



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

COURSE PLAN

Department

:

Civil Engineering

Course Name & code

:

Environmental studies & CIE 1052

Semester & branch

:

01 & Chemistry Cycle

Name of the faculty

:

Mr. Anup Wilfred Sebastian & Mr. Vishnu Unnikrishnan

No of contact hours/week:

L	T	P	C
2	0	2	2

ASSESSMENT PLAN

Course Outcomes (COs)

At the end of this course, the student should be able to:

		No. of Contact Hours	Marks
CO1:	Discuss the role of Environmental Science, its multidisciplinary nature in conservation of global environment	6	20
CO2:	Describe the natural resources, utility and the role of ecosystems in maintaining planetary cycles	8	25
CO3:	Discuss types, sources, and prevention and control measures of pollution	4	20
CO4:	Discuss laws, acts and policies related to environmental protection in India	2	15
CO5:	Describe types, mitigation and management techniques of disaster	4	20

	Total	24	100
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Components	Quiz 1 (online)	Continuous Assessment (Submission type)	In-Semester Examination (online)	End-Semester Examination (offline)
Duration	30 minutes	30 minutes after every class	90 minutes	180 minutes
Weightage	10% (10 marks)	20% (20 marks)	20% (20 marks)	50% (50 marks)
Typology of Questions	Understanding/ Comprehension; Application; Analysis; Evaluation	Knowledge/ Recall; Understanding/ Comprehension; Application	Understanding/ Comprehension; Application; Analysis; Evaluation	Understanding/ Comprehension; Application; Analysis; Evaluation
Pattern	MCQ and/or fill in the blanks using MS Forms	Activity in the form of a mini project addressing current issues	Answer all 4 full questions of 10 marks each. Each question will have 2 parts of 4 and 6 marks	Answer all 5 full questions of 10 marks each. Each question will have 2 parts of 4 and 6 marks
Schedule	6 th week of academic calendar	Every class from 7 th week to 16 th week of academic calendar	13 th week of academic calendar	Between 21 Feb 2022 & 5 Mar 2022
Topics Covered	L 1-8 (C01 - 2)	L 19 onwards (C01,2,3 & 5)	Comprehensive examination covering L 1-14 Students are expected to answer all questions (C01-5)	Comprehensive examination covering full syllabus. Students are expected to answer all questions (C01-5)

Lecture Plan

L. No./ T. No.	Topics	Course Outcome Addressed
L0	Course Outline, Course Plan, Assessment Plan	-
L1	Introduction of the subject: Meaning, objectives, major environmental issues	1
L2	Sustainable development, Environment as a global concern	1
L3	Sundarbans Vanishing Shores/Case study 1	1

L4	Natural Resources: Renewable and non-renewable resources – Resource consumption & conservation methods. Availability of water resources, Forest, Land and Mineral resources	2
L5	Energy – Different types of energy, Conventional sources & non-Conventional sources of energy, solar energy, Hydro electric energy, Wind Energy, Nuclear energy, Biomass & Biogas, Fossil Fuels, Hydrogen as an alternative energy	2
L6	How Ballari was laid waste? / Case study 2	2
L7	Ecosystem: Meaning, structure and functions, biotic and abiotic components, Tropic levels, Energy flow in an ecosystem	2
L8	Biodiversity and its conservation – in situ & ex situ	2
L9	Chennai Floods, A Man-made Natural Disaster / Case study 3	2,5
L10	Environmental Pollution - water, air, land, noise, solid waste	3
L11	Biomedical waste, nuclear pollution, marine pollution	3
L12	The Cost of Green Revolution / Case study 4	3
L13	Environmental laws and legislations: Related to general, air, water, biodiversity and forests.	4
L14	Pollution control Boards: Central & State - Roles and responsibilities, Environmental impact assessment (EIA)	4
L15	How to define an electrified village? Current distress / Case study 5	2
L16	Disaster Management: Meaning, classification of disasters, Disaster risk formula	5
L17	Disaster management phases – Disaster management cycle, Emergency response and recovery, Hazardous waste spills and dangers posed	5
L18	Citizen Conservation, Limitations of traditional conservation measures and the role of technology in mitigating them / Case study 6	1
L19	Student activity 1/ To describe the Environmental problems of your locality and suggest a remedy	1,5
L20	Student activity 2 /To prepare the list of plants and animals which are used for making meals at your home on any one day and to comment on the habit and the habitat of each.	2
L21	Student activity 3/To describe: a) Climate of your area b) Yearly variation in the suspended particulate matter in the same area	3
L22	Student activity 3 continuation / Revision class	3
L23	Student activity 4/To make an audit of the Electrical energy consumption by various household appliances at your home.	1
L24	Student activity 4 continuation / Revision class	1

References:

1. Mohan kanda, Disaster Management in India evolution of institutional arrangements & operational strategies. (2017)
2. Benny Joseph, Environmental Studies, Tata McGraw-Hill Publishing Company Ltd., New Delhi (2008)
3. Aloka Debi, "Environmental Science and Engineering", Universities Press (India) Pvt. Ltd. (2012)
4. Y.Anjaneyulu, Introduction to Environmental science (2017)
5. Student guide: Environment Reader for Universities, based on UGC syllabus published by Centre for Science and Environment, (2017).

Submitted by: Mr. Anup Wilfred Sebastian; Assistant Professor, Civil Engg Department

(Signature of the faculty)

Date: 22-10-2021

Approved by: Dr. Purushotham G Sarvade

(Signature of HOD)

Date: 22-10-2021