

SUMMARY OF PROGRAM REVIEW

*Western Nevada College
Associate of Science, Mathematics*

I. Description of Program Reviewed

This program offers the Associate of Science in Mathematics degree. It can be used as a transfer degree to UNR or UNLV for a mathematics, physics, or engineering baccalaureate degree. The goal of this program is to place students on a career track toward mathematics, science, or engineering, either as a university major or as preparation for a teaching career.

II. Review Process and Criteria

The program review team conducted a self-study over the course of the 2007-2008 academic year in order to identify program strengths, weaknesses and ideas for improvement in terms of: enrollment, curriculum, scheduling, student satisfaction, and program retention. The Office of Institutional Research provided the review team with data that were used to inform conclusions about the program.

Two external reviewers—UNR Math Professor Ed Keppelmann and WNC English Professor Jim Kolsky—reviewed the self-study document, toured the Carson campus facilities, met with a group of mathematics students, and reported their findings to the program review team, members of the Program Assessment and Review Committee, the Director of Institutional Research, the Dean of Instruction, and the Vice President of Academic and Student Affairs.

III. Major Findings and Conclusions of the Program Review

The following are the major strengths of the program that were identified during the review process:

- All courses required for the degree are taught by full-time faculty.
- Students participating in the focus group discussion highly praised the quality of the faculty.
- Because of the small class sizes in courses following Calculus I, faculty are able to spend a lot of time working individually with students.
- A peer-mentoring program has proven to be successful in helping students succeed in mathematics courses.
- The mathematics department strives for flexibility in course scheduling to accommodate students' needs, including those of high school students enrolled at a reduced tuition rate in the Fast Track program.
- The curriculum is well-designed for transferability to four-year institutions.

Several opportunities to improve the program were also identified. Recommendations from internal [I] and external [E] reviewers are in italics:

Program Retention: Few students who declare that they are in the AS Mathematics degree program graduate with the degree. Potential mathematics graduates may not understand the value and benefits of completing an Associate of Science in Mathematics degree before transferring to a four-year institution because the department does not communicate that information as well as it could.

- *Conduct an exit interview with students who do not complete the mathematics degree to find out why they do not.* [E]

- *Devote a lecture in Calculus II to the topic of the value and benefits of completing an Associate of Science in Mathematics. Consider inviting UNR mathematics faculty to speak about how the degree prepares students for many four-year degrees and math-related professions. [I,E]*
- *Work with UNR on an agreement whereby a very limited number of 300- and 400-level courses would be developed and taught at WNC and accepted in transfer at UNR, starting with MATH 330 (Linear Algebra). [I,E]*
- *Forge contacts between WNC students and faculty at transfer institutions in order to encourage students to persevere in their math studies. [I,E]*
- *Pursue transfer agreements with four-year institutions outside of NSHE to increase the value and marketability of the Associate of Science in Mathematics degree. [I]*
- *Strengthen the informal learning community that already exists among math students by forming a math club and giving students a meeting place where they can help each other with math, socialize, and work together on puzzles and interesting problems. [I,E]*

Identification of AS Mathematics Majors: The mathematics department does not identify those students who are potentially interested in pursuing a mathematics degree but have not declared the major on the application for admission or degree declaration form.

- *Conduct focus group discussions with students in Calculus I classes to find out if they plan to enter or stay in the program, and if not, learn the reasons. [I,E]*
- *Encourage students to complete the paperwork necessary to declare the mathematics major if they are interested in math or a math-related field. [I]*

Recruitment: Local businesses employ people who could benefit from an Associate of Science in Mathematics degree or from industry-specific mathematics courses, but that audience is not being actively recruited.

- *Research employers in the area in order to market the degree, and find out what classes the college could offer that would give their employees skills and knowledge needed to advance in the workplace and do their jobs better. [E]*
- *Follow up with employers to find out to what extent the completion of the degree or the courses is helping the employees to succeed on the job. [E]*

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2007-08*	48
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B. Number of graduates from the program for the following years:

2005-06	8
2006-07	8
2007-08*	12

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2007	12
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* Does not include summer 2008.