Master of Sciences – Environmental Management & Assessment Studies (EMAS)

Pollutants and naturally occurring substances pose a potential risk of having an adverse impact on human health and the environment. The proper management of these risks requires scientifically-based decision making. Environmental assessment bridges the gap between scientific research and the use of science in decision-making, regulation, and environmental management. By understanding and evaluating the sources, fate, and effects of pollutants in the environment we can develop a scientific basis for assessing risks and thus support regulatory, enforcement, and remedial-action decisions.

The MSc program (EMAS) is designed to develop a sound and critical understanding of the processes and methodologies of Environment Management, to expose students to the range of public policy and social science considerations involved in environmental planning, sustainable development and resource decision-making, to enhance students' existing knowledge of the biogeophysical environment and provide students with a thorough understanding of GIS applied to environmental decision-making. It is directed towards individuals who hold an undergraduate degree in any relevant discipline in the social or physical sciences and are interested in developing or enhancing their knowledge and skills in the environmental field. Students will also be able to relate EMAS theory and practice during their internship, designed to provide opportunities for them to deepen their knowledge and extend their skills through direct application as EMAS practitioners in governmental, non-governmental organizations (NGOs), or private sector organizations.

The program will provide:

An in-depth understanding of the natural and human-induced forcing factors that are responsible for the rapid rates of environmental, and the types of governance and community based responses required to address the impacts, vulnerabilities and implications of these changes on physical, biological, social, economic and cultural environmental conditions.

Professional development in the field of Environmental Assessment, Environmental Impact Statements, Environmental Management Plans and Environmental Management Systems for practitioners with practical skills in problem solving as related to adaptive environmental assessment and integrated management. Such skills will be acquired through a combination of face-to-face teaching and practical projects. Training sessions will utilise environmental simulation models to practice students in problem definition, data and information

manipulation, management and application. These tools will be used to support the preparation of EMAS documents and with environmental management system/plan preparation.

Environmental assessment and management practitioners with the theoretical understanding and practical tools to enable practitioners to more effectively integrate best practice environmental impact assessment tools and techniques with nationally and internationally endorsed environmental management systems. Such tools, techniques and systems are designed to mitigate unwanted effects and manage the outcomes of the implementation of project implantation in ways that ensure continuous improvement.

Skills will be acquired through a combination of lectures, readings, group discussions, practical projects and use of interactive modelling tools. Participants in the program will be assessed by a combination of individual and group project tasks.

Learning outcomes

On completion of courses under the MSc of EMAS participants in the professional development education and training program will be well equipped to meet existing and emerging professional challenges and be able to:

- follow international trends in environmental assessment and management
- better understand international and national obligations for environmental assessment and management
- use integrated adaptive assessment and management tools and techniques to achieve continuous improvement in environmental outcomes
- more effectively assess and manage complex industrial, infrastructure and urban development proposals using statutory and best practice processes and procedures

Organisation

Duration : 2 years - ECTS : 120 credits
Bilingual Program (French and English) or Only in English

	1st Semestre	Ects	2nd Semestre	Ects
1st YEAR	EMAS 311 - Environmental Economics	4	EMAS 321 - Climate Change	4
	EMAS 312 - Introduction to Statistics in the Environmental Sciences	4	EMAS 322 - Introduction to Planning and Development	4
	EMAS 313 - Group Development Workshop	4	EMAS 323 - Environmental Management and Risk Assessment	4
	EMAS 314 - Physical Science for Environmental Management	4	EMAS 324 - Dissertation Methods	4
	EMAS 315 - Society and Environment: Introduction to Theory and Method	4	Choose 1 major course	9
	EMAS 316 - The Politics and Practice of Environmental and Resource Policy	4		
	EMAS 317 - Ecosystem Analysis	4		
	LAN 318 - Language	2	Internsip of 3 Months	5
	60 ECTS			

	3rd Semestre	Ects	4th Semestre	Ects
2nd YEAR	EMAS 411 - GIS	4	Internsip of 6 Months	30
	EMAS 412 - Energy Management	4		
	EMAS 413 - The Basis for Conservation and Management	4		
	Choose 1 major course	12		
	LAN 414 - Language	2		
	60 ECTS			

Choose 1 major course from the following topics:

- ***Climate and Atmospheric Sciences***: Climate & Life; A Biological Perspective of Global Change, Climate and Air Pollution Seminar, Water Quality Control, Managing the Global Carbon Cycle
- ***Ecology and Conservation Biology***: Tropical Field Botany, Tropical Forest Ecology, Ecosystem Pattern and Process, Biological Oceanography, Biogeography and Conservation, Biodiversity Conservation, Aquatic Ecology, Species and Ecosystem Conservation: An Interdisciplinary Approach, Dynamics of Ecological Systems
- ***Economics***: Valuing the Environment, Green Markets, Economics of Natural Resource Management, Agriculture and the Environment, Environment and Development: An Economic Approach
- ***Energy and the Environment***: Energy Systems Analysis, Energy Issues in Developing Countries, Energy Markets Strategy

- ***Environmental Planning***: Land-Use Planning and Policy, Transportation and the Urban Future, Urbanization: Problem or Solution?, Cities and Sustainability in the Developing World, Ecological Urbanism, Management Plans for Protected, Areas Large-Scale Conservation: Integrating Science, Management, and Policy
- ***Environmental Policy***: International and Comparative Forest Policy and Governance, The New Corporate Social Responsibility: Public Problems, Private Solutions, and Strategic Responses, Technology, Society, and the Environment, Strategies for Land Conservation, Local Environmental Law and Land Use Practices, Environmental Law and Policy, International Environmental Law and Policy, Foundations of Natural Resource Policy and Management, Entrepreneurial Business Planning, Green Energy Policy, Environmental Ethics, Global Ethics and Global Problems
- ***Health and Environment***: Ecology and Epidemiology of Vector-Borne and Zoonotic Diseases, Applied Risk Assessment, Introduction to Toxicology, The Environment and Human Health
- ***Industrial Ecology***: Advanced Seminar: Business Strategy and Industrial Ecology , Industrial Ecology , Green Engineering and Sustainability, Greening Business Operations, Emerging Markets for Ecosystem Services
- ***Social and Political Ecology***: Global Problems of Population Growth, Society and Natural Resources, grarian Societies: Culture, Society, History, and Development, Producing and Consuming Nature, Social Science of Development and Conservation, Climate Change: Impacts, Adaptation, and Mitigation, Urbanization, Global Change, and Sustainability, Anthropology of the Global Economy for Development and Conservation, Households, Communities, Gender (for Development and Conservation)
- ***Water Resources***: Organic Pollutants in the Environment, Aquatic Chemistry, Biogeochemistry and Pollution, Coastal Governance, Water Resource Management, Coastal Ecosystems: Natural Processes and Anthropogenic Impacts, Environmental Hydrology, River Processes and Restoration, Watershed Cycles and Processes
- ***Waste Management*** : Waste Management: Systems and Principles, Emerging Technology in Solid Waste Management, Ground Water Problems, Environmental Toxicology, The Economics of Waste Management, Environmental and Waste Management in Business and Industry

Conditions to get the degree

- Student must to follow regullarly all the coures - He/She had to attend their class work, project; exams required in each course - He/She must to get at least 12/20
- Attend and realize Internships in company - Memory
- Student must get the TOEIC with 750 points or an equivalent in french

Tuition fee *8700 euros per year*