

**APSU Teacher Unit
Annual Program Review (APR) Report
2013 – 2014**

Curriculum and Instruction: Mathematics

I. Name of Program: Master of Arts in Education – Curriculum and Instruction with Mathematics Specialization

II. Provide list of Reviewers: Ann Assad, Jackie Vogel, Andrew Wilson, Audrey Bullock, Amber Sullivan, Jennifer Yantz

III. Program Description:

The Mathematics Specialization is an advanced degree appropriate for licensed teachers of elementary school, middle school, or high school mathematics. Students complete 30 hours of graduate courses related to mathematics education. These include courses offered in the College of Education and in the Department of Mathematics and Statistics. Individual programs are planned based on whether the candidate is certified in elementary, middle grades, or high school education.

IV. Changes in Program

A. During the 2011-2012 academic year, university approval was sought for a change in the program. This consisted of dropping EDUC 5000: Research in Education from the required courses and replacing it with MATH 4120: Contemporary Programs in K-12 Mathematics. This change was supported by the following.

- The program already included a research course - MATH 5090: Research in Mathematics Education.
- A review of the program indicated a need to more deeply address selected program standards (based on the National Board Mathematics Standards). MATH 5120 addresses these standards.
- Student feedback from the previous year (see the 2011-2012 Annual Program Report) indicated a need for more opportunities to take mathematics courses.

The program change was approved and is now being implemented. MATH 5120 was redesigned to meet specific program standards that were identified as needing deeper development.

B. To further address the need for more opportunities to take mathematics courses, a more consistent course rotation was established in 2012-2013. The Department of Mathematics and Statistics continued the implementation of this rotation in 2013-2014.

V. Program Strengths

The program provides rigorous mathematics courses that extend both the mathematics content knowledge of candidates and their knowledge of current research and pedagogy in mathematics education. Recent changes should further strengthen the program.

Another strength of the program is the collegiality of the stakeholders. Mathematics faculty and College of Education faculty work closely on all aspects of the program. Strong support from the Chair of the Department of Mathematics and Statistics and from the Dean of the College of Science and Mathematics has been vital in providing a strong, sustainable program.

VI. Program Weaknesses

No significant weaknesses have been noted in curriculum. However, low enrollment has been a problem in the past. This has been somewhat alleviated by the formation of a cohort group and by the establishment of the Eriksson Teaching Fellows Scholarship, which has provided funding for several secondary mathematics teachers in the program.

VII. Assessment of Candidates

Graduates in this program meet high expectations in both content and pedagogy. One candidate completed the program in the past year. This candidate successfully met all program standards, exhibiting a high level of content knowledge and understanding of pedagogy.

In general, our graduates are highly successful. Many are employed by local school systems as highly qualified teachers. One graduate is teaching full time in the Department of Mathematics and Statistics. In 2012-2013, another graduate served as an adjunct in the Department of Mathematics and Statistics.

IX. Assessment of Program Operations

As noted in Item VII above, our graduates are very strong in mathematics and pedagogy. No student surveys were returned this past year, but student satisfaction has generally been very high and students have valued the close working relationship between students and faculty.

X. Summary of Proposed Changes

Since several major changes were made in the past two years, no significant changes are planned in the immediate future. However, the Department of Mathematics and Statistics will continue to implement the cohort model in order to make courses available to students in a timely manner.

XI. Assessment System

In each course, both in the College of Education and in the Department of Mathematics and Statistics, faculty record student attainment of standards in Livetext. Each faculty member establishes rubrics for the standards addressed in the courses they teach. When a student

completes his or her program, all standards should have been addressed. The College of Education provides reports on individual student achievement of standards.

Although this system has only been in place for a short time, it seems to be working well.