De La Salle University

MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE AND ECOSYSTEM MANAGEMENT

What is the Master of Science in Environmental Science and Ecosystem Management program?

The Master of Science in Environmental Science and Ecosystem Management (MS ESEM) Program intends to provide professionals with an in-depth technical background in environmental science to be used in the protection of the environment and the proper utilization of human and natural resources.

MS ESEM at De La Salle University

MS ESEM is a transdisciplinary partnership of the different units of the university coordinated by the College of Science, Biology Department. The faculty is a mixture of highly qualified academicians and practitioners in the field. Hence, research and management interests are drawn from a wide area of environmental sciences, economics, social sciences and engineering disciplines.

The Degree Program

The MS ESEM Program provides students with an in-depth knowledge in the theories/principles of environmental science and adequate skills, proper attitudes and values in the practice of environmental management.
In addition, graduates of the program are expected to be sufficiently trained a) to prepare environmental risk assessment (ERA) and environmental impact assessment (EIA); and b) to coordinate with other institutions for collaborative scientific and management researches in environmental issues.

Program Requirements

Advance Academic Writing	(6 units)
Course Work	30 units
Practicum	3 units
Special Problem	3 units
Comprehensive Examination	0 unit
Total	**36 units**

Course Description

Advance Academic Writing Courses:

Advanced Technical Reading and Writing 1 (ENG501M)
3 units
The first part of an intensive English academic reading and writing course, focuses on the review of basic reading and writing skills and their application in the preparation of short academic papers such as definitions and descriptions, and non-prose forms. It emphasizes the mastery of active reading strategies, the effective use of rhetorical and organizational features of academic writing, and proper documentation.

Advanced Technical Reading and Writing 2 (ENG502M)
3 units
The second part of the intensive English academic reading and writing course, focuses on the writing of data commentary and the various parts of a research report, with emphasis on the different rhetorical moves and the linguistic features that realize these moves. The course continues to emphasize the observance of integrity in writing and research.

Course Work:

Technology for Energy and the Environment (ENS615M
3 units
The course provides an overview of different technological solutions to problems pertaining to energy and environmental issues. Topics include end-of-ripe treatment and disposal techniques for solid, liquid and gaseous residues, open and closed-loop recycling, and preventive approaches based on the principle of design for environment (DFE).

Applied Ecology for the Management of Natural Resources (ENS617M)
2 units
The course seeks to lay the basic foundations of environmental science by defining the context, basis and fundamental cause of environmental problems, and how these relate to human societies and the choices they make. Topics include basic planetary processes, systems ecology, conservation biology, restoration ecology and landscape ecology.

Social Concepts in Environmental Science and Their Application (ENS619M)
3 units
The course is designed to introduce the students to the (i) social concepts relevant in the understanding the environment and (ii) related concepts germane in the interpretation and analysis of environmental issues and concerns. Topics include social science perspective on the environment, social theory and environmental governance and issues and concerns.

Biometrics for the Management of Natural Resources (ENS621M)
2 units

This is an introductory course on statistical tools used to solve problems in environmental studies and management. It provides illustrative examples and case studies in the application of multivariate statistical techniques that determine the interrelationships of factors that may contribute to environmental problems.

Economic Principles and Measurements in Resource Valuations (ENS623M)
3 units
The course aims to develop in the students a basic understanding of the economic principles behind, as well as the economic consequences of environmental changes. Topics include basic natural economics, economic growth and industrialization, resource valuation methods, input-output models, economics of user fees.

Management Science for Environment (ENS625M)
3 units
The course focuses on the application of management science in solving management decision problems. It provides illustrative examples and case studies in the application of these techniques.

Environmental Risk Assessment (ENS627M)
3 units
The course provides the scientific basis and concepts in assessing risks such as characterization of exposure, identification of hazards, dynamics and kinetics in biological systems. Preventive interventions will also be emphasized.

Information Technology for Environmental Studies (ENS629M)
2 units
The course focuses on the collection, organization, analysis, presentation and interpretation of environmental data using current computer based information technology.

Management Skills and Tools (ENS631M)
2 units
The course provides the foundation and training for developing skills and tools for management. These include changing a culture, process characterization and ownership, customer satisfaction, roles/quality advocacy, teamwork and team building, team meeting, problem solving tools, continuous improvement, management standards, coaching counseling and facilitation.

Environmental Governance (ENS633M)
2 units
The course aims to introduce the student to the political, social and cultural settings that will determine the responses of the Philippine society, both at the national and local level, to environmental issues and problems. Ethical repercussions will be considered along with the responsibilities of the environmental science practitioner. Development and implementations of environmental laws and policies will be examined. Executive, legislative and judiciary, community based perspectives will be analyzed.

Topics include Environmental Laws and Policies, The Philippine Medium Term Development Program, Philippine Sustainable Plan, Community Development, Community Organizing, Participatory Research and Management Methods, Resource Management.

Environmental Impact Assessments (ENS635M)
3 units
The course focuses on the processes and methodologies in environmental impact assessment (EIA). It also discusses impact prediction, risk and uncertainty in EIA, social assessment, environmental management plan and environmental monitoring program. The course also provides students hands-on activities in preparing EIA report.

Research Designs and Methods (ENS637M)
2 units
The course focuses on the principle and method of qualitative research and evaluation. This course will cover design of qualitative and evaluative studies, observation methods, fieldwork strategies, interviewing, documentation, analysis, interpretation and reporting.

Special Problem* (ENS872M)
3 units
This is a course where students select, analyze and investigate a specific contemporary topic or issue on environmental studies. Students have a widest freedom on the topic including but not limited to the experiences and problems encountered during his/her practicum. As a course requirement, student has to present the result of the investigation in a seminar or research forum. A written report must also be submitted at the end of the presentation.

Practicum* (ENS901M)
3 units
This is a course where students are provided opportunity to integrate and apply all the theories and skills learned in the previous academic courses. It is also serves as venue where students are exposed to real working environment in institutions or organizations involved in implementing environmental resource management. This is a 120-hr on-the-job training that may be paid or unpaid, which takes place at the workplace of participating institutions or organizations. Students may choose from any government or non-government institutions lined up for them by the department for their training. Experiences and problems encountered by the student during the practicum could provide possible topic or issue for his/her special problem.

*The student must enroll under a faculty adviser.