PROFESSIONAL MASTER'S DEGREE
With initial support from the Alfred P. Sloan Foundation, Oregon State University developed an exciting new Master's degree option in Environmental Sciences. From conversations with local and regional industry and government representatives, we were told that there is a need for environmental professionals with additional skills in business management and communications. In response to this need, the Environmental Sciences Graduate Program offers a non-thesis M.S. degree option called the Professional Science Master's (PSM) in Environmental Sciences. Students with this degree acquire skills that enhance career opportunities in both the private and public sectors. Recruitment targets students who have or seek careers as professionals working in the environmental industry.

CURRICULUM (45 credits)
The PSM in Environmental Sciences includes coursework in environmental sciences as well as courses from other academic units on campus. In addition, students earning the PSM degree take Cohort Curriculum, especially designed for science majors, to acquire skills in business management, communications, and ethics. Students will also complete a minimum 3-month internship arranged with private industry or agencies in the public sector in lieu of a thesis project.

1. Environmental Sciences Core (9 credits) forms the foundation of this program by providing students with basic skills in environmental research methods and analysis as well as ethical training.

ENSC 515 Environmental Perspectives and Methods (3 credits)
ENSC 520 Environmental Analysis (3 credits)
ENSC 508 Joint Intercampus Environmental Conference (2 credits)
GRAD 520 Responsible Conduct of Research (1 credit)

2. Numerical Skills (6-8 credits) expose students to research design, statistical analysis, modeling, survey design, or other quantitative and qualitative techniques. Students have an opportunity to select courses based on their internship needs and objectives.

Example courses:
CS 515 Algorithms and Data Structures (4 credits)
CS 540 Database Management Systems (4 credits)
FES 522 Research Methods in Social Science (4 credits)
FES 523 Quantitative Analysis in Social Science (4 credits)
GEO 544 Remote Sensing (4 credits)
GEO 565 Geographic Information Systems (4 credits)
MTH 551, 552, 553 Linear Algebra, Differential Equations (3 credits each)
OC 675 Numerical Modeling in Ocean Circulation (4 credits)
OC 682 Oceanographic and Atmospheric Data Analysis I (4 credits)
OC 683 Oceanographic and Atmospheric Data Analysis II (4 credits)
ST 511, 512, 513 Methods of Data Analysis (3 credits each)
ST 515 Design and Analysis of Planned Experiments (3 credits)
ST 522 Introduction to Mathematical Statistics (4 credits)
ST 531 Sampling Methods (3 credits)
ST 535 Quantitative Ecology (3 credits)
3. **Environmental Sciences Track Electives (8-10 credits)**

**ENSC Area of Concentration (Track)** gives focus and identity to each student’s curriculum and allows for flexibility in response to changing employment demands. Students choose courses listed within these areas of concentration—there are many to choose from. Seven areas of concentration in addition to PSM have been defined and are currently available as follows:

1. Biogeochemistry
2. Ecology
3. Environmental Education
4. Natural Resources
5. Quantitative Analysis
6. Social Science
7. Water Resources

4. **Professional Core (8 credits)** provides PSM@ENSC students the ability to serve as liaisons between the scientific and business communities in industry, consulting, NGOs, and government.

   BA 515 The Essence of Business – Accounting and Finance (4 credits)
   BA 516 The Essence of Business – Management and Marketing (4 credits)

5. **Professional Electives (6 credits)** allow students to expand their business training aligned with a particular area of interest.

   Example courses:
   - PSM 567 Innovation Management (3 credits)
   - COMM 518 Interpersonal Communication (3 credits)
   - COMM 542 Bargaining and Negotiation (3 credits)
   - FW 520 Ecological Policy (3 credits)
   - BA 532 Environmental Law and Business (3 credits)
   - H 595 Design for Environment, Safety, and Health (3 credits)

6. **Internship/Project (6 credits)**

   **INTERNSHIP**

   Internships can take place in a variety of venues, including but not limited to: environmental consulting or engineering firms, businesses involved in land use planning, NGOs, global organizations, or governmental agencies in the public sector such as the U.S. Environmental Protection Agency, the U.S. Forest Service, the U.S. Department of Agriculture, and the Bureau of Land Management. Each of these governmental agencies have extensive laboratories and facilities in the Corvallis area.

   During their internships, students will become aware of the costs of protecting resources, career opportunities in the field of environmental sciences, management, and policy, and the breadth of the environmental industry in today’s business world. The PSM advisor and the student’s graduate committee will help define specific objectives for the proposal and help identify potential internship opportunities. However, it is the responsibility of the graduate student to formally initiate the internship with an industry supervisor.

   ENSC 510 Internship or project equivalent to 3 months full-time work (6 credits)
PROFESSIONAL SCIENCE MASTER'S PROGRAM CONTACT
To learn more about the PSM Program in Environmental Sciences, please contact:
Dr. Carolyn Fonyo Boggess
PSM@ENSC Program Advisor
Oregon State University
104 Wilkinson Hall
Corvallis, OR 97331
Tel: 541 760 4196
Email: carolyn.fonyo@oregonstate.edu

To learn more about the Environmental Sciences Graduate Program and the application process, please contact:
Renee Freeman
Oregon State University
104 Wilkinson Hall
Corvallis, OR 97331
Tel: 541 737 5095
Fax: 541 737 9858
Email: esgp@oregonstate.edu