University of Maryland University College (UMUC)

Secondary Computer Science, 7-12 Grade Teacher Certification

MAT Transcript Review in Computer Science - ISTE Standards

ISTE Assessment Standards for Certification	Typical Courses Aligned with Standards (Course Samples)	Courses Completed (Include Prefix, number, and Name)	# of Credits
Knowledge of programming skills and use of data— testing programs, databases, program languages	• Advanced Programing Languages • Advanced Application Software		
Knowledge of components, operation, single/multi-user systems, hardware, software, usability	• Operating Systems • Relationship Database • Concepts & Applications		
Understanding machine level data, structures, problem solving and information organization	• Intro to Discrete Structures • Data Structures & Analysis		
Social aspects of computing in society, societal norms, laws, ethics, security, privacy	• Principles of Web Design & Technology • Social Networking & Cybersecurity Best practices		
Planning computer instruction through teaching tasks, approaches, application and/or evaluation	• Design and Analysis of • Computer Algorithms • Current Trends and • Projects in Computer Science		
knowledge of digital devices, systems, and networks	• Advanced Electronic Publishing • Digital Media & Society		

		TOTAL CREDITS:	

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

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Full standards are available at ISTE: http://www.iste.org/standards