PROFESSIONAL SCIENCE MASTER'S IN ECOSYSTEM SCIENCE AND SUSTAINABILITY

The Professional Science Master's (PSM) in Ecosystem Science & Sustainability (PSM) is an excellent course of study for students eager to work in environmental sustainability right away or for working professionals looking to transition quickly or advance their careers.

- The PSM is coursework-focused – the degree does not require a thesis.
- Through coursework, students gain expertise in sustainable management solutions through policy analysis, applied methods, and skills-based learning.
- Students choose from three different degree specializations: carbon management, watershed science, or sustainable food systems.
- Students are required to participate in an intensive 4-credit, 400-hour internship, where they gain hands-on knowledge in their chosen field, implement the skills learned within the classroom, and begin to establish a professional network. The program has successfully placed many students in paid internships focused on their career objectives.

Program Learning Objectives

After successfully completing the program, students will be able to:

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

Institutional Learning Objectives

How the Program Learning Objectives (PLOs) relate to CSU's Institutional Learning Objectives:

- **Creativity**: The development of sustainable management strategies (PLO 2) and the promotion of policies enhancing ecosystem sustainability (PLO 3) require creative problem-solving that integrates diverse perspectives on human and ecosystem interactions. This aligns with the ILO on creativity since generating innovative solutions to complex sustainability challenges requires creative thinking across disciplines and analytical approaches.
- **Reasoning**: Evaluating socioeconomic and ecosystem linkages (PLO 1) and the development of sustainable management strategies (PLO 2) directly engage with the ILO of reasoning through the development and application of a diverse analytical skillset necessary to address complex environmental problems.
- **Communication**: The ability to build, work within, and lead interdisciplinary teams (PLO 4) and promote policies for ecosystem sustainability (PLO 3) requires advanced communication skills. These objectives require students learn to listen substantively and communicate both effectively and respectfully to professional and public audiences.
- **Responsibility**: The entire curriculum of the program encourages an understanding of the responsibility professionals have toward promoting sustainability and human well-being. By focusing on the determinants of sustainability (PLO 1) and the development of strategies and policies that consider the long-term health of ecosystems (PLOs 2 and 3), students learn about personal and social responsibility in a global context.
- **Collaboration**: Building, working within, and leading interdisciplinary teams in a professional environment (PLO 4) directly supports the ILO on collaboration. This PLO develops skills for solving sustainability challenges while emphasizing the benefits of shared discourse, open inquiry, and constructive disagreement

In addition to the PSM degree, we offer graduate certificates that provide further training through 9-15 credits of graduate-level coursework to be completed on the CSU campus or online, allowing credentialed specializations in carbon management and water resource planning, management, and policy.

The PSM 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.

The PSM in Ecosystem Science & Sustainability is an affiliated Professional Science Master's (PSM) degree. Affiliation is administered by the Commission on Affiliation of PSM Programs (https://www.professionalsciencemasters.org/) (formerly named PSM National Office) to ensure a strong and distinctive PSM brand. The PSM is designed for students seeking a graduate degree in science or mathematics and understanding the need for developing workplace skills valued by top employers.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (http://catalog.colostate.edu/general-catalog/graduate-bulletin/).