



योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada
An Institute of National Importance, Ministry of Education Gov. of India

Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Course: ARC126 – Environmental Sciences	Class: B. Arch - Year I Sem II (2023-24)	Coordinator: Dr. Bhanuchitra , Pushpendra Kumar Ar. Pushpendra Kumar
Credits: 3 (2L + 1T)	Contact Hours per week: 03 hrs	Time Table: Tuesday, 9:00 am - 11:45 am
Internal Assessment Marks: 50	External Theory Exam: 50	Total Marks: 100
Min. Attendance: 75%	Min. Marks: 40% both in Internal & External	

Subject Objectives:

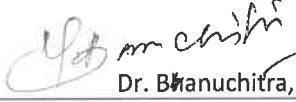

- To introduce the basics of environmental science and its relevance to mankind, the built environment around.
- To also introduce fundamentals of Climatology in view of its integral importance for students of Architecture.

Lecture Plan:

Week No.	Date	Topic(Lecture/Discussion)	Methodology/Assignment
Week 1	4.01.2024	Overview of the syllabus & discussion of lecture plan. Adopting innovative methodologies for the subject	
Week	11.01.2024	Discussion on the various social issues and group discussion for the evolution after 50 Year because of the pollution	Presenting Video documentaries on 'Environmental Awareness' and having a classroom discussion on various parameters.
Week	18.01.2024	UNIT I - INTRODUCTION TO ECOSYSTEMS AND ENVIRONMENT, ENVIRONMENTAL RESOURCES Types of ecosystems, characteristics features, structure and functions of Ecosystems	Lecture and Classroom Discussion
Week	25.01.2024	UNIT I - INTRODUCTION TO ECOSYSTEMS AND ENVIRONMENT, ENVIRONMENTAL RESOURCES Forest, Grassland, Desert, Aquatic (lakes, rivers and estuaries). Land, Forest, Water and	Lecture and Classroom Discussion Assignment 01 – Eco Heroes (10 MM) Students will create a

		Energy as environmental resources.	comic strip that depicts a group of eco-heroes on a mission to save the environment & utilize environmental resources sustainably
Week	01.02.2024	UNIT II - BIO-DIVERSITY AND ITS CONSERVATION Value of bio-diversity - consumptive and productive use, social, ethical, aesthetic and option values. Bio geographical classification of India – India as a mega diversity habitat.	Lecture and Classroom Discussion
Week	08.02.2024	UNIT II - BIO-DIVERSITY AND ITS CONSERVATION Threats to biodiversity- Hotspots, habitat loss, poaching of wildlife, loss of species, seeds etc. Conservation of bio-diversity, in-situ and ex-situ conservation.	Lecture and Classroom Discussion
Week	15.02.2024	UNIT III - ENVIRONMENTAL PROBLEMS IN INDIA Local and Global Issues, Causes, effects and control measures of Air pollution, Indoor air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Solid waste management, composting, vermin culture	Lecture and Classroom Discussion
Week	22.02.2024	UNIT III - ENVIRONMENTAL PROBLEMS IN INDIA Urban and Industrial wastes, recycling and re-use. Nature of thermal pollution and nuclear hazards, Global warming, Acid rain and Ozone layer depletion.	Lecture and Classroom Discussion
Week	29.02.2024	UNIT IV - SOCIAL ISSUES AND ENVIRONMENT Social issues and the environment, from unsustainable to sustainable development, urban problems related to energy	Lecture and Classroom Discussion Assignment 02 – Sustainable Cities (10 MM)

		Human population and environment- population explosion, resource exploitation and depletion, human-wild conflict, loss of wet lands, mangroves, increasing desert areas, spread of diseases.	Students will create a short video that highlights the social issues related to the environment and urban problems related to energy in their local area and propose solutions for creating sustainable cities.
Week	07.03.2024	UNIT V INSTITUTIONS AND GOVERNANCE Introduction to Government regulations, Monitoring and enforcement of environmental regulations.	Lecture and Classroom Discussion
Week	14.03.2024	UNIT V INSTITUTIONS AND GOVERNANCE Introduction to Environmental Acts, viz., Water (Prevention and Control of Pollution) Act.	Assignment 03 – Environmental Acts Brochure (10 MM) Students will research and analyze the key provisions of the acts and create an informative and visually appealing brochure to communicate their findings to a target audience
Week	21.03.2024	UNIT V INSTITUTIONS AND GOVERNANCE : Air Prevention and Control of pollution act, Environmental Protection Act, Wildlife protection Act, Forest Conservation Act, etc.	Lecture and Classroom Discussion
Week	28.03.2024	Review of the all Assignment	Students will work and improve the assignments.
Week	04.03.2024	Discussion on the Government policies and methods of implementation and their problems for the society.	Ground survey on the activities with final report
Week	11.03.2024	Final Submission of the schemes and Policies and new method to adept the policies' during the discussion.	Lecture and Classroom Discussion
Week	18.03.2024	Final Submission and discussion for the final end exam.	Lecture and Classroom Discussion

		END SEMESTER EXAMINATION	
Subject Outcomes:			
Students finishing this course will be able to:			
<ul style="list-style-type: none"> • Understand concepts related to environment studies and the responsibility of designing built environments. • Work according to the various Acts and regulations present in the country • 3. Appreciate the bio-diversity a region is endowed with and respect the role of the natural environment. 			
References:			
<ul style="list-style-type: none"> • Agarwal, K. C. (2001). Environmental Biology. Bikaner: Nidhi Publications Ltd. • Benny, J. (2005). Environmental Studies. New Delhi: Tata McGraw Hill. • Bharucha, E. (2005). Text book of environmental studies for undergraduates' courses. New Delhi: Universities Press, UGC. • Brunner, R.C. (1989). Hazardous Waste Incineration. New Delhi: McGraw Hill. • 5. Kaushik, A. and Kaushik, C. P. (2010). Basics of Environment and Ecology. New Delhi: New Age International Publisher 			
Dr. Umashankar Basina (Head of Department)		 Dr. Umashankar Basina	 Dr. Branuchitra, Ar. Pushpendra Kumar (Subject Coordinator)