

GEOGRAPHIC AND ENVIRONMENTAL SCIENCE EDUCATION (NON-LICENSURE) GRADUATE CERTIFICATE

Banner Code: E1-CERG-GESE

Academic Advising

Website: gse.gmu.edu/secondary-education-6-12/academics/secondary-education-geographic-environmental-science-education-graduate-certificate

This 15 to 16 credit non-licensure certificate is designed to provide students who have a background in the sciences with greater content knowledge in the geographic and environmental sciences as well as effective methods in teaching science. For those with an undergraduate degree in teaching, students focus on the principles and fundamental topics of geography, environment, pedagogy, instruction of these sciences as well as hands-on experience and current tools and methods in science education research. This certificate is designed for teachers, scientists, public officials, field naturalists, environmental interpreters, and others having responsibility for educating or informing people about the environment and its geography.

This graduate certificate may be pursued on a part-time or full-time basis.

or EVPP 652 The Hydrosphere	
Science Education Electives:	
EDCI 671	Innovations in Science Teaching
EDCI 810	Foundations of Science Education Research
EDUC 547	Scientific Inquiry and the Nature of Science
Total Credits	9-10

Admissions & Policies

Policies

For policies governing all graduate certificates, see AP.6.8 Requirements for Graduate Certificates.

Requirements

Certificate Requirements

Total credits: 15-16

Required Courses

EDCI 670	Advanced Methods in Science Teaching	3
GGS 550	Geospatial Science Fundamentals	3
Total Credits		6

Electives

Students with an undergraduate degree in pedagogy must take at least two science electives, and students with an undergraduate degree in science must take at least two science education electives.

Select a minimum of three courses from the following: 9-10

Science Electives:	
CSI 500	Computational Science Tools
EVPP 521	Marine Conservation
EVPP 543	Tropical Ecosystems
EVPP 607	Fundamentals of Ecology
or BIOL 607	Fundamentals of Ecology
GGS 553	Geographic Information Systems
GGS 656	The Hydrosphere