



**SCIENCE K-12 CONCENTRATION
COURSE SHEET**

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.	2
<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



Advanced Studies in Teaching and Learning (ASTL)

Division of Advanced Professional Teacher Development and International Education
College of Education and Human Development

Dr. Stephanie Dodman (sdodman@gmu.edu)

Dr. Nancy Holincheck (nholinch@gmu.edu)

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
Diversity and Exceptionality in PK-12 Schools	Marie Champagne	mchampa4@gmu.edu	(703) 993-3173
Early Childhood Education	Dr. Julie Kidd	jkidd@gmu.edu	(703) 993-8325
Languages (Spanish & French)	Dr. Rebecca Fox <i>Dr. Jenny Leeman*</i> <i>Dr. Christy Pichichero*</i>	rfox@gmu.edu jleeman@gmu.edu cpichich@gmu.edu	(703) 993-4123
Gifted Child Education	Dr. Nancy Holincheck	nholinch@gmu.edu	(703) 993-8136
History	Dr. Mark Helmsing <i>Dr. Brian Platt*</i>	mhelmsin@gmu.edu bplatt1@gmu.edu	(703) 993-2384 (703) 993-1253
Individualized	Dr. Nancy Holincheck	nholinch@gmu.edu	(703) 993-8136
International Baccalaureate	Marie Champagne	mchampa4@gmu.edu	(703) 993-3173
Literacy: Reading Specialist	Dr. Jennifer Hathaway	jhathaw2@gmu.edu	(703) 993-5789
Literacy: PreK-12 Classroom	Dr. Jennifer Hathaway	jhathaw2@gmu.edu	(703) 993-5789
Mathematics	Dr. Courtney Baker	cbaker@gmu.edu	(703) 993-5081
Physical Education	Dr. Dominique Banville	dbanvill@gmu.edu	(703) 993-3579
Science K-12	Dr. Nancy Holincheck	nholinch@gmu.edu	(703) 993-8136
STEM	Dr. Nancy Holincheck	nholinch@gmu.edu	(703) 993-8136
Special Education	Jancy Templeton	jtemple1@gmu.edu	(703) 993-2387
Teacher Leadership	Dr. Stephanie Dodman <i>Dr. Farnoosh Shahrokhi*</i>	sdodman@gmu.edu fshahrok@gmu.edu	(703) 993-3841 (703) 993-2009
ASTL Core Advisors	Dr. Stephanie Dodman Dr. Nancy Holincheck	sdodman@gmu.edu nholinch@gmu.edu	(703) 993-3841 (703) 993-8136
APTDIE Coordinator of Student Services	Marie Champagne	mchampa4@gmu.edu	(703) 993-3173
APTDIE Support Manager	Felicita Minionis	fminioni@gmu.edu	(703) 993-2794
ASTL program (general)		astl@gmu.edu	(703) 993-2794
ASTL program website		https://gse.gmu.edu/advanced-teaching-studies/	
ASTL Facebook page		https://www.facebook.com/ASTLProgramGMU/	

* *Liaison Contact for Departmental Advising*

**Advanced Studies in Teaching and Learning (ASTL)
Program of Study Form**

Once you are admitted and you indicate your intent to enroll, contact your Advisor *immediately*. Advisor information is located in your admissions materials and at <https://gse.gmu.edu/advanced-teaching-studies/current-student-information>.

Complete this form with your Advisor *by the end of your second semester*. What you include on this form is not permanent, and you can adjust as necessary. However, it will provide you with a roadmap for your program. See the Concentration Course Sheet for your specific Concentration for guidance in course selection.

Any changes to your Program of Study should be made in consultation with your Advisor.

Student Name	Concentration
Advisor Name	

Notes on Core courses:

The Core classes may be taken concurrently and interspersed with the Concentration courses OR the Core may be taken in a one year block as necessitated by Concentration course availability.

EDUC 612: offered face to face and online; summer only; must be first Core course taken

EDUC 613: offered face to face and online; fall only; must be second Core course taken

EDUC 614: offered face to face and online; fall only; can be taken concurrently with EDUC 613

EDUC 606: offered face to face and online; spring only; can be taken concurrently with EDUC 615

EDUC 615: offered face to face and online; spring only; must be taken the last spring semester of program

Semester	Semester, Year	Course number	Credits	Concentration or Core?
<i>(Example)</i>	<i>Summer 2019</i>	<i>EDUC 612</i>	<i>2</i>	<i>Core</i>
		<i>EDLE 620</i>	<i>3</i>	<i>Concentration</i>
1				
2				
3				
4				
5				
6				
7				
8				

Student's signature		Date	
Advisor's signature		Date	