

PROFESSIONAL SCIENCE MASTER'S IN ECOSYSTEM SCIENCE AND SUSTAINABILITY

The Professional Science Master's in Ecosystem Science and Sustainability enables students from diverse academic backgrounds, such as environmental studies, business, engineering, natural resources, and agriculture, to understand the latest ecosystem science and develop the skills needed for emerging professions in areas such as greenhouse gas/carbon management, water sustainability and watershed management, and climate adaptation.

After completing the program, students are able to:

- Describe ecosystem processes and sustainable management strategies to maintain those processes.
- Discuss current issues in environmental policy related to ecosystem sustainability.
- Evaluate the linkages between socioeconomic and ecological processes that influence ecosystem sustainability.
- Apply quantitative and qualitative methods to assess ecosystem sustainability using systems approaches and integrative methods.
- Build, work within, and lead interdisciplinary teams in a professional environment.

The Professional Science Master's in Ecosystem Science and Sustainability focuses a core set of classes on understanding ecosystem sustainability and climate change and offers multiple tracks for students to focus electives in courses related to carbon management, water resources, and sustainable food systems. The program is typically completed in three semesters, plus a 400-hour internship (<https://warnercnr.colostate.edu/ess-internships/>). A minimum of 36 credits is required to complete this program.

Requirements Effective Fall 2022

Code	Title	Credits
ESS 501	Principles of Ecosystem Sustainability	3
ESS 587	Internship	4
STAR 511	Design and Data Analysis for Researchers I	4
Select one course from the following:		2-3
ESS 542	Greenhouse Gas Policies	
WR 512	Water Law for Non-Lawyers	
Foundational Elective Courses ^{1, 2}		10-11
Data Tools and Quantitative Analysis Elective Courses ³		12
Program Total Credits:		36

A minimum of 36 credits are required to complete this program with 21 or more credits at 500-level or higher, including a 4-credit Internship (ESS 587).

¹ Students who take ESS 542 to meet curriculum requirements must take 11 credits of Foundational Elective Courses.

² Select courses (e.g. water resources, hydrology, foundations in greenhouse management and accounting, climate change, international climate negotiations, global agriculture and environmental change, etc.) with approval of advisor and graduate committee.

³ Select courses (e.g. GIS, remote sensing, numerical analysis, modeling, greenhouse gas inventory, hydrological data analysis, etc.) with approval of advisor and graduate committee.