पर्यायवरणीय अध्ययन विभाग
DEPARTMENT OF ENVIRONMENTAL STUDIES
दिल्ली विश्वविद्यालय
University of Delhi
दिल्ली–११००००७ / Delhi-110007

Ref. No. : DES/..... *Dated.19/08/2021....*

Details of the Open elective Paper being offered by the Department of Environmental Studies in Semester –III

- Name of the Course: Paper-21- Environmental Studies: Towards A Sustainable Future (copy of syllabus attached)
- Credits: 4 credits course
- Number of Seats: Up to 75 (Total strength of master seats+10% of existing seats, as per norms of Faculty of Science)

Subject	Semester III/IV	Title of Papers	Seats offered to other Depts	Total No of Seats
MA/M.Sc programme in Environmental Studies	III rd	Paper-21- Environmental Studies: Towards A Sustainable Future	37	75

- Eligibility: The Open Elective offered by the Department of Environmental Studies shall be open to students from the Departments of Faculty of Science, Faculty of Social Science, Faculty of Mathematical Science, Faculty of Interdisciplinary & Applied Science and those students who meet the eligibility requirements for admission to M.Sc/MA Environmental Studies
    - Enrolment from within Department: up to 50% seats (as per norms of the Faculty of Science)
- Selection Criteria: A combination of two criteria, i.e., maximize representation of the Departments across Faculties and first-cum-first basis, will be used for selection of the candidates.

Head of the Department

Tel. No. : 011-27667125

OPEN ELECTIVE
Paper 21
ENVIRONMENTAL STUDIES: TOWARD A SUSTAINABLE FUTURE

Preamble: The paper focuses on the long-term well-being of the planet Earth and its myriad diversity of inhabitants and their habitats. This course is aimed at exploring the dilemma of the imperatives of economic development and criticality of conserving natural resources not only for the sake of preserving diversity of the living world including its varied ecosystem services, but also for the sake of intergenerational equity in the world dominated by the human enterprise. The course will examine successes and failures of sustainable development (SD) as the central paradigm of sustainability. The criticality of natural resources conservation and their unsustainable consumption patterns will be highlighted in the course. The need for engaging with multiple stakeholders in terms of a establishing a new world order based on the axiom of 'sustainable living' would be envisaged. With enduring human presence there is a need to ensure transition towards a sustainable society, which seeks a balance between human demands on nature and the ecological limits to growth. Establishing a sustainable society is our realistic hope and it will only evolve through addressing the root causes of the on-going environmental crisis. Addressing the causes, restructuring human systems and critical thinking would lay foundation for a sustainable society.

Evolution of sustainable development as the central paradigm of addressing the Earth's environmental crisis and human poverty; United Nations and the World Commission on Environment and Development.

Roots of the environmental crisis: Socio-economic systems characterized by resource overconsumption resulting in habitat destruction, resource depletion and degradation; cumulative failure of nations and societies to manage and restore degraded resources/ecosystems.

Restructuring human systems for sustainability: human population stabilization, management of natural resource – land, water, air and vegetation; efficient use of resources through renewable energy and recycling, restoration of natural systems, managing resource sustainability; India's water problems; declining per capita

water availability; irrigation problems and agriculture distress; climate change, water availability and farmer suicides in India; climate change and biodiversity loss, species extinctions and shrinking protected/conservation areas.

Critical thinking about environmental issues and solutions: Humans as part of the problem and also part of the solution: case studies to understand the problems and sustainable solutions under the carrying capacity framework of the environment, e.g. Vehicular pollution in Delhi, and administrative and technological instruments to solve it; burning of agriculture waste (parali) in neighboring states of Haryana and Punjab; Solid waste generation in urban centres such as Delhi and their management; Landfills in the urban environment: Sewage management.

Toward sustainability: New paradigms in economic and developmental planning; Emerging technologies and innovations for a sustainable world; Indian traditional cultural practices of recycling and reuse; ethics as the cornerstone of sustainable living; Mahatma Gandhis' philosophy of 'greed versus need'.

Suggested Readings

- Gadgil, M.& Guha, R. 2001. Ecology and Equity: The use and abuse of nature in contemporary India, Delhi, Penguin.
- Meadows, D.H. 2013. Club of Rome (1972) The Limits to Growth; a report for the Club of Rome's project on the predicament of mankind. Earth Island, London, UK.
- Owen, O.S. & Chiras, D.D. 1995. Natural resource conservation: management for a sustainable future (No. Ed. 6). Prentice-Hall International, Inc.
- Pandit, M.K., 2017. Life in the Himalaya: an ecosystem at risk. Harvard University Press; Chapter 10; pp.261-285.
- Robinson, J. 2004. Squaring the circle? Some thoughts on the idea of sustainable development. *Ecological Economics*, 48:369-384.
- Ruckelshaus, W. D. 1989. Toward a sustainable world. Scientific American, 261:166-175.
- Tietenberg. T. 2003, Environmental and Natural Resource Economics. Pearson Education, New York.
- Wals, A. E. (ed). 2007. Social learning towards a sustainable world: Principles, perspectives, and praxis. Wageningen Academic Pub.
- Wright, R. T. and Nebel, B. J. 2004. Environmental science (8thEdn.). Prentice Hall. India Ltd.