

Assessment Report – 2010

Evidence collected in spring & fall 2010

Report due March 31, 2011

Directions: Please complete a form for each of the programs within your department. This form was designed to provide a format for assessment reporting and should not be used to limit the amount of information provided. Each box that is attached to each of the sections is designed to adjust to varying lengths. If you have any questions, please contact Dr. Bea Babbitt at x51506 or via email.

***Email form to assessment@unlv.edu (Academic Assessment/UNLV)

Program Information:

Program	B.A. and B.S. Mathematics
Department(s)	Mathematical Sciences
College	Sciences
Program Assessment Coordinator	Carryn Bellomo
Report submitted by (include phone/email)	Carryn Bellomo; carryn.bellomo@unlv.edu ; 895-0358
Date Submitted	March 29, 2011

1. Student Learning Outcomes for the program. List the Student Learning Outcomes for the program. *Number for later reference.*

Our students that graduate with either a B.S. or a B.A. in the Mathematical Sciences will...

1. Demonstrate a solid understanding of differential (1A), integral (1B) and multivariable (1C) calculus, and be able to apply these concepts to a variety of problems.
2. Demonstrate a solid understanding of vector calculus (2A), linear algebra (2B), ordinary differential equations (2C), higher level algebra (2D) and analysis (2E), and be able to apply these concepts to a variety of problems.
3. Be able to think analytically and critically and to formulate problems, solve them, and interpret their solutions.

4. Achieve an understanding of the nature of proof, in particular should demonstrate a good understanding of rigorous mathematical proof (reading and writing), and apply reasoning based on definitions, axioms, theorems and induction.
5. Communicate effectively in writing.
6. Have experience applying knowledge from one branch of mathematics to another and from mathematics to other disciplines.

Items highlighted gray are common with the actuarial science concentration.

2. Planned assessments: Methods, Instruments and Analysis. According to the Assessment Plan for this program, what were the planned assessments to be conducted during the Spring & Fall 2010 Academic Semesters?

None. Plan developed for initial implementation Spring 2011, including:

- Data on 181/182 performance on final exams for math majors first collected for Spring 2011
- Sample of written proof, first collected AY 2011-2012
- Senior survey developed Summer 2011 for implementation Fall 2011

Assessment Instrument	Learning outcome(s) assessed (list by #)	Person responsible for instrument & data collection	When and where will data be collected	Expected Measures (results that would indicate success)
1. Math 181 comprehensive final exam	1A, 3, 6	Data provided to assessment coordinator by each instructor teaching the course, with assistance from office staff.	Final exam scores will be collected for all math majors in all sections of Math 181 for each full semester; data pooled for each academic year.	70% of our majors, when grouped, will earn an 80% or better on their final exam. Next step: if not performing to standards, review final exams and perhaps standardize.
2. Math 182 comprehensive final exam	1B, 3, 4, 6	Data provided to assessment coordinator by each instructor teaching the course, with assistance from office staff.	Final exam scores will be collected for all math majors in all sections of Math 182 for each full semester; data pooled for each academic year.	70% of our majors, when grouped, will earn an 80% or better on their final exam. Next step: if not performing to standards, review final exams and perhaps standardize.

3. Sample of written proof	3, 4, 5	Data provided to assessment coordinator by the instructor teaching the course.	Math 453 is taught once per year, with only one section. The instructor on record will create an individual item (preferably on an exam) to assess all students on their ability to perform each stated learning outcome. The instructor will score based on ratings (Unsatisfactory, Satisfactory, Above Average, Excellent) and report results.	80% of our majors will perform at a level of satisfactory or above. Next step: if not performing to standards, we will assess students in a similar fashion in Math 251.
4. Senior survey	1 – 6	Instructor collects student responses and submits to the assessment coordinator to summarize.	Collected once every other year in Math 457.	Expect 70% of our students to report good or great gains related to each outcome as a result of the program.

3. Results, conclusions and discoveries. What are the results of each planned assessment listed above? Is the outcome at, above, or below what was expected? What conclusions or discoveries do you draw from the results? Describe below or attach to the form.

N/A (no data collected this term, only initial plan development)

4. Use of results. What program changes are indicated, and how will they be implemented? Include a description of who will review and act on the findings. If none, describe why changes are not needed.

N/A (no data collected this term, only initial plan development)

5. Progress. Describe program changes that have been recommended in past reports. What progress has been made since the recommendation?

No previous reports.