**Resource Economics and environmental Impact assessment**

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| **Course Title** | **Resource Economics and Environmental Impact assessment**  |
| **Course Code** | PPM 522 |
| **Credit Hours** | 3 |
| **Classification**  | Core |
| **Semester** | Year 1, Semester II |
| **Description** | The subject addresses concepts of resource economics, principles of Environmental Management., Principles of Ecology, Policies and Legal aspect of Environmental Management, Overview of Environmental Impact Assessment (EIA). Preparation and Review of Environmental Impact Assessment Report, Environmental Audit, Environmental Management Systems Standards: Related Issues in Environmental Management, Environmental Design and Environmental Economics. It will just try to notify students about Economic analysis of environmental problems focusing on air, water, and land pollution. Emphasis could be on analyzing individual incentives that lead to pollution, the valuation of environmental quality amenities, and the design and evaluation of regulations that seek to improve environmental quality. Natural resource economics is all about economic analysis of natural resources use and conservation and includes analysis of the use of fuel, forest, marine, and biodiversity resources. It focuses on evaluating natural resource use in terms of efficiency and sustainability, and designing regulations for correcting inefficiency and unsustainable resource market. |
| **Objective** | The course is intended to help students accomplish the following learning objectives:* It provides students with skills and understanding of necessary issues to identify, evaluate and respond the environmental and sustainability implications of project implementation and construction process.
* To learn and know more about natural resources like land, forest, fuel, marine, and biodiversity
* The course will enable students to understand about efficient and sustainable utilization of natural resources.
* Students are introduced to systematic analysis of procedures of environmental impacts of project implementation.
* Examine the operational concept of the principal components of economic efficiency, environmental integrity and social equity.
* Expose students to inter‑disciplinary approaches to problem identification, analysis and project design.
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| **Course Content** |  **Chapter 1****1. Resource economics**1.1. Introduction to natural resource economics 1.2. Resource assessment and land evaluation theory 1.3. Resource production potential assessment and crop production modeling1.4. Resource inventory techniques1.5. Remote sensing for resource inventories and integrated surveys, 1.6. Property rights, tenure regimes and agrarian reform.1.7. Economic benefits of water resources, land use, outdoor recreation, air quality, and other natural resources and environmental areas.**Chapter 2****2. Environmental Impact assessment**2.1.The meaning of the term ‘environment’* 1. The history and legal context of Environmental Impact Assessments
	2. When EIA is required
	3. Socioeconomic aspects of feasibility analysis and economic valuation
	4. How to systematically identify potential impacts of a given project
	5. The utilitarian and intrinsic value of the environment
	6. The basics of the theory of environmental regulations
	7. Dynamic regulations, regulation under asymmetric information
	8. The second best environmental regulation
	9. Voluntary and information based approaches to environmental managements
	10. Emerging approaches to energy conservation

**Chapter 3**1. **Environmental systems and effects of projects implementations**
	1. The different spheres of the environment (both natural and human),
	2. The effect of projects on the environment and ecosystem services.
	3. How do projects affect the environment?
	4. Implication of projects on the human environment: The concept of environmental justice and the implications of infrastructure.

**Chapter 4**1. **Mitigation methods to reduce environmental impacts**
	1. The consideration of alternatives as a means of mitigation.
	2. Mitigation through design, construction methods and management.
	3. How green projects can be used to enhance the environment.
	4. Conducting procedurally just public consultations

**Chapter 5**1. **Strategic Environmental Assessment**
	1. Environmental Assessment in Developing Countries
	2. The challenges specific to developing countries in conducting an environmental impact assessment.
	3. Environmental impact assessment in developing and developed countries.
	4. The design of environmental and natural resource policies, particularly incentive-based policies
	5. International environmental cooperation, environmental and natural resource policy in the developing world
	6. Sustainability and conservation of biodiversity.

**Chapter 6**1. **Cost-benefit analysis and the valuation of ecosystem services**
	1. Different methods of valuing ecosystem services, including, hedonic pricing and contingent valuation.
	2. Practical examples of valuing ecosystem services.
	3. Theoretical foundations and practical procedures of benefit-cost analysis
	4. The analysis and control of environmental risks
	5. Cost benefit analysis of specific environmental policies
	6. Critics of cost benefit analysis
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| **Mode of Delivery** | We will be taking an active learning approach in this class. Class participation is vital to learning and demonstrating proficiency in strategic management. Students are, therefore, expected to read, think about the issues and prepare to contribute to class discussion by sharing your experiences. The course instructor’s primary role is to facilitate the learning process. In each session, the instructor will devote some time in lecturing, but we will also spend a great deal of time in class discussion. Moreover, case studies and exercises will also be employed. |
| **Method of Assessment** | Individual Term Papers …………………………………30% Group Term Paper………………………………………20%  Classroom reflection exercises…………………………..10% Final Examination ……………………………………...40% |
| **Reading List** | *Readings:*Holling, C.S., (1987), *Adaptive Environmental Assessment & Management*, John Willey &Sons, New York.Munashinge, M. and Schwab, A., 1993. *Environmental Economics and Natural ResourceManagement in Developing Countries,* World Bank, New York.Munasinge, M., *1993, Environmental Economics and Sustainable Development,* World BankEnvironmental Paper 3, World Bank, New York. |