

ECOSYSTEM MEASUREMENTS AND DATA ANALYSIS GRADUATE CREDIT CERTIFICATE

Person-in-Charge	Marc McDill
Program Code	ECMSDT
Campus(es)	World Campus

The Graduate Certificate in Ecosystem Measurements and Data Analysis (EMDA Certificate) requires 9 credits, consisting of three 3-credit courses. The program is intended for people who are working as natural resources managers in higher-level management and leadership positions or for those who wish to move into such positions. The certificate program provides ecosystem managers with basic skills for designing and managing ecosystem data collection programs and for using data to support decision-making.

Effective Semester: Fall 2018

Ending Semester: Fall 2023

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<https://gradschool.psu.edu/graduate-admissions/how-to-apply/>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>). International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/>) for more information.

Applicants must have an undergraduate degree in forestry, wildlife or fisheries management, environmental resource management, natural resources management, environmental science, ecology or related field. For admission, an applicant should have at least a 2.75 overall grade-point average (or equivalent) and a 3.00 junior/senior average (on a 4.00 scale), or an advanced degree and appropriate courses and/or experiential background. Official transcripts from all post-secondary institutions attended (<http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission/>) must accompany the application.

Certificate Requirements

Requirements listed here are in addition to requirements listed in Graduate Council policy GCAC-212 Postbaccalaureate Credit Certificate Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-212-postbaccalaureate-credit-certificate-programs/>).

Code	Title	Credits
Required Courses		
STAT 500	Applied Statistics	3
GEOG 482	Making Maps That Matter With GIS	3

EMGT 810	Ecosystem Monitoring	3
Total Credits		9

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes

1. Graduates will be able to describe and apply fundamental statistical principles and common sampling designs.
2. Graduates will be able to recognize the properties of geographic data; they will be able to find and use existing geographic data products; and they will be able to apply basic geographic information technologies, including geographic information systems and global positioning systems.
3. Graduates will be able to describe a variety of quantitative approaches to statistical sampling and monitoring for different natural resources, including vegetation, water quantity and quality, soils and wildlife, and be able to design and implement an ecosystem monitoring plan.

Contact