Form E-1-A for Boston College Undergraduate Programs

Program: MATHEMATICS

1) Have formal learning outcomes been developed? What are they? (What specific sets of skills and knowledge does the department expect its majors to have acquired before they graduate?)

The department approved an assessment plan in 2010, and identified four learning goals.

i. Students will learn to perform computations and solve problems in calculus and linear algebra.
ii. Students will learn to effectively use mathematical language and notation.
iii. Students will demonstrate the ability to reason mathematically and to write clear and concise proofs.
iv. Students will demonstrate knowledge of the key concepts and theorems of abstract algebra and of real analysis.

2) Where are these learning outcomes published? Be specific. (Where are the department’s learning expectations accessible to potential majors: on the web or in the catalog or in your department’s major handouts?)

A statement of the department’s commitment to assessing the success of our students, with descriptions of our goals, is available on the department’s website at http://www.bc.edu/content/bc/schools/cas/math/programassessment.html.

3) Other than GPA, what data/evidence is used to determine whether graduates have achieved the stated outcomes for the degree? (What evidence and analytical approaches do you use to assess which of the student learning outcomes are being achieved more or less well?)

The department has decided to collect evidence in two ways, direct and indirect.

i. Each semester, the Assessment Committee reviews final exams in specifically identified courses and rates carefully chosen problems with regard to the learning goals.

ii. Graduating seniors are asked to complete a survey expressing their satisfaction with the program, reflecting on their own mathematical growth, and informing the department of their future plans. The first survey was given to the class of 2011, and the Assessment Committee is currently reviewing the results.

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 Assessment Committee consists of four faculty members, chaired by the Assistant Chair for Undergraduates. The committee reviews the data described in item 3 during the fall.