

CPR Report Submitted!

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- 5 **Institution:** Columbus State University
- 6 **Review Status:** Triggered Review
- 7 **Degree level:** Masters
- 8 **Degree acronym:** MED
- 9 **Degree/Major:** MEd in Secondary Education - Mathematics
- 10 **CIP Code:** 13131101
- 11 **College,
School/Division:** College of Education
- 12 **Department:** Teacher Education
- 13 **CPR Plan
followed:** Yes
- 14 **Future institutional
plans for program:** Maintain at present level
- 15 **Supplemental file:** MEd Sec Ed Math Exec-Sum.doc
- 16 **File Type:** MS Word
- 17 **CPR Web site:** aa.colstate.edu/assess/cprtbl.htm

Executive Summary for the M.Ed. Secondary Mathematics

Major Findings of the Program's Quality and Productivity

Program Quality: Very Strong

In February 2005, a continuing approval review of the College of Education 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 2000 NCATE Standards and the Georgia 2000 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.

Overall, the M.Ed. Secondary Mathematics program is strong and prepares highly qualified mathematics teachers who have the knowledge, skills, and dispositions to help all students learn. The Real Analysis course sequence has been problematic for some candidates. This is indicated by course grades and informal feedback from candidates. We are continuing to monitor this situation and exploring ways to better support graduate students in these courses.

Program Productivity: Satisfactory

Enrollment in the M.Ed. Secondary Mathematics program increased by 61.5% in Fall 2003 with only a 4.8% decrease the following year. Average enrollment for the four-year period from 2001-2005 was 16.5. The program ranks sixth in average enrollment among the ten M.Ed. programs housed in the Department of Teacher Education. Courses are offered on a one- or two-year cycle, and enrollment in required courses is good. This helps to contribute to the cost-effectiveness of the department. The program has a diverse group of majors (on average 64% female and 30% minority) from a wide range of age groups. Graduates of the program are in high demand.

The number of M.Ed. Secondary Mathematics degrees conferred by CSU is small (an average of 3.25 per year) but has been fairly consistent over the past four years and is comparable to the number of degrees conferred by other USG state universities. 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

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

- providing professional development and networking opportunities for teachers and graduate students through the Support, Mentoring and Resources for Teachers Project (Project SMART) funded by the Calculus Consortium for Higher Education,
- aligning coursework with the new Georgia Performance Standards for Mathematics in an effort to help prepare teachers to teach with the new standards,

- connecting content in graduate mathematics courses to the secondary curriculum so that teachers see the relevance of the mathematics they are learning.

List of Recommendations for Improving Program Productivity

The Mathematics Program Advisory Committee (PAC) oversees the M.Ed. program in Secondary Mathematics and works to improve the curriculum, courses, and resources offered to teachers. Recommendations to improve program productivity are as follows.

- Align coursework with the new Georgia Performance Standards for Mathematics in an effort to help prepare teachers to teach with the new standards. By responding to current initiatives and mandates, we hope to recruit more teachers into the M.Ed. program.
- Provide additional support for students in graduate mathematics courses through advising and/or offering prerequisite courses or professional development opportunities that better prepare students for the graduate mathematics courses.
- Connect the content of the graduate mathematics courses to the secondary curriculum. By making the coursework more relevant to teachers, we hope to attract more teachers into the M.Ed. program.
- Work with Enrollment Services to develop a recruitment and retention plan to attract more students into the undergraduate mathematics and mathematics education programs.

Conclusion about the Program's Viability at CSU

The M.Ed. Secondary Mathematics program at CSU is a viable one. As indicated by the evaluation of the NCATE/PSC Board of Examiners in February 2005, the quality of the program is very strong. All NCATE/PSC standards were judged to be met for all initial and advanced programs. 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), Project SMART (Support, Mentoring, and Resources for Teachers), and the Georgia Partnership for Reform in Science and Mathematics (PRISM).

The viability of the program is also ensured by the sharing of resources among all secondary mathematics programs at CSU. Graduate mathematics courses at the 5000-level also enroll undergraduates on a cross-listed basis. Furthermore, the College of Education, Mathematics Department, CRMC, and P-12 teachers work collaboratively on the design and implementation of the secondary mathematics programs at all levels (B.A., 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.Ed. program in secondary mathematics is a valuable resource 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.

Though small, the number of M.Ed. Secondary Mathematics degrees conferred by CSU has been fairly consistent over the past four years and is comparable to the number of degrees conferred by other USG state universities. 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 that 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.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 Secondary Mathematics Program Advisory Committee (PAC).

<i>Departmental Plans and Priorities</i>	<i>CPR Indicator</i>	<i>Projected Timeline</i>
1. Refine the College of Education Recruitment Plan to focus on specific methods for recruiting Secondary Mathematics graduate students from diverse backgrounds	Productivity Viability	2006-2007
2. Explore various funding sources to provide scholarships for students seeking advanced degrees in Secondary Mathematics	Productivity Viability	2006-Ongoing
3. Collaborate with the Columbus Regional Mathematics Collaborative to maximize the visibility of the secondary mathematics graduate programs in local schools	Productivity Viability	2006-Ongoing
4. Align appropriate graduate courses with the Georgia Performance Standards (GPS) to make the individual courses as well as the program highly attractive to prospective graduate students who will be implementing the GPS.	Quality Productivity Viability	2006-2007
5. Continue to connect the content of the graduate mathematics courses to the secondary mathematics curriculum	Quality Productivity Viability	2006-Ongoing
6. Maximize recruiting opportunities by providing professional development and networking opportunities for teachers and graduate students through the Support, Mentoring, and Resources for Teachers Project (Project SMART) funded by the Calculus Consortium for Higher Education	Productivity Viability	2006-2007

The Interim Dean and the Vice President for Academic Affairs have reviewed the plan and will commit financial and personnel resources to accomplish priorities 1, 4, and 5 for program improvement. Resources from external funding will be necessary to support priorities 2, 3, and 6. The Program Coordinator will communicate additional resource

requests as needed to the appropriate administrator within the College of Education at Columbus State University.

Summary Recommendation and Supporting Rationale

Recommendation: *Maintain the Program at the Current Level*

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. Until we are able to recruit more students into undergraduate programs in mathematics or mathematics education, opportunities for expansion of the M.Ed. program in secondary mathematics will be limited. There are also factors beyond our control that have an impact on the M.Ed. program. Since teachers can get a master's degree in any field and receive an increase in pay, some of the math teachers in our service region have chosen to pursue a master's degree in an area other than secondary mathematics.

As previously mentioned, CSU will continue to work to improve the current M.Ed. program in secondary mathematics by responding to new initiatives (e.g., Georgia Performance Standards), improving the curriculum, providing better support and resources for students, and intensifying recruitment efforts. By enhancing the quality of the program, we hope to attract more potential students.