

EXECUTIVE SUMMARY FOR THE M.A.T./M.ED. SECONDARY MATHEMATICS EDUCATION

Major Findings of the Program's Quality and Productivity

Program Quality: Very Strong

In February 2013, a continuing approval review of the Educator Preparation Unit at CSU was conducted by a Board of Examiners (BOE) consisting of representatives from the National Council for Accreditation of Teacher Education (NCATE) and the Georgia Professional Standards Commission (PSC). The 2008 NCATE Standards and the Georgia 2008 Standards were used to assess the unit and its programs. The BOE judged all standards to be met for the unit and for all initial and advanced programs. There were no areas for improvement cited, and the team noted multiple areas of strength.

Overall, the M.A.T. and M.Ed. Secondary Mathematics Education programs are very strong and prepare highly qualified mathematics teachers who have the knowledge, skills, and dispositions to help all students learn. This is demonstrated by GACE pass rates of 90% or above, consistent ratings of meets or exceeds expectations on performance evaluations, overall GPAs of 3.0 or better, and satisfactory completion of a culminating research project.

Program Productivity: Satisfactory

The total number of students enrolled in master's degree programs in secondary mathematics increased from 19 to 24 in 2009-2010 and then to 28 in 2010-11, an increase of 47% from 2008-09 to 2010-11. In 2011-2012, enrollment in M.A.T. and M.Ed. Secondary Mathematics Education programs decreased from a combined total of 28 in 2010-11 to 15, a decrease of 46%. A similar decline occurred in all other secondary education programs, with the exception of the M.A.T. in Secondary English, but the percentage decrease was lower in the other programs. Average enrollment for the five-year period from 2007-2012 was 24. Enrollment in the M.A.T./M.Ed. Secondary Mathematics Education programs has been comparable to enrollment in other graduate secondary education programs. In average enrollment, Secondary Mathematics Education ranks second among the M.A.T./M.Ed. Secondary Education programs.

The number of M.A.T./M.Ed. Secondary Mathematics degrees conferred by CSU is small (an average of four per year) but has increased steadily from three in 2008-2009 to nine in 2011-2012). The five year average is comparable to Secondary Science and Secondary Social Science programs but less than Secondary English. Among the twelve USG state universities that offer master's degrees in secondary education, CSU ranks fourth in average number of degrees conferred. As the only USG institution within a 90 mile radius of Columbus that offers a master's degree in secondary mathematics, CSU provides math teachers in its service region an opportunity that they might not have otherwise, to gain expertise in mathematics education.

List of Recommendations for Improving Program Quality

The Mathematics Program Advisory Council (PAC) oversees the M.A.T. and M.Ed. programs in Secondary Mathematics and works to improve the curriculum, courses, and resources offered to

teachers. Though the program quality is very strong, we continue to look for ways to make improvements. Current initiatives include:

- aligning the curriculum with the new Common Core Georgia Performance Standards for Mathematics in an effort to help prepare teachers to teach with the new standards,
- examining math course requirements in the M.Ed. program to determine whether or not changes are needed to provide candidates with a broader and more in-depth preparation in advanced mathematics,
- hiring a new mathematics education faculty member and program coordinator to decrease the need for use of part-time faculty and provide greater consistency in program delivery.

List of Recommendations for Improving Program Productivity

Recommendations to improve program productivity are as follows.

- Align coursework with the new Common Core Georgia Performance Standards for Mathematics. By responding to current initiatives and mandates to make our programs more relevant for classroom teachers, we hope to recruit more teachers into the M.A.T. and M.Ed. programs.
- Attract more students into the undergraduate mathematics and mathematics education programs through an innovative UTeach replication program that will then provide a larger pool of teachers from which to recruit for the M.Ed. program.
- Seek grant funding to support graduate students in mathematics education.
- Explore possibility of admitting students from outside of Georgia into the online M.A.T. program.

Conclusion about the Program's Viability at CSU

The M.A.T./M.Ed. Secondary Mathematics Education programs at CSU are viable. As indicated by the evaluation of the NCATE/PSC Board of Examiners in February 2013, the quality of the programs is very strong. All NCATE/PSC standards were judged to be met for all initial and advanced programs with no areas for improvement and multiple areas of strength cited. In addition, program quality is enhanced by special opportunities available at CSU. Mathematics education majors have access to resources and professional development opportunities offered through the Columbus Regional Mathematics Collaborative (CRMC).

The viability of the program is also ensured by the sharing of resources among all secondary mathematics education programs at CSU. Graduate mathematics courses at the 5000-level also enroll undergraduates on a cross-listed basis. Furthermore, the College of Education and Health Professions, Department of Mathematics and Philosophy, CRMC, and P-12 teachers work collaboratively on the design and implementation of the secondary mathematics education programs at all levels (B.S., M.A.T., M.Ed., and Ed.S.). Representatives from each of these groups work together to make improvements to the mathematics education programs at CSU and to impact mathematics education in our region. The M.A.T. and M.Ed. programs in secondary mathematics are valuable resources for teachers in our region who want to grow professionally and gain expertise in the field of mathematics education.

Graduates of the M.Ed. Secondary Mathematics program are also a valuable resource for our undergraduate program in secondary mathematics. A substantial number of program graduates teach in systems served by CSU, especially Muscogee County. Our graduate programs in secondary mathematics have helped to create a cadre of leaders within our Partner School Network. Graduates

often serve CSU as pre-student teaching cooperating teachers and cooperating teachers for student teaching. They are an invaluable asset in assisting with the development of our undergraduates. Enrollment in the M.A.T./M.Ed. Secondary Mathematics Education programs has been comparable to enrollment in other graduate secondary education programs. In average enrollment, Secondary Mathematics Education ranks second among the M.A.T./M.Ed. Secondary Education programs. As the only USG institution within a 90 mile radius of Columbus that offers a master's degree in secondary mathematics, CSU provides math teachers in its service region an opportunity to gain expertise in mathematics education. This is an opportunity they might not have if CSU did not offer this degree program. With the critical shortage of highly-qualified mathematics teachers, we need to provide every possible opportunity for teachers to grow professionally and enhance their knowledge and skills in teaching mathematics.

Program Improvement Plan

In response to the findings of the Comprehensive Program Review, the faculty members and administrators of the M.A.T./M.Ed. in Secondary Mathematics Education propose the strategies outlined below to improve the quality, productivity and viability of the program. These strategies will be facilitated by the Mathematics Education Program Advisory Council (PAC).

Goals	Projected Timeline
Align the curriculum with the new Common Core Georgia Performance Standards for Mathematics.	2013-2014
Examine math course requirements in the M.Ed. program to determine whether or not changes are needed.	2013-2014
Hire a new mathematics education faculty member and program coordinator.	Fall 2013
Attract more students into the undergraduate mathematics and mathematics education programs through UTeach Columbus program and other STEM initiatives.	Ongoing
Seek grant funding to support graduate students in mathematics education.	Ongoing
Explore possibility of admitting students from outside the state of Georgia into the online M.A.T. program.	2013-2014

Summary Recommendation and Supporting Rationale

Recommendation: *Continue to Maintain and Enhance the Program*

The program quality is very strong, but the number of degrees conferred each year is small. Because of decreasing interest in mathematics as students progress through high school and college, few students take the higher level mathematics courses needed to prepare one for a career in mathematics or mathematics education. We are working to change this through various STEM initiatives on campus (UTeach Columbus, Noyce Scholarship Program, NeXtGen STEM). Through these efforts, we hope to attract more students into the undergraduate mathematics and mathematics education programs so that we have a larger pool of candidates from which to recruit for our M.A.T. and M.Ed. programs.

CSU will continue to work to improve the program by responding to new initiatives such as improving the curriculum, aligning the curriculum with the edTPA model of teacher assessment model, providing better support and resources for students, preparing P-12 teachers to teach online,

developing a retention and graduation plan to improve program viability, and intensifying recruitment efforts.

By enhancing the quality of the program, we hope to attract more potential students.