# Content Area Guidelines for M.Ed Secondary Education: Teaching – Mathematics

This worksheet describes expectations for admission to the program and is an optional attachment to submit with your application. Applicants can use this form to understand the content area requirements for mathematics and get a sense of where they stand. Faculty will evaluate applications to determine an admissions decision based on the criteria below. It is possible that some candidates are admitted conditionally pending the completion of additional courses. Passing the Praxis II Mathematics (5161) exam is required to begin coursework.

## I. REQUIRED CREDITS AND GPA IN MATHEMATICS

An undergraduate major in mathematics or a mathematics-related field (for example physics, engineering, economics, computer science) is preferred although not required. Submitted transcripts must include at least 30 credits in mathematics or mathematics intensive (physics, engineering, economics, computer science) courses and with a minimum GPA of 3.0 (courses outside content area can be excluded from GPA calculation). Use the table to list out the number of mathematics intensive courses taken and a total credit count below:

| COURSE CODE AND TITLE | UNIVERSITY/COLLEGE | CREDIT AMOUNT: | GRADE EARNED: |
|---|---|---|---|
| *MATH 123—Mathematics Example* | *XYZ University* | *3* | *A* |
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| **TOTAL NUMBER OF CREDITS IN MATHEMATICS INTENSIVE COURSES:** | | | |

## II. CONTENT COMPETENCIES

Mathematics intensive courses also need to cover certain content areas in mathematics. A 12-credit sequence in calculus is required and the remaining courses must cover number theory, linear algebra, geometry, discrete math, probability, and statistics. Some courses can cover multiple topics at once. For example, one course titled "Probability and Statistics" may be used to cover both probability and statistics.

| REQUIRED CONTENT COMPETENCY | CODE AND TITLE OF COURSE(S) SATISFYING COMPETENCY |
|---|---|
| **CALCULUS COURSEWORK (12 CREDITS)** | |
| | |
| | |
| **NUMBER THEORY** | |
| **LINEAR ALGEBRA** | |
| **ABSTRACT ALGEBRA** | |
| **GEOMETRY** | |

| | |
|---|---|
| **DISCRETE MATH** | |
| **PROBABILITY** | |
| **STATISTICS** | |

If any competencies, total credits needed, or the GPA minimum are deficient, applicants are encouraged to take college level courses to start satisfying these requirements to help strengthen their application.

### III. PROFESSIONAL EXPERIENCE

The PA Department of Education also allows KU to consider professional experience (such as work in industry or in schools) as an aspect of an applicant's content preparation to offset requirements listed above. If an applicant would like us to consider this in their application, they can submit a few paragraphs in the box below that describe 1) the nature of the professional experience and how it relates to mathematics and 2) the total years worked in the profession.