Master of Arts in Teaching (MAT) Requirements
Secondary Mathematics

Candidate: _____   Personal Email: _____   Campus ID: _____

PREREQUISITES

Candidates are Required to Possess a B.A. or B.S.
All Courses Must be completed with a C or Better

Prerequisite	Course	Semester	Grade
Differential Calculus, Analytic Geometry, & Intro to Integration (Eq. to MATH 151)	_____	_____	_____
Integral Calculus, Calculus for Sequences and Series, &Analytic Geometry, (Eq. to MATH 152)	_____	_____	_____
Linear Algebra (Eq. to MATH 221)	_____	_____	_____
Differential Equations (Eq. to MATH 225)	_____	_____	_____
Multivariable Calculus (Eq. to MATH 251)	_____	_____	_____
Mathematical Modeling (Eq. to MATH 385)	_____	_____	_____
Euclidean/Non-Euclidean Geometry with Proofs (Eq. to MATH 306)	_____	_____	_____
Mathematical Reasoning (Eq. to MATH 300)	_____	_____	_____
Mathematical Analysis (Eq. to MATH 301)	_____	_____	_____
Computational Methods (Eq. to MATH 341)	_____	_____	_____
Probability and Statistics (Eq. to STAT 355)	_____	_____	_____
History of Mathematics (Eq. to MATH 432)	_____	_____	_____
Adolescent/Developmental Psychology (Eq. to PSYC 200)	_____	_____	_____

PROFESSIONAL EDUCATION REQUIREMENTS:

Graduate students must maintain a 3.0 GPA throughout program. All students must attain a B or better in all required education courses.

MAT CORE REQUIREMENTS		Semester	Grade
EDUC 601 Human Learning and Cognition	3	_____	_____
EDUC 602 Instructional Systems Development	3	_____	_____
EDUC 650 Education in Cultural Perspective	3	_____	_____
EDUC 658 Reading in the Content Area I	3	_____	_____
EDUC 678 Instr Strategies/Students with Diverse Needs	3	_____	_____
Content Elective	3	_____	_____
Content Elective	3	_____	_____
PHASE I INTERNSHIP SEMESTER (Fall Only)*			
EDUC 659 Reading in the Content Area II	3	_____	_____
EDUC 628 Instr Strategies for Teaching Secondary Math	3	_____	_____
EDUC 789 Phase I Internship and Seminar	1	_____	_____
PHASE II INTERNSHIP SEMESTER (Spring Only)*			
EDUC 791P Practicum in Education	3	_____	_____
EDUC 793S Internship in Education	5	_____	_____
EDUC 797 Internship Seminar in Secondary Education	1	_____	_____

*See https://education.umbc.edu/internship/ for internship requirements.

CERTIFICATION TEST SCORES

Praxis Core Reading (≥156) _____		
Praxis Core Writing (≥162) _____	GRE Verbal _____	
Praxis Core Mathematics (≥150) _____	GRE Quantitative _____	
	GRE Composite (≥297) _____	
Praxis II Mathematics: Content Knowledge 5165 (≥159) _____		

ADVISING DATES (Initial Advising Date:_____)

FALL: _____   _____   _____

SPRING: _____   _____   _____

ADVISOR _____

Mathematics Education Website: https://mathed.umbc.edu

UMBC Secondary Mathematics MAT Program Transcript Analysis Process

The UMBC Secondary Mathematics Education program is committed to helping students become highly effective mathematics teachers. The program is accredited by the National Council of Teachers of Mathematics (NCTM) CAEP/NCATE Standards for Mathematics Teacher Preparation Programs. The current accreditation is based on NCTM's 2012 standards. The program has undergone revision in preparation for the next review cycle, which will be based on NCTM's 2020 standards (http://www.nctm.org/standards/content.aspx?id=2978).

The induction of a student into the MAT program begins with an initial analysis by the Director of Student Services in the UMBC Education Department. Following the initial analysis, the Secondary Mathematics advisor conducts a full analysis and makes final determinations regarding any questions about pre-requisites being met by courses on the student's transcript(s).

The transcript analysis begins with a comparison of course names and level (i.e., 100/200/300/400 level) of mathematics classes on the student's transcript to the UMBC undergraduate mathematics courses used to satisfy NCTM CAEP Standard 1: Knowing and Understanding Mathematics.

Candidates demonstrate and apply understandings of major mathematics concepts, procedures, knowledge, and applications within and among mathematical domains of Number; Algebra and Functions; Calculus; Statistics and Probability; Geometry, Trigonometry, and Measurement.

a. All courses must be completed with a "C" or better.

b. Courses on transcripts that are at the same level or higher as their UMBC counterpart are accepted as meeting the same NCTM Content Standards as the UMBC course.

c. Courses on transcripts that are at a lower level than their UMBC counterpart are potentially accepted as meeting the same NCTM Content Standards as the UMBC course, pending verification of the course components (e.g., course description, syllabus, communication from the transcript institution).

d. Mathematics courses on transcripts without a clear UMBC counterpart may meet NCTM Content Standards, pending verification of the course components (e.g., course description, syllabus, communication from the transcript institution) and aligning them directly to the NCTM Content Standards.

Alignment of UMBC Mathematics Courses to NCTM CAEP (2020) Essential Concepts

Course	Number	Algebra and Functions	Calculus	Statistics & Probability	Geometry, Trigonometry, Measurement	Problem Solving	Reasoning and Communicating	Math Modeling
MATH 151 Calculus and Analytic Geometry I		✓	✓		✓	✓	✓	✓
MATH 152 Calculus and Analytic Geometry II		✓	✓		✓	✓		
MATH 221 Introduction to Linear Algebra	✓	✓						✓
MATH 225 Introduction to Differential Equations		✓	✓			✓		
MATH 251 Multivariable Calculus		✓	✓		✓	✓		
MATH 300 Intro to Math Reasoning	✓						✓	
MATH 306 Geometry					✓		✓	✓
MATH 301 Introduction to Mathematical Analysis I			✓				✓	
MATH 341 Computational Methods	✓	✓				✓		
MATH 385 Introduction to Mathematical Modeling	✓	✓						✓
STAT 355 Intro to Probability &Statistics for Scientists and Engineers				✓			✓	✓
MATH 432 History of Mathematics	✓	✓	✓	✓	✓			