Assessment Progress Template Feedback 2016-2017

Program: Earth Sciences (B.A.)
Contact: Eric Pyle

CARS Liaison: PASS
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Average Rating Across Elements = 3.5*

3.4 or higher meets exemplary standard established by faculty. Please scroll to the bottom of this page to see information about the reliability of these feedback scores.

Program Summary

Exemplary Assessment 🌟🌟🌟🌟🌟
## I.A. Student-centered learning objectives - Clarity and Specificity

Fantastic job grouping objectives into goals for clarity and context. The objectives are well-written. To make this even stronger, consider rewording objective 5a. Completing a project does not seem to be an outcome that reflects student's performance on a particular skill or knowledge. Objectives are strong when the emphasis is on what the program expects students to be able to do after going through the program.

## I.B. Student-centered learning objectives - Orientation

Great job making sure all objectives are student-centered.

## II. Course/learning experiences that are mapped to objectives

Fantastic job ensuring all objectives are covered by at least one course as well as providing information on the level of coverage in each course. It would be helpful to identify the first column of the tables as foundational concepts or skills, and perhaps a reorganization of the tables to begin with the objectives and then map course concepts and coverage would be more clear and prioritize the learning outcomes. Excellent to include the scale of I/R/S regarding coverage of concepts.

## III.A. Systematic method for evaluating progress on objectives - Relationship between measures and objectives

Great job providing details and connecting the indicators of the Department Performance Assessment Task to specific goals as well as documenting the development process that faculty consensus was achieved. To make the connection even more clear, consider providing how each of the task items are matched with indicators.

## III.B. Systematic method for evaluating progress on objectives - Types of Measures

Great job making sure all objectives are measured by direct measures such as the Department Performance Assessment Task or the Student Research Symposium Presentation Evaluation Form.

## III.C. Systematic method for evaluating progress on objectives - Specification of desired results for objectives

Fantastic job stating desired results for different groups of students and justified the benchmark! Nice reflection and adaptation of the Symposium Presentation to reflect new types and levels of competency.

## III.D. Systematic method for evaluating progress on objectives - Data collection & Research design integrity

Great job providing a summary report of the assessment process and the results achieved.
It is clearly evident that the program took data collection seriously and provided incentives such as extra credit to increase participation. Nice design of data collection and efforts to improve diverse sampling and ensure trained raters. Moving forward, consider possible strategies to improve test motivation for students to give truthful responses and discuss more on the test setting such as whether the Assessment day setting was proctored.

**III. E. Systematic method for evaluating progress on objectives - Additional validity evidence** 2.5

Great job addressing reliability issues with new rater as well as estimates from past years. To make this better, reliability estimates should be reported for the current year when possible for the Department Performance task. It is also commendable that the program considered content validity and external validity for the measures.

**IV. A. Results of program assessment - Presentation of results** 3.5

Great job presenting the results in a clear, easily readable format. To make this area stronger, consider presenting the results by each objective and goal. This would make the connection stronger and interpretation easier to understand student performance in each objective. For consistency you might ensure that you refer to the Performance Assessment Task by the same name throughout the report (Referred to as Department Visual Task in results.)

**IV. B. Results of program assessment - History of results** 4.0

Fantastic job presenting and using past years data! It is excellent to be able to see the current data in a historical context.

**IV. C. Results of program assessment - Interpretation of results** 3.25

Great job discussing the results from each measure as well as interpreting trend and patterns based on program and course changes over the years. To make this area stronger, consider placing more emphasis on objectives using the desired and actual results especially for the Student Research Symposium Evaluations. Also, consider articulating who is doing the interpretation of results with a goal of a collaborative approach to interpretation.

**V. Documents how results are shared with faculty/stakeholders** 3.5

It is evident that the program shares the APT results with faculty as well as external body using retreats and presentation. Kudos! Your continued efforts in engaging faculty in developing assessment measures and an assessment process could be documented and presented nationally as evidence of your program leading the way in Earth Science assessment practices.
VI. A. Documents the use of results for improvement - Improvement of programs regarding student learning and development  
Great job documenting past changes. It is great that the program actively uses assessment as well as APT ratings to inform changes. To make this even stronger, provide some timeline on future changes in the curriculum and cite specific numbers from the results to justify the changes. Many programmatic/learning improvements were noted generally but additional specificity about how these will be implemented would be helpful. Many of the specific things you included in the report were from previous years. Keep in mind that the use of the data you collected to guide improvement is the goal, not the use of reviewer comments to improve APT scores.

VI. B. Documents the use of results for improvement - Improvement of assessment process  
Kudos on planning to make a more detailed map between objectives, goals, and courses. This will greatly facilitate future analyses and interpretations. Furthermore, the use of repeated measures ANOVA is a great asset to document learning improvement.

VII. Overall Comments  
Overall, the geosciences program has done a tremendous amount of work and neatly reporting assessment efforts to inform program and course level changes. The objectives are well-written, there are plans for improving instruments, and the use of results in the past is terrific. Your faculty truly are becoming leaders in Earth Science assessment practices and your approach of measuring student growth across programmatic levels is sound. Continue the great work. Moving forward, consider breaking down the results to each specific objectives to gain better insights on student performance.

*All APTs are rated by two raters. The average score is more reliable than individual trait scores (i.e., IA – VIB). For the average score, a .3 difference from year to year is likely meaningful. On the other hand differences of half a point or less may not be meaningful at the trait score level (e.g., III.B.). That is, they could be attributable to factors such as rater subjectivity (which is inherent in all rating processes) or changes in presentation format. Note that scores near the Exemplary cutoff are evaluated by at least one other rater for a total of three or more raters for that APT.

From a more technical perspective, the reliability of this two-rater design is .90. If another two trained raters evaluated the same APT, 68% of the time the average APT score would be within .15 of the reported score. 95% of the time the average APT score would be within .30 of the reported score. Ratings for the Individual Traits (IA – VIB) are less reliable and should be considered more as a rough
gauge of a program’s strengths and weaknesses regarding assessment practice and reporting (68% CI = + or - .35 ; 95% CI = + or - .70 ). For more information refer to the FAQ sheet.

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Assessment Progress Template Feedback 2016-2017

Program: Geology (B.S.)
Contact: Eric Pyle

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Average Rating Across Elements = 3.8*

3.4 or higher meets exemplary standard established by faculty. Please scroll to the bottom of this page to see information about the reliability of these feedback scores.

Program Summary

Exemplary Assessment
I.A. Student-centered learning objectives - Clarity and Specificity
Well done! The objectives are clearly stated using precise verbs. It is very easy to see what Geology graduates should know, think, and do upon completion of the program.

I.B. Student-centered learning objectives - Orientation
Fantastic! All objectives are stated in student-centered terms.

II. Course/learning experiences that are mapped to objectives
The program has done a very good job linking courses to student learning objectives! It is especially nice to see the indication of how much focus each course provides for the corresponding objective!

III.A. Systematic method for evaluating progress on objectives - Relationship between measures and objectives
Well done! Objectives are linked to specific questions/requirements for the student research symposium presentation. It may be useful for the program to further affirm these relationships by performing a backwards translation. This is something that PASS (programassessment@jmu.edu) can assist with.

III. B. Systematic method for evaluating progress on objectives - Types of Measures
Fantastic! All objectives are measured by at least one direct measure.

III. C. Systematic method for evaluating progress on objectives - Specification of desired results for objectives
The program has nicely detailed the desired results for students at different levels of curricular experience, nicely done!

III. D. Systematic method for evaluating progress on objectives - Data collection & Research design integrity
The program has provided a very clear explanation of the data collection process, such as sample size, motivation, use of multiple raters, and the testing conditions, well done! It is great that the program is discussing ways to increase the number of students participating in these assessments.

III. E. Systematic method for evaluating progress on objectives - Additional validity evidence
The program has done a great job establishing reliability estimates of the measures in the past! It is also commendable to see that the program wishes to investigate further validity evidence by comparing scores with either the ASBOG or the
praxis if this process is feasible. It will be great for the program to see what the reliability estimates were for the most recent round of data once that analysis is complete. Another way to collect validity evidence could deal with convergent validity. If you believe that your assessments measure similar types of geology knowledge, you could examine the correlation of scores for two of your assessments. If they are measuring similar content/constructs, then the correlations should be high. PASS can certainly assist in this endeavor!

**IV. A. Results of program assessment - Presentation of results**

Great job presenting the results in a clear manner!

**IV. B. Results of program assessment - History of results**

Fantastic! Having the ability to compare current results to past results is really useful in identifying areas of improvement within the program.

**IV. C. Results of program assessment - Interpretation of results**

The program has done a great job interpreting the results and making inferences as to what factors may have influenced the results! The program may find it useful in the future to have multiple faculty interpret the results.

**V. Documents how results are shared with faculty/stakeholders**

The Geology B.S. program has done a fantastic job of sharing the results with faculty as well as presenting at national presentations! It is clear that the assessment process is of high importance to the program. It may also be beneficial to share the results with students in the program as well. This could help with some of the student motivation factors the program has been observing.

**VI. A. Documents the use of results for improvement - Improvement of programs regarding student learning and development**

Te program has done a great job detailing past improvements which have been made based off of results, well done! It will be exciting to see how the program uses the most recent results to initiate changes in the program.

**VI. B. Documents the use of results for improvement - Improvement of assessment process**

Excellent work here. It is very helpful to have the improvements listed based on the elements of the APT rubric. We agree that the next improvement to the overall assessment process could be the collection of additional validity evidence, be it external or convergent.
VII. Overall Comments

It is apparent that the Geology B.S. program faculty consider their assessment process to be of high importance. Student learning objectives are clear, the data collection process is well defined, and the program has done a great job using the results to make inferences about curriculum effectiveness. The program may want to consider ways in which the current assessment process could be improved. Overall it is clear to see that the program is invested in seeing the students achieve the student learning outcomes.

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