SVKM's Narsee Monjee Institute of Management Studies
Mukesh Patel School of Technology Management and Engineering

Program: B Tech/ MBA Tech				**Semester :** I/ II	
Course: Environmental Science				**Code:** 702CI0C014	
Teaching Scheme				**Evaluation Scheme**	
Lecture (Hours per week)	**Practical (Hours per week)**	**Tutorial (Hours per week)**	**Credit**	**Internal Continuous Assessment (ICA) (Marks - 50)**	**Term End Examinations (TEE) (Marks- ---)**
1	0	1	2	Marks Scaled to 50	--

Pre-requisite: Fundamental Knowledge of physics, chemistry and mathematics

Course Objective

This course aims to understand the multidisciplinary nature of environmental sciences, greenhouse effect and climate change. It also aims to discuss the basics of natural resources, biodiversity, environmental pollution.

Course Outcomes

After completion of the course, the student will be able to -

1. Explain the concept of natural resources, ecosystem and biodiversity
2. Relate the various aspects of environmental pollutions with its cause and effect
3. Explain the greenhouse effect and climate change

Detailed Syllabus

Unit	Description	Duration
1	**Multidisciplinary nature of environmental science** Definition, scope and importance of environmental sciences.	**01**
2	**Natural Resources** Natural resources: Forest resources, Water resources, Mineral resources, Food resources. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.	**02**
3	**Ecosystems** Concept of an ecosystem. Structure and function of an ecosystem. Food chains, food webs and ecological pyramids. Introduction, types, characteristic features of the following ecosystem:- a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems.	**02**
4	**Biodiversity** Definition: genetic, species and ecosystem diversity. Value of biodiversity: consumptive use, productive use. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.	**02**
5	**Environmental Pollution** Definition, Cause and effects for Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards and Solid waste pollution.	**04**
6	**The Science of Climate Change** Greenhouse effect, Global warming, Global environmental changes, Acid rain Ozone layer depletion, Carbon footprint	**04**
	Total	**15**

Text Books

1. Erach Bharucha, *Textbook of Environmental Studies*, 2nd Edition, University Press, 2019.
2. Soli J Arceivala, Dr. Shyam R. Asolekar; *Environmental Studies: A Practitioner's Approach*, 1st Edition, McGraw-Hill Education Private Limited, 2012. (Classic Book)

Reference Books

1. MP Poonia & SC Sharma, *Environmental Studies*, 1st Edition, Khanna Publishing House, 2017. (Classic Book)
2. Rajagopalan, *Environmental Studies*, 3rd Edition, Oxford University Press, 2015. (Classic Book)

Tutorial Work

8 to 10 Tutorial exercises based on the syllabus.

Signature
(Head of the Department)