OUTCOMES ASSESSMENT FOR ACADEMIC PROGRAMS

2008-09 PHASE 2 REPORT

Academic Program: Mathematics

Undergraduate  B.S.

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*Note:  See the “Assessment Revisited: A Guide to De-Cluttering the Assessment Process” for definitions of mission, goals, objectives, and student learning outcomes.

NMSU MISSION:  New Mexico State University is the state’s land-grant university, serving the educational needs of New Mexico’s diverse population through comprehensive programs of education, research, extension education, and public service.

ACADEMIC PROGRAM MISSION: The draft departmental mission statement is: The Department of Mathematical Sciences provides core education in numeracy and quantitative topics that prepares graduate and undergraduate students to be knowledgeable and responsible citizens of the world. It does this by conducting research, scholarship, and teaching, including teaching service courses for other programs, to fulfill the land grant mission of the university.

GOALS: The program strives to produce students with a strong mathematical background, who are able to use mathematics to solve a wide range of problems and to communicate effectively their work, allowing them to pursue a graduate degree in mathematics, graduate work in related fields, teach mathematics, or employ their mathematical expertise in business and industry.

OBJECTIVES: Students who complete the B.S. in Mathematics will have a broad knowledge of mathematical ideas sufficient to allow them to pursue careers in a wide range of areas, including mathematics, science, engineering, and business. They will be able to form clear and complete mathematical arguments. They will be able to communicate mathematics competently through both written and oral communication.

DIRECT STUDENT LEARNING OUTCOME (1 outcome is required): Students who complete the B.S. in Mathematics will be able to clearly express a written mathematical argument.

INDIRECT STUDENT LEARNING OUTCOME (this is optional):

WHAT EVIDENCE WILL BE USED TO ASSESS THE IDENTIFIED DIRECT STUDENT LEARNING OUTCOME? Questionnaires will be given to instructors of undergraduate courses that ask faculty to directly address student aptitude of the learning outcome listed above. Faculty will rate numerically students’ aptitude.
METHOD OF DATA COLLECTION: Office staff will distribute questionnaires to faculty, who will then provide the evidence and return it back to the staff. This will be done each semester approximately one month before the end of the semester.

HOW, AND BY WHOM, WILL THE EVIDENCE BE QUANTIFIED? Office staff will tabulate the data, producing an average rating of aptitude on the learning outcome.

WHAT LEVEL OF PERFORMANCE IS CONSIDERED EVIDENCE THAT THE STUDENTS ARE LEARNING THE INTENDED OBJECTIVE? The learning outcome will be graded on a four point scale, with 4 the highest value. We consider that a 3 or a 4 will constitute evidence that students are learning the objective.

WHAT NUMBER OR PERCENTAGE OF STUDENTS OBTAINING A SATISFACTORY LEVEL OF PERFORMANCE IS SUFFICIENT TO DETERMINE THE PROGRAM IS PROVIDING THE NECESSARY COMPONENTS IN AN EFFECTIVE WAY TO MEET PROGRAM EXPECTATIONS? We feel that if 2/3 of students are assessed a score of 3 or 4 on the questionnaire, then this is a satisfactory level of performance sufficient to determine that the program is effective in meeting our expectations.

WITH WHOM WILL FINDINGS OF THE ASSESSMENT PROCESS BE SHARED? WHEN? HOW? The department’s Majors and Minors Committee, together with the Department Head, will first discuss the assessment findings, and consider initial recommendations program change. The committee will then discuss the findings in a department meeting midway in the spring semester to allow all faculty to be aware of the findings and to make suggestions for program revision.