

CURRICULUM MATRIX

ACADEMIC MASTER'S DEGREE

Graduate Program in Environmental Science and Technology

To obtain the Master's Degree, students must complete a total of 50 credits, distributed as follows:

1.) 16 Credits in Required Courses:

- "Literature Review in Scientific Research and Formulation of Research Questions" (2 credits)
- "English Scientific Writing Module for Academics and Professionals" (2 credits)
- "Modeling in Environmental Research: Mathematical Models, Statistical Routines for Environmental Analysis, Data Analysis, and Statistical Methods in Environmental Science and Technology" (2 credits)
- "Research and Graduate Skills: Experimental Design, Laboratory and Field Skills, and Networking Skills" (2 credits)
- "Environmental Science and Technology for Environmental and Health Management" (2 credits)
- "Scientific Communication: Writing, Oral Presentations, and Web Design" (2 credits)
- "Integrated Analysis of the Relationships Between the Environment and Human Health" (4 credits)

2.) 10 Credits in Elective Courses Offered by the Program:

Students may choose from the following:

- "Multivariate Techniques Applied to Environmental Sciences" (2 credits)
- "Treatment, Reuse, and Recycling of Industrial Waste" (2 credits)
- "Sustainable Urban Planning" (2 credits)
- "Novel Analytical Methods for Organic Compounds in Water Resource Monitoring" (2 credits)
- "Mitigation of Pollutant Loads from Chemical Process Industries" (2 credits)
- "Human Ecology and Food Security" (2 credits)
- "Lentic and Lotic Continental Ecosystems: Function, Diversity, and Conservation" (2 credits)
- "Socio-environmental Management" (2 credits)
- "Integrated Coastal Management" (2 credits)
- "Scientific and Technical Strategies for CO₂ Mitigation in the Environment" (2 credits)
- "Environmental Education" (2 credits)
- "Terrestrial and Aquatic Ecotoxicology" (2 credits)
- "Ecophysiology of Aquatic Organisms and Conservation of Natural Resources" (2 credits)
- "Applied Environmental Law" (2 credits)
- "Biomarkers of Environmental Contamination" (2 credits)
- "Life Cycle Assessment" (2 credits)
- "Integration of Social and Natural Sciences for Environmental Policy Formulation" (2 credits)
- "Mitigation of Pollutant Loads from Chemical Process Industries" (2 credits)
- "Recovery and Restoration of Degraded Areas" (2 credits)
- "Water and Coastal Management" (2 credits)

3.) 6 Credits from Publications

Students may earn credits during the course by publishing articles in Qualis-indexed journals, books, book chapters, or conference proceedings.

- These credits require a formal request from the student, their advisor's recommendation, and approval by the Graduate Committee. The publication's relevance to the student's research project and the environmental sciences field will be evaluated.

4.) 3 Credits for Participation in Research Group Activities

Credits are granted for mentoring or other activities within the advisor's Research Group.

- These credits require a formal request from the student, their advisor's recommendation, and approval by the Graduate Committee.

5.) 15 Credits for the Successful Defense of the Master's Thesis

Credits are awarded upon approval of the Master's Thesis.