Assessment Plan

Mathematics (Instructional Degree Program)

B.A. (Degree Level)

Program Mission:
The mission of the Mathematics Program at New Mexico Highlands University is to provide students with a challenging, market relevant and high-quality education in mathematics. Students completing the baccalaureate program in mathematics will be well prepared for their first position in the field. Each mathematics graduate will be capable of independent thought and initiative in the field of mathematics. Each graduate will demonstrate the behavior and attitudes of a professional in the field and be capable of performing the technical tasks required of their field.

Student Learning Outcome 1:

Understanding and demonstrating mastery of basic algebraic skills (Math 120) as well as more advanced algebraic technique and concepts (Math 140).

NMHU Traits Specifically Linked to Student Learning Outcome 1

- Mastery of Content Knowledge and Skills

First Means of Assessment for Outcome 1:

Final grade from Math 120: Intermediate Algebra. Students' mastery will be measured by the cumulative percentage of passing grades for all sections of the course offered in Fall 2016 and Spring 2017.

Second Means of Assessment for Outcome 1:

Final grade from Math 140: College Algebra Students mastery will be measured by the cumulative percentage of passing grades for all sections of the course offered in Fall 2016 and Spring 2017.

Change to Program Based on Results:

Student Learning Outcome 2:

Effectively understand and demonstrate competence and proficiency with analytic geometry, algebraic manipulation of formulas and equations, rates of change and applications of the derivative and the integral; effectively be able to write proofs in Math 317.

NMHU Traits Specifically Linked to Student Learning Outcome 2

- Critical and Analytic Thinking Skills
- Algebraic Competence

First Means of Assessment for Outcome 2:
Math 211: Calculus 1 Students' ability to successfully demonstrate proficiency with the topics and concepts in this course will be measured by an achievement of a passing grade.

Second Means of Assessment for Outcome 2:

Math 252: Calculus 2. Students' ability to successfully demonstrate proficiency with the topics and concepts in this course will be measured by the achievement of a passing grade.

Third Means of Assessment for Outcome 2:

Math 317: Discrete Mathematics. Students' ability to successfully demonstrate proficiency with the topics and concepts in this course will be measured by the achievement of a passing grade.

Student Learning Outcome 3:

Effectively process more abstract and theoretical mathematical ideas and concepts, and effectively construct and write mathematical proofs associated with these concepts.

NMHU Traits Specifically Linked to Student Learning Outcome 3

- Mastery and Interpretation of Abstract Analytic Mathematical Concepts
- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills

First Means of Assessment for Outcome 3:
Math 425: Introduction to Real Analysis: Students ability to construct and transcribe meaningful and logically correct mathematical proofs, as well as processing abstract theoretical concepts and ideas will be measured by the achievement of a passing grade.

Second Means of Assessment for Outcome 3:
Math 421: Applied Abstract Algebra: Similar to Math 425, students are asked to construct mathematical proofs in relation to concepts involving abstract algebraic structures. Student's ability to demonstrate mastery of proof-writing and abstract interpretive skills will be measured by the achievement of a passing grade.

Change to Program Based on Results: