

## MATH & STATISTICS ASSESSMENT PLAN

**Department/Program:** Mathematics and Statistics

### Student Learning Objectives (SLO) for MAJORS

1. Students will demonstrate expertise in the core topics of mathematics.
2. Students will demonstrate ability to solve advanced mathematical problems, apply various methods of mathematical proof, and communicate solutions in writing.
3. Students will demonstrate the ability to communicate mathematical ideas, both orally and in writing.
4. Students will be aware of and involved with mathematics outside the classroom.
5. Students will demonstrate aptitude in, and experience a variety of, several elective mathematical areas.

Outcome Measure	SLO's	Description of Departmental Use of Data
A departmentally approved set of conceptual common final questions for each course (Calculus Courses)	1	Data are reported to the department chair after each semester and reviewed annually by the instructors of the course, which makes recommendations to the department for further action.
Each math major enrolled in Math 266 will submit a formal written proof of a mathematical proposition selected by the instructor	1,2	Proofs will be evaluated by a departmental committee annually, which makes recommendations to the department for further action.
Each mathematics major will submit a formal written proof completed in one of his or her advanced theory courses.	2	Proofs will be evaluated by a departmental committee annually, which makes recommendations to the department for further action.
Each mathematics major will give a conference-style presentation in Math 499 and submit a companion written paper.	3	Presentations and papers are evaluated by three or more faculty members initially and then reviewed by a departmental committee annually, which makes recommendations to the department for further action.
Standardized (Common) Course Evaluations	1, 2, 3	Data will be reviewed by the department chair annually for individual faculty performance and for general

		departmental performance. Recommendations can be made both individually and to the group.
Co-curricular Activity Tracking via Math 399	4, 5	Student participation in co-curricular activities (outside of the classroom) is tracked; satisfactory attendance at colloquium assures some minimal exposure to topics that are not necessarily tied to a specific course.
Annual Count of 300+ level electives offered and numbers of math majors in each ; average GPA of majors in these classes	4, 5	Chair tabulates this data to ensure that, on the whole, students are taking advantage of a wide variety of electives and are performing on average at a grade of 2.5 or above
Senior Exit Interviews	3,4,5	Chair gathers student responses to several questions, reports to department.

1. **Results**—Review activities and findings by completing the Assessment Activities Table below. You can also provide a brief discussion afterward if you feel it would help the committee understand your assessment activities and findings during this cycle.

### Assessment Activities Table

<b>This year we assessed SLO(s)...</b> (list each SLO in its own row)	<b>...using Outcome Measure(s) (OMs).</b> (See Report Instructions for description and example)  Direct OM(s):  Indirect OM(s):	<b>Findings:</b>  <b>program-performance for these SLOs, as indicated by these OMs, is:</b> <b>Excellent/Satisfactory/Needs Improvement</b> (See Report Instructions for description and example)	<b>Strategies for Improvement</b>  <b>(in selected areas):</b> (See Report Instructions for description and example)
SLO1	(D) Tracking performance on common final questions		

	across sections and comparison to past semesters		
SLO 2	(D) Ratings from faculty on proofs collected from upper level classes (10 point scale with rubric)		
SLO3	(D) Ratings from faculty on presentations and papers on 10 point scale w/ rubric		
SLO4	(ID) Records of Student Activities Related to Colloquium; Senior Exit Interviews		
SLO 5	(D) Count of upper level electives offered vs majors enrolled ; senior exit interviews		

**Discussion (Optional):**

2. What **revisions**, if any, to current SLOs and/or outcome measures did you make from previous plan?
  
3. **Plans**- What learning objectives will you be assessing in the next cycle?



- 1 Students will demonstrate expertise in the underlying mathematical and statistical concepts of the actuarial profession.
- 2 Students will demonstrate expertise in the underlying finance and economic concepts of the actuarial profession.
- 3 Students will demonstrate the ability to communicate actuarial topics in written and oral form.
- 4 Students will utilize their actuarial education in their careers

Course			Program SLOs	
	1	2	3	4
ACRS 325		M, A	M, A	