over time, not just in a single course.  <input type="checkbox"/> Mechanisms (rubrics, checklists, criterion-referenced exams, etc.) were provided that demonstrate that the measure provides clear evidence of what students know/can do.

				<input type="checkbox"/> If a measure is used to assess more than one outcome, a clear explanation is offered to substantiate how this is effective.
<b>3. Results</b>	<input type="checkbox"/> No data are being collected.  <input type="checkbox"/> No information is provided about the data collection process.  <input type="checkbox"/> No results are provided.  <input type="checkbox"/> Students are meeting few of the performance standards set for them.	<input type="checkbox"/> Some data are being collected and analyzed.  <input type="checkbox"/> Some results are provided.  <input checked="" type="checkbox"/> Insufficient information is offered to demonstrate that data collection, analysis, and interpretation processes are valid.  <input type="checkbox"/> Students are achieving some of the performance standards expected of them.	<input checked="" type="checkbox"/> Data are being collected and analyzed.  <input checked="" type="checkbox"/> Results are provided.  <input type="checkbox"/> Some information is offered to demonstrate that data collection, analysis, and interpretation processes are valid and meaningful.  <input checked="" type="checkbox"/> Students generally are achieving the performance standards expected of them.	<input type="checkbox"/> Clear, specific, and complete details about data collection, analysis, and interpretation of results are provided to demonstrate the validity and usefulness of the assessment process.  <input type="checkbox"/> Students generally are achieving the performance standards expected of them and demonstrate continuous improvement on standards they have yet to achieve/achieve less well.  <input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, the pass rate meets the established benchmark.
<b>4. Engagement &amp; Improvement</b>	<input type="checkbox"/> No one is assigned responsibility for assessing individual measures.  <input type="checkbox"/> Assessment primarily is the responsibility of the program chair.  <input type="checkbox"/> No improvements (planned or actual) are identified.  <input type="checkbox"/> No reflection is offered about previous results or	<input checked="" type="checkbox"/> The same faculty member is responsible for collecting and analyzing most/all assessment results.  <input type="checkbox"/> It is not clear that results are shared with the faculty as a whole on a regular basis.  <input type="checkbox"/> Plans for improvement are provided, but they are not specific and/or do not clearly connect to the results.	<input type="checkbox"/> Multiple faculty members are engaged in collecting and analyzing results.  <input checked="" type="checkbox"/> Results regularly are shared with the faculty. ?  <input checked="" type="checkbox"/> The faculty regularly engages in meaningful discussions about the results of assessment. ?  <input checked="" type="checkbox"/> These discussions lead to the development of specific, relevant plans for improvement.	<input type="checkbox"/> All program faculty members are engaged in collecting and analyzing results.  <input type="checkbox"/> Faculty regularly and specifically reflect on students' recent achievement of performance standards and implement plans to adjust activities, performance goals, outcomes, etc. according to established timelines.  <input type="checkbox"/> Faculty and other important

	plans.	<input checked="" type="checkbox"/> Little reflection is offered about previous results or plans.	<input type="checkbox"/> Improvements in student learning have occurred as the result of assessment.	<p>stakeholders reflect on the history and impact of previous plans, actions, and results, and participate in the development of recommendations for improvement.</p> <p><input type="checkbox"/> Continuous improvement in student learning occurs as the result of assessment.</p> <p><input type="checkbox"/> Outcomes and results are easily accessible to stakeholders on/from the program website.</p> <p><input type="checkbox"/> Assessment is integrated with teaching and learning.</p>
<b>Overall Rating</b>	<input type="checkbox"/> <b>Level 0 – Undeveloped</b>	<input checked="" type="checkbox"/> <b>Level 1 - Developing</b>	<input type="checkbox"/> <b>Level 2 – Mature</b>	<input type="checkbox"/> <b>Level 3 – Exemplary</b>

## COMMENTS

### Strengths, Concerns, Recommendations for Improvement

#### 1. Learning Outcomes

The outcomes assessed this past year are specific, measurable, and traverse multiple learning domains.

#### 2. Measures & Performance Goals

A single measure was used to assess all three outcomes, a pre- and post-test. What courses are the tests delivered in? What benchmarks have you set for student performance other than improvement? Keep in mind that you will need to develop an indirect measure as well.

#### 3. Results

No n's were provided, but the report indicates that students met established standards. However, it is not clear that results are specific to the identified outcomes. Do you key the questions to the outcomes so that you can determine what students know/can do well and less well?

#### 4. Engagement & Improvement

It is difficult to gauge engagement from a single report, especially when one person is responsible for collecting, analyzing, and sharing results (an issue you have tentative plans to address). But it is clear from the reported curricular changes that the faculty is attentive to improving the student experience. In next year's report, please focus more on the specifics of what assessment reveals about student learning and on the plans you develop to continuously improve learning as a result.

Thanks!