



SCIENCE K-12 CONCENTRATION FORM

30 credit degree program

(12 credits of Core courses, 18 credits of Concentration courses)

Core Courses: 12 credits <i>Required for all ASTL M.Ed. students</i>	Credit Hours
<u>EDUC 612: Inquiry into Practice</u> Provides experience using research skills to foster systematic and thoughtful inquiry into classroom practice. Explores relevant classroom practice issues through critical writing, action, and research. Emphasizes cultural diversity and gender issues in research.	2
<u>EDUC 613: How Students Learn</u> Advanced course in study of learning based on research and theory from different disciplines. Focuses on increasing students' learning through study of different learning systems, and understanding each learner in context of learning process itself.	3
<u>EDUC 614: Designing and Assessing Teaching and Learning</u> Explores design and development of curricular, pedagogical, and assessment strategies responsive to needs and interests of students. Investigates factors that affect teaching and learning, and examines multiple ways of knowing that teachers bring to classrooms.	3
<u>EDUC 606: Education and Culture</u> Uses cultural inquiry process (CIP) and web site to acquire cultural, social, and language-related perspectives on educational processes; and teaches skills to analyze educational settings and expand strategies to address puzzlements in students' own practice.	3
<u>EDUC 615: Educational Change</u> Explores influences on educational change at classroom, school, community, state, and national levels. Investigates implications of factors and influences that affect educational change. Analyzes influences and factors, and involves students in reflecting on their own experiences.	2

Science K-12 Concentration Courses: 12 credits	Credit Hours
<p><u>EDCI 663: Research in Science Teaching</u> Investigates the research and methodology involved in teaching and learning biological, chemical, physical, and earth sciences from K-12.</p>	3
<p><u>EDCI 670: Advanced Methods in Science Teaching</u> Application of major principles of education and psychology for the improvements of science teaching in secondary schools.</p>	3
<p><u>EDCI 671: Innovations in Science Teaching</u> Focuses on the development and selection of teaching materials that reflect concepts of technology innovation with an emphasis on middle and secondary school science.</p>	3
<p><u>EDUC 547: Scientific Inquiry and the Nature of Science</u> Incorporates understanding about scientific knowledge in K-12 classrooms. Builds fundamental knowledge of scientific inquiry and the nature of scientific knowledge and skills to weave this knowledge explicitly in curriculum. Focuses on developing inquiry-based lessons for students to investigate science and assessing student understanding of science and the nature of science.</p>	3
Concentration Electives: 6 credits	
Choose six credits of science coursework with advisor approval.	
PROGRAM EXIT REQUIREMENT	
<p>Professional Development Portfolio: A performance-based portfolio that provides evidence of a teacher's teacher professional learning and development throughout the ASTL program. The portfolio is presented the last spring semester of a student's program.</p>	NA



College of Education and Human Development
Advanced Studies in Teaching and Learning (ASTL)

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 ASTL Academic Program Coordinators

Advisor and Support Contact List

Concentration	Advisor	Email	Phone
Designing Digital Learning in Schools	Dr. Dawn Hathaway	dhathawa@gmu.edu	(703) 993-2019
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ASTL program website		https://gse.gmu.edu/advanced-teaching-studies/	
ASTL Facebook page		https://www.facebook.com/ASTLProgramGMU/	

* *Liaison Contact for Departmental Advising*