

- 4) Who interprets the evidence? What is the process? (Who in the department is responsible for interpreting the data and making recommendations for curriculum or assignment changes if appropriate? When does this occur?)

The department's Undergraduate Committee, chaired by the Assistant Chair for Undergraduates, is charged with assessment. The committee reviews the data described in item 3 during the fall semester, with the goal of recommendations to the full department in the spring.

- 5) What were the assessment results and what changes have been made as a result of using this data/evidence? (What were the major assessment findings? Have there been any recent changes to your curriculum or program? How did the assessment data contribute to those changes?)

Following on assessments made in previous years, the department initiated two major changes to our (by far) largest core offerings, MATH1100/1 Calculus I,II.

- (1) For all but two sections of MATH1101 in the Spring (see item 2 below), these courses were made more uniform. Syllabi, homework assignments, and exams were common. One faculty member coordinated the multiple sections of each course. The instructors (some faculty and some teaching fellows) were responsible for writing their own lectures, but adhered to a common topics list and lecture schedule.
- (2) In the Spring, the department tested a revised curriculum for Calculus II, whose audience is primarily students in life sciences, economics, and other social sciences. This curriculum was used with 51 students, in two sections. The goals of the revised curriculum were:

to modernize 1101 to reflect less emphasis on computing techniques which can be done by computers and more need for ability to apply concepts of calculus and work with functions of multiple variables;
to increase relevance of the course for all students.

These pilot sections of 1101 covered the same topics as the others, with the exception of NOT covering advanced integration techniques, volumes via integration, or polar coordinates, and instead covering multivariable functions and derivatives.

The pilot was a success, in two senses. In terms of content understanding, the multivariable material was challenging but within reach. In homework and exam settings, students were generally able to interpret and compute with multivariable functions and derivatives, work with them visually and do some foundational problem solving, from such areas as optimization and linear approximation. Students seemed motivated and engaged with the new material. This conclusion is supported by responses to a question posed on the final

exam: