University of Maryland University College (UMUC)
Secondary Mathematics, 7-12 Grade Teacher Certification

MAT Transcript Review in Mathematics – NCTM Standards 2003

NCTM Assessment Standards for Certification	Typical Courses Aligned with Standards (Course Samples)	Courses Completed (Include Prefix, number, and Name)	# of Credits
Knowledge of Number and Operation (computation proficiency–via number theory, history of math, differential equations, computational methods)	• Differential Equations • Complex Variables		
Knowledge of Different Perspectives on Algebra (relationship among quantities–via linear algebra, abstract algebra)	• College Algebra • Ex. Linear Algebra		
Knowledge of geometries (spatial visualization, geometric modeling, analyze geometric shapes, structures and their properties)	• Trigonometry & Analytical Geometry		
Knowledge of calculus (conceptual understanding of limit, continuity, integration, calculus)	• Calculus		
Knowledge of discrete mathematics (in the formulation and solution of problems)	• Discrete Mathematics		
Knowledge of Data Analysis, Statistics, and Probability (understanding of concepts and practices related to data analysis, statistics, and probability)	• Concept of Real Analysis • Statistics		
		Total Credits:	

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Applicants may qualify to enter the MAT program with a content specialization in Mathematics if they have an undergraduate major in the certification area, or if they have completed 30 credit hours of coursework in Mathematics.

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Full standards are available at NCTM: http://www.nctm.org/standards/content.aspx?id=2978