

**Common Core Assessment Plan  
Department of Mathematical Sciences**

**Area of Common Core:** Area II (Mathematics)

**Common Core Mathematics Competencies:**

In Area II, the five core competencies say that students will:

- Display, analyze, and interpret data.
- Demonstrate knowledge of problem-solving strategies.
- Construct valid mathematical explanations.
- Display an understanding of the development of mathematics.
- Demonstrate an appreciation for the extent, application, and beauty of mathematics.

**Assessment Rotation:**

We will assess one competency each year, in the following rotation. We thus will assess the full list of competencies in five years.

1. Demonstrate knowledge of problem solving strategies.
2. Display, analyze, and interpret data.
3. Construct valid mathematical explanations.
4. Display an understanding of the development of mathematics
5. Demonstrate an appreciation for the extent, application, and beauty of mathematics

**Assessment Method:**

We will assess outcomes in our program by measuring student performance on questions on final exams. Each year we will choose a subset of the common core courses, and a subset of the sections of those courses. We will design a question for the final exam which tests the learning outcome. Instructors will meet near the end of the semester to discuss how to apply the assessment rubric. We will randomly choose between 50-100 final exam papers to assess, and two readers will assess each question to be assessed.

**Rubric:**

Papers will be given a rating of 0, 1, or 2, according to the following general rubric:

0. student shows little or no ability to work a problem.
1. student shows moderate ability to work a problem, but with some moderate mistakes.
2. student shows good ability to work a problem, with little or no mistakes.

**How will we use the results to improve student learning:**

Each February we will convene a committee comprised of departmental administrators and relevant faculty to analyze the data. The committee will then make a recommendation on how to change the program to improve student learning. It will also make a recommendation on how to change the assessment method for the next year.