

Annual Report Form

Please answer the following questions in the body of an e-mail and return to rculbert@iusb.edu.
CC a copy of the report to your department faculty and to your dean.

- a. Program Name – Department of Mathematical Sciences
- b. Report prepared by – Anne Brown
- c. Who is the current assessment contact for your program? Anne Brown and Yu Song.
- d. Should assessment information be sent to anyone else in your department? No.

1. What are the program's educational goals? (Please take goals directly from your program's assessment plan, and highlight any changes made this year.)

- The major goal of our program is to give students seeking degrees in mathematics a broad understanding of the field of mathematics.
- Students should have the ability to read and understand technical mathematical writing, including proofs, in such areas as algebra and analysis.
- Students should have the ability to communicate mathematical ideas, both in written and verbal form, to others.
- Students should be able to model complex problem situations in equivalent mathematical form and, once a solution is found, be able to translate the solution into the original problem context.
- Students should be able to use appropriate technology to explore and solve mathematical problems.
- Students should be able to apply mathematical knowledge in non-academic contexts.

2. What assessment techniques did the program use? (Please take assessment techniques directly from your program's assessment plan and highlight any changes made this year.)

One major instrument of assessment is the use of student portfolios, containing representative work from all 400 level Mathematics courses taken by a student. Depending on the desires of the instructor, the representative work may include such items as final examinations, homework assignments, projects, papers, etc. Student research projects are also included in their portfolios.

Other components of our assessment plan include records of student applications to graduate schools, and student performances on the Putnam, on the actuarial exams, on the Graduate Record Exam, and on other competitive examinations such as the Indiana College Mathematics Competition.

We also regularly survey current students and alumni.

3. What has your program done with assessment information this year? (i.e. communicated results to faculty, staff, alumni and students, made changes in the curriculum, made changes in the budget, added new courses. . .)

We negotiated with the mathematics departments at Bethel College and Saint Mary's College to coordinate future, regular offerings of the upper level mathematics course. Bethel College agreed to adjust their schedule so that all students have more flexibility (through the consortium) in scheduling, when needed. This was done in response to a survey of student opinion concerning scheduling difficulties.

In response to student and faculty interest in strengthening the actuarial program, there was an important development. The department applied for Validation by Educational Experience (VEE) certification for the program. In order to qualify for this certification, two new courses (Corporate Finance and Economics) were proposed and approved, and a proposal for the third needed course, Applied Statistical Methods, has been submitted.

4. After reflecting on assessment activities in your unit, as a result of assessment what are two issues you would like to address?

We need to update our questionnaires used for gathering opinion from students in our upper level courses and from alumni. We will do that this fall, and then administer the survey to students and to alumni who have graduated in the past 5 years.

The department curriculum committee will continue to review the scheduling and syllabi of the upper level courses. One issue is that M403 and M413 are offered in alternate fall semesters and there are two choices for the spring semester of each course. We may decide to modify the content of the first semester course, depending on what the second semester is. This decision is complicated by the fact that there are state standards that identify much of the content that must be covered in these courses because they are required courses for future high school teachers. In addition, we need to find a way to accommodate student demand for courses (such as M409) with the need to offer certain courses regularly (such as M405), when the two courses will compete for enrollment.