

Indiana University Kokomo
B.A. in Mathematics
Assessment Report Summary AY 2007-2008

The Mathematics faculty assessed two student learning outcomes from Goal 3 concerning learning to formulate and solve problems mathematically.

Goal 3, Outcome 1. Students will be able to perform algorithmic and logical procedures to solve computational problems. This was assessed by evaluating coursework in M215 (Fall 2007), M311 (Fall 2007), and M216 (Spring 2008).

Goal 3, Outcome 2. Students will be able to perform algorithmic and logical procedures to construct proofs. This was assessed by evaluating coursework in M303 (Spring 2008), M347 (Spring 2008), M403 (Fall 2007), and M404 (Spring 2008).

Student performance with regard to the outcomes being assessed was evaluated by reviewing a selection of relevant problems taken from the final exams of M215, M216, M311, M303, M347, M403 and M404. In addition one student took the Mathematics General Examination, and that exam was carefully reviewed as part of the assessment process.

When reviewing a student's ability to perform algorithmic and logical procedures to solve computational problems, their work was judged to be at an acceptable level in this regard if they did not make many or serious errors performing algorithmic computations.

When reviewing a student's ability to perform algorithmic and logical procedures to write proofs, their work was judged to be at an acceptable level in this regard if as a minimum they could write some less simple proofs, but may have had difficulty with some more complex proofs.

The benchmark for student performance for courses with an enrollment of 10 or more students is that, using the performance criteria for the assessed outcome, 90% of students who earn a grade of C- or better in the course are judged to be working at an acceptable level. This benchmark of student performance was achieved in M215. The benchmark for courses with less than 10 students enrolled is that at least 80% of the students who earn a grade of C- or better, are judged to be working at an acceptable level. This was achieved in M216, M311, M303, M347, M403, M404, and the mathematics general exam.

The assessment results and performance levels achieved were in line with what is to be expected, and at this time the assessment results for the learning outcomes assessed do not indicate that any curriculum changes are necessary.

In the course of this year's assessment of the Mathematics Major the Mathematics faculty discussed the Mathematics General Examination dating back nearly twenty years. Our experience has been that students take the four week open book take-home examination very seriously and prepare carefully for it. We are confident that it is accomplishing what it set out to do, by providing a capstone experience which requires students to draw on the mathematics learned over the course of their entire degree program and giving students the opportunity to demonstrate that they have acquired broad range of mathematical knowledge.