



June 19, 2006

Mr. Steve Stegink
Higher Education Coordinator
Office of Professional Preparation Services
Michigan Department of Education
608 W. Allegan Street
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Dear Steve:

I am writing to provide University of Detroit-Mercy's response to the review panel's recommendations regarding our Secondary Mathematics endorsement program (EX) as dated January 18, 2006.

Reviewer criticisms were largely centered on the way the program allowed students to take either Math 481 (Modern Algebra for Teachers) or Math 405 (Introduction to Modern Algebra); Math 482 (Linear Algebra for Teachers) or Math 402 (Linear Algebra with Applications); or Math 485 (Statistics for Teachers) or Math 427 (Applied Probability or Statistics). Reviewers felt the two options within each pairing led to ambiguity around whether or not the Secondary Math program requirements were adequate to meet the following standards:

- ∞ *1.5.6 use both descriptive and inferential statistics to analyze data, make predictions, and make decisions; and*
- ∞ *1.5.7 understand the concepts of random variable, distribution functions, and theoretical versus experimental probability and apply them to real-world situations*

The option within each pairing was also at the center of the criticism around the program's appearance of not meeting the following standard:

- ∞ *1.5.14 understand and apply the concepts of linear and nonlinear algebra, and the major concepts of abstract algebra.*

The program has taken two steps to address reviewer concerns about the two options within in each pairing. First, we have clarified the narrative in our Standards Matrix to better reflect how the content of either course in each pairing addresses the given standard. Second, we worked closely and collaboratively with the Math Department to address specific reviewer concerns and to talk more broadly about how each course meets the various standards. The Math Department

assures us that the courses within each pairing are practically identical in content, but differ in approach. The first course in each pairing is designed specifically with teacher certification candidates in mind. The second course in each pairing, while delivering the same content, is designed with science or engineering students in mind. The program felt that, given that the content was the same in each course pairing, we would allow either to be taken by certification students in order to provide them with the greatest number of scheduling and course-taking options.

Reviewers also expressed concerns about the lack of specific examples related to the following standard:

- ∞ *1.5.12 use mathematical modeling to solve problems from fields such as natural sciences, social sciences, business, and engineering*

The program addressed this in two ways: first, we revised our narrative language related to this standard; and second, in working with the Math Department around this standard, they realized their syllabi did not explicitly refer to the use of problems and models related to other fields, even though this is the embedded practice in their courses. The syllabi for the referenced courses now more explicitly demonstrate the use of relevant problems/models.

Lastly, reviewers did not feel the referenced courses addressed the following standard:

- ∞ *2.9 Programs prepare prospective teachers who can work on an interdisciplinary team and in an interdisciplinary environment.*

In our initial submission, the program response focused on how specific Math courses addressed this standard. While we think some of the required Math courses do assist candidates with meeting this standard, we were in error by not including the wide variety of Education courses that address this standard very well. Our newest Standards Matrix narrative for this standard includes a discussion of the applicable Math and Education courses.

In addition to the standards listed above, reviewers were also concerned about the course load of one Math Department faculty member. The updated Instructional Faculty table and current syllabi reflect a more accurate representation of the distribution of course load across the Math Department faculty.

Reviewers also expressed a desire to understand the opportunities students have around early field experiences in both their major and minor. Our program currently has two Education courses in which students are required to have relevant K-12 field experiences, **EDU 400 Introduction** and **EDU 432 Psychology of Education**. In both of these courses, students are encouraged to explore classroom settings related to both their major and minor. This information is reflected in the revised content of Section 9, “Methods for Instruction”.

The program was also asked to provide information regarding the methods for improving the MTTC pass rate in Mathematics. This issue is addressed in Part B of Section 4, “Candidate Preparation.” We invite reviewers to read this section of our submission.

There was also some confusion on the part of reviewers because courses referenced in the Standards Matrix were not listed on Form XX as either required courses or electives. We have

chosen to revamp our Standards Matrix so that only required courses are utilized in the response narrative. We hope this will make the Standards Matrix easier for reviewers to interpret during the review process.

Our response for Secondary Mathematics, dated June 19, 2006, can be viewed at:
<http://www.udmercy.edu/accredreport/mathematics.html>

We look forward to receiving comments from reviewers and the Michigan Department of Education regarding our Secondary Mathematics endorsement program.

Sincerely,

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