

Master of Science in INTEGRATED SCIENCE (MSISM)

Contact Person:

Dr. Steve Leslie
Department of Earth Science
(501) 569-8061
saleslie@ualr.edu

UNIVERSITY OF ARKANSAS AT LITTLE ROCK Plan No. 52

Assessment Progress Report Form - Calendar Year 2005

ASSESSMENT OF PROGRAM

Use of Assessment for Program Building and Improvement:

The most important goal for any assessment project is to provide information to build and improve programs. This section should, therefore, be weighted the most heavily of all in your overall score evaluation.

Please discuss how you have used assessment findings this past year to understand, improve, and/or make decisions regarding the program. What have been your main findings? How did you analyze them? How do you interpret them? Have these findings led to making any significant changes in your program? If so, what are they? Please focus on evidence for or proposed changes that will lead to improvements in student learning outcomes.

Twelve students are in the MSISM program with highly diverse emphases: Earth Science—Biology, Earth Science – Environmental Sciences focus, Earth Science-Mathematics, Environmental Science focus, Chemistry-Biology (forensic), Chemistry-Physics. Most of the effort in the program is actually building the program at this point. With such a small data set I have not yet determined a way to put together a plan for assessing such a program that has demonstrable validity. I welcome constructive suggestions from the assessment committee. There is no model that I have been able to find for assessing small, very diverse graduate programs. A complicating factor is that there are no faculty assigned to the MSISM program, and no reward for being a faculty member with a graduate student in MSISM outside of the satisfaction of being a good mentor for graduate students. So far, the data collection is from a written statement from the students as they enter the program to document what it is that they wish to achieve through the degree program. This is done currently through a written essay collected from each student entering the program.

Faculty and Stake Holder Involvement:

Please describe how faculty, students, and other stakeholders have been involved in the assessment process and the decisions arising out of assessment findings. How have you shared the results and your interpretation with your stakeholders?

Employer stakeholders were to be surveyed 1-2 years following graduation of the student. We have had only 5 graduates. As of yet no employer stakeholders have been surveyed. This is because I have yet to be able to construct an appropriate survey for that will yield results that have validity.

All faculty in the College are potential stakeholders in this program. It is difficult to find a way of involving all faculty in the College in the assessment process of the program. Input from the assessment committee on how to do this with the MSISM program would be very appreciated.

Approach:

Help place your efforts for the time period reported here in context for your reader by briefly summarizing the goals and student learning objectives of your program. Were there any significant changes since last year's report?

MSISM Goals:

1. Develop skills that combine writing, thinking, and analyzing skills with the study of specialized knowledge in a combination of science and/or mathematics disciplines
2. Solidify the student's understanding of the basic scientific concepts in multiple science areas.
3. Help the student to develop a working knowledge of scientific and quantitative methods used in their chosen field of study.
4. To personalize each student's program to their individual goals, since each one comes to this program with their own unique objectives.

MSISM Objectives:

1. Graduates of the program should have content and skill competencies in at least two areas of specialization within the college. This will include having a masters level knowledge of concepts, theories, and research techniques covered by the core courses in each student's chosen areas of specialization.
(Goals 1,2,3, and 4)
2. Students will understand and be able to use appropriate scientific investigation design and apply these general techniques to both areas of selected study.
(Goals 2 and 3)
3. Students will be able to critically evaluate scientific problems, design avenues of work toward solutions, and be able to read, analyze, and write technical reports related to the two areas of specialization.
(Goals 1,2,3, and 4)
4. Students will display a knowledge of scientific research methods appropriate for the selected disciplines.
(Goals 3 and 4)
5. The unique personalization of each student's program will better prepare them for their present or future goals.
(Goal 4)

MSISM Objective 1 is measured by student's success in their course work in both of their chosen fields/

MSISM Objective 2 is first demonstrated in some of the student's course work, however, it is most fully examined in the student's project/thesis defense.

MSISM Objective 3, 4, and 5 are directly measured through successful completing of the project/thesis.

MSISM Objective 5 is examined in the exit interview with the student by the MSISM director.

What methods did you use to measure the student learning outcome objective(s) assessed since last year's report? Have there been any significant changes here? If so, please explain why. What measures do you propose to use next year? How are you addressing the reliability and validity of those measures?

All students have a thesis/project requirement that is rated by their committee. The satisfactory defense of the thesis/project indicates that the student has demonstrated the ability to complete such a project at the level of expectation of their committee. Therefore, successful defense of the thesis/project requirement indicates that this aspect of the program works to a satisfactory level. Failure of the thesis/project defense suggests that this aspect of the program may not be working. So far, the program has passed and graduated all that have defended (total of 5). In 2005, one thesis defense of an Earth Science-Biology occurred.

How does what you did this past year fit into the overall assessment plan for your program? Please include any changes you may have made to your plan in response to last year's feedback. Do you plan to make any changes in your assessment plan itself? What will your targets be for the coming assessment year?

At this point the assessment plan is to survey students as that enter the program and document what it is that they wish to achieve through the degree program. This is done currently through a written essay collected from each student entering the program.

The students will then be asked in an exit survey if the program to re-read their essay, and to provide written comment as to whether the program fulfilled their needs/expectations. I recognize that this is quite subjective.

Assessing Assessment (for information purposes only not to be rated by readers panels):

a). What changes, if any, would you recommend in the assessment process in your college or in the university as a whole?

None

b). What additional resources could the university provide that would be of most help to you in your assessment efforts?

Hire someone that is a program assessment expert to assess small graduate programs in CSAM.

c). Please estimate what resources you have spent on assessment this last year, including both time and money.

No money has been spent on assessment.

d). Courses offered through distance learning technologies are becoming a part of more and more programs. These courses should be treated like any other course offered by a department including being part of the assessment of the program. For example, if students are supposed to include something from every upper-level course in their major, then they need to include distance as well as on-campus courses. What guidelines have you put into place to be sure that courses offered through distance learning technology are included in the assessment of the program?

MSISM has no distance learning courses of its own. Any courses that MSISM students take that utilize long distance learning are offered through each individual college department.