

Illinois State University

Department of Mathematics

Master's Program Assessment Plan: Mathematics Program, plus sequences in Actuarial Science, Applied Statistics, and Biomathematics

Program Goal 1. The program will provide students with strong mathematical foundations, plus specialized content knowledge and reasoning/communication skills that are necessary and appropriate in their sequence.

- Outcome measure: Demonstrate strong background entering program
  - Data collected:
    - GRE scores from application to program
- Outcome measure: Demonstrate core foundational knowledge
  - Data collected: (to be reviewed yearly by Master's committee)
    - Student GPA in core courses 336, 337, 347, 350, 351
    - Yearly instructor rubric evaluation of selected sample students (20%) in core courses
- Outcome measure: Demonstrate advanced content knowledge and reasoning/communication skills
  - Data collected: (to be reviewed yearly by Master's committee)
    - Yearly instructor rubric evaluation of selected sample students (20%) in 400-level courses appropriate to sequence
    - Comprehensive exam evaluations
    - Professional exam results in Actuarial Science
    - Culminating Experience Evaluation: Internship reports, Master's Project reports, Comprehensive Exam reports, Thesis reports (rubric completed by supervisor)
- Outcome measure: Satisfaction of alumni
  - Data collected: (reviewed yearly by Master's committee)
    - Alumni survey information (upon graduation, and 5 years after)

Program Goal 2. In the program, students will demonstrate the ability to formulate and evaluate questions seeking new knowledge in mathematics.

- Outcome measure: Demonstrate ability to formulate and investigate new problems
  - Data collected:
    - Master's thesis evaluations (rubric completed by supervisor)
    - Master's project evaluations (rubric completed by supervisor)
    - Research submissions & presentations
    - Participation in ISU research symposium

Program Goal 3. The program will prepare students to continue their professional growth after completion of the program.

- Outcome measure: Alumni attitude toward preparation received
  - Data collected:
    - Alumni surveys – 5 years after graduation
- Outcome measure: Professional advancement
  - Data collected: (from alumni surveys and other means)
    - PhD program success by graduates
    - Professional exams passed

Illinois State University

Department of Mathematics

M.S. Assessment Plan – Mathematics Education

Program Goal 1. The program will provide students with strong mathematical knowledge and reasoning/communication skills that are necessary and appropriate in their sequence.

- Outcome measure: Demonstrate core foundational knowledge.
  - Data collected: (to be reviewed yearly by Master’s committee)
    - Student GPA in core courses 304, 409
    - Yearly instructor rubric evaluation of selected sample students in core courses
- Outcome measure: Demonstrate additional content knowledge and reasoning/communication skills.
  - Data collected: (to be reviewed yearly by Master’s committee)
    - The number of courses completed successfully from the following list of mathematics content courses: 309, 312, 315, 421, 422
- Outcome measure: Satisfaction of alumni.
  - Data collected: (to be reviewed yearly by Master’s committee)
    - Alumni survey information (upon graduation, and 5 years after)

Program Goal 2. The program will provide students with strong pedagogical knowledge and reasoning/communication skills that are necessary and appropriate in their sequence.

- Outcome measure: Demonstrate ability to apply their pedagogical and pedagogical content knowledge in an educational setting.
  - Data collected:
    - Video Reflection Cycle evaluation (rubric completed by faculty attending the formal presentation of this analysis)\*
    - Student GPA in MAT 401, 402, 403
    - The number of courses completed successfully from the following list of pedagogy courses: 326, 404, 406
- Outcome measure: Satisfaction of alumni.
  - Data collected: (to be reviewed yearly by Master’s committee)
    - Alumni survey information (upon graduation, and 5 years after)

\*The Video Reflection Cycle presentation is a culminating experience required by all students in this sequence.

Program Goal 3. The program will prepare students to continue their professional growth after completion of the program.

- Outcome measure: Alumni attitude toward preparation received.
  - Data collected:
    - Alumni surveys – 5 years after graduation
- Outcome measure: Professional advancement.
  - Data collected: (from alumni surveys and other means)
    - PhD program success by graduates
    - The number of Masters students who enter the Ph.D. program at ISU

## **Data to be collected for Master's Assessment Plan**

### **Each semester:**

- Grades in core courses
- Student distribution and passes in program courses
- Instructor evaluation rubric for sample (20%) of students in core courses
- Instructor evaluation rubric for sample (20%) of students in 400-level courses
- Supervisor evaluation (rubric) of all culminating experiences
- Survey information from new graduates

### **Each year:**

- Survey information from 5 years past graduation
- Numbers of student professional presentations
- Number of students participating in ISU graduate research symposium
- Number of students going on to advanced degree programs

### **Regular program review:**

- ISU program review (every 7 years)
- Center for Actuarial Excellence review (by Society of Actuaries) (every 5 years)