Master of Science in Natural Resources & Environment

Program Outline

The Environmental Management program is targeting policymakers, managers and environmental specialists in governmental agencies working with environmental issues and challenges. Executive managers and environmental specialists in corporations are also the primary audiences of the program. Graduate students who wish to pursue their studies in the field of environmental management are encouraged to join the program too.

Research areas include:

Environmental management for sustainable businesses, private sector companies, and Non-Government Organizations, including ISO 14000 certification, EIA procedures, risk management and the like

Environmental management and planning for public institutions, particularly environmental planning and policy formulation, environmental assessment, energy management, waste management, climate change, and the like.

Supportive measures for successful environmental management and planning. These measures using economic incentives, financial instruments, environmental awareness, laws and regulations, environmental statistics, environmental education and the like.

Outline of Courses

A. NRE Courses

Course Code	Course Title	Diploma	Masters
		Credit Hours	Credit Hours
GS 500	Islamic Culture	0	0
GSTS 501	Computer Applications	0	0
GSTS 502	English Language	0	0
GSTS 510	Scientific Writing	1	1
GSTS 520	Research Methods	2	2
GSTS 521	Applied Statistics	2	
NRE 520	Environmental Impact Assessment	2	
NRE 521	Water Resources Development and Management in Arid Regions	2	

B. Environmental Management Courses

The requirement of these Basic courses in Molecular Medicine must reach at least 6 credit hours.

Semester	Course Code	Diploma	Masters
		Credit Hours.	Credit Hours.
1	**Department Core Courses**		
GSTS 502	English Language	0	**0**
GSTS 501	Computer Applications	0	**0**
GS 500	Islamic Culture	0	**0**
GSTS 510	Global Environmental Issues	1	**1**
Program Specialized Courses			

NRE 521	Water Resources Development and Management in Arid Regions	2	**2**
NREEM 530	Waste Management and Pollution Abatement	3	**3**
NREEM 532	Environment and Sustainable Development	3	**3**
NREEM 510	Scientific Writing	1	**1**
NREEM 521	Management of the Marine Environment	2	**2**
NREEM 522	Environmental Management Systems	2	**2**
Total Department and Program Credit Hours for Year 1		**14**	**14**
2	**Department Core Courses**		
GSTS 520	Research Methods	2	**2**
	Program Specialized Courses		
GSTS 521	Applied Statistics	2	**2**
NRE 520	Environmental Impact Assessment	-	**2**
NREEM 523	Project Management	2	**2**
NREEM 524	Environmental Policy Making	-	**2**
NREEM 525	Environmental Economics	2	**2**
NREEM 526	Energy Resources Management	2	**2**
NREEM 540	Diploma Project	4	**-**
Total Department and Program Credit Hours for Semester 2		**12**	**12**
3	Elective Course	--	**2**
NREEM 527	Disasters and Risk Management	--	**2**

NREEM 680	MSc. Thesis	--	**8**
Total Department and Program Credit Hours for Semester 3		**--**	**12**

Course Description

NREEM 510 Global Environmental Issues (1Cr) (110): Seminar on the particular topic of contemporary global human-environment relationship.

NREEM 521 Management of the Marine Environment (2Cr) (220): Terminology and concepts in marine ecology, groups of marine organisms, assessment of water and sediment quality, management of marine habitats, anthropogenic pollutants and their control, management of marine communities, sustainable development of the marine environment, marine environmental legislation and laws.

NREEM 522 Environmental Management Systems (2Cr) (220): Concept of an Environmental Management Systems, the EMSs importance of firms and global level, recycling, clean production mechanism, life cycle assessment of a product, the role of EMS in environmental management, international environmental systems, Procedures to implement and operating EMS programs (ISO14000, ISO14001).

NREEM 523 Project Management (2Cr) (220): framework, quantitative methods, scope, time, cost, quality; human resources, communication, risk, procurement, integration, and professional responsibility.

NREEM 524 Environmental Policy Making (2Cr) (220): the Political, legal, and social context of policy and policymaking, policy analysis, stakeholder identification and their role, policy instruments, implementation, and impacts of policies, decision-making process.

NREEM 525 Environmental Economics (2Cr) (220): Microeconomic theory and analysis in resource management and use decisions, valuing environmental resource degradation.

NREEM 526 Energy Resources Management (2Cr) (220): Energy and development, the environmental impact of energy generation and use, energy policies, fossil fuel energy, renewable energy resources, consumption and conservation of energy types; energy use and energy efficiency, calculation of national energy balance.

NREEM 527 Disasters and Risk Management (2Cr) (220): Cities are subject to a wide array of risks including, but not limited, to oil spills, fires, extreme weather events, dust storms, flash floods, are among the significant disasters. The course introduces the student to the basics of disaster risk reduction and management and the role of

spatial planning and urban management in preparedness, prevention, and risk reduction, case studies from the GCC region.

NREEM 530 Waste Management and Pollution Abatement (3Cr) (330): Introduction to environmental pollution, environmental, socioeconomic and health impacts, management of pollution, the role of legislation and environmental conventions in pollution control, wastewater, and solid waste management, air quality management, the technology of pollution control.

NREEM 532 Environment and Sustainable Development (3Cr) (330): Earth's ecosystems, issues, and topics related to relationships between human populations and natural resources, strategies for sustainable management of the environment and natural resources.

NREEM 540 Diploma Project (4Cr): A student is expected to provide satisfactory evidence indicating a grasp of theoretical knowledge and practical knowledge in his field of study (environmental management). By the end of work, the student is expected to present his/her learning outcomes that reflect a thorough understanding of the chosen topic using sound methodologies.

NREEM 680 Master Thesis (8Cr): A student is expected to provide satisfactory evidence indicating a good grasp of all the dimensions of the research problem, ability to identify, follow and utilize the relevant references in addition to clear contribution towards understanding and solution of a research problem with suggestions and recommendations. By the end of work, the student is expected to present a thesis that reflects a thorough understanding and analysis of the chosen topic using scientific methodologies.