



RAGHU ENGINEERING COLLEGE(Autonomous)

(Approved by AICTE, New Delhi, Accredited by NBA (CIV, ECE, MECH, CSE), NAAC with 'A+' grade & Permanently Affiliated to JNTU-GV Vizianagaram)

Dakamarri, Bheemunipatnam Mandal, Visakhapatnam Dist. - 531 162 (A.P.)

Ph: +91-8922-248001, 248002 Fax: + 91-8922-248011

e-mail: principal@raghuenggcollege.com website: www.raghuenggcollege.com

AR23	Environmental Studies (common to all branches)	L	T	P	C
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Course Learning Objectives:

The objectives of the course is to impart

1. Overall understanding of the natural resources
2. Basic understanding of the ecosystem and its diversity
3. Acquaintance on various environmental challenges induced due to unplanned anthropogenic activities
4. An understanding of the environmental impact of developmental activities
5. Awareness on the social issues, environmental legislation and global treaties

Syllabus:

UNIT –I Multidisciplinary nature of Environmental Studies: (6hrs)

Definition, multidisciplinary nature, Scope and Importance of environmental studies–Global Environmental Challenges: Global warming.

UNIT–II Natural Resources: (6hrs)

Natural resources and associated problems

Forest resources–Use and over–exploitation, deforestation –Timber extraction–Mining–dams

Water resources–Use and overutilization of surface and ground water– conflicts over water, dams–benefits and problems

UNIT–III Ecosystems: (6hrs)

Concept of an ecosystem. - Structure and function of an ecosystem- Producers, consumers and decomposers. –Energy flow in the ecosystem–Food chains, food webs and ecological pyramids.

UNIT– IV Biodiversity and its conservation: (6hrs)

Definition: genetic, species and ecosystem diversity- classification- Value of biodiversity

-Hot-spots of biodiversity–Endangered and endemic species of India–Conservation of biodiversity

UNIT–V Environmental Pollution and Social issues: (6hrs)

Definition, Cause, effects and control measures of Air pollution, Water pollution, Water conservation, rainwater harvesting, Environmental Protection Act–Air (Prevention and Control of Pollution) Act.–Water (Prevention and control of Pollution) Act–Wildlife Protection Act–Forest Conservation Act–Public awareness.



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Course Outcomes:

The student should have knowledge on

1. The natural resources and their importance for the sustenance of the life and recognize the need to conserve the natural resources
2. The concepts of the ecosystem and its function in the environment. The need for protecting the producers and consumers in various ecosystems and their role in the food web
3. The biodiversity of India and the threats to biodiversity and conservation practices to protect the biodiversity
4. Various attributes of the pollution and their impacts and measures to reduce or control the pollution along with waste management practices
5. The environmental legislations of India and the first global initiatives towards sustainable development.

TextBooks:

1. Environmental Studies, K.V.S.G.Murali Krishna, VGS Publishers, Vijayawada
2. Environmental Studies, R. Rajagopalan, 2nd Edition, 2011, Oxford University Press
3. Environmental Studies, P. N. Palanisamy, P. Manikandan, A. Geetha, and K. Manjula Rani; Pearson Education, Chennai

Reference:

1. Text Book of Environmental Studies, Deeshita Dave & P. Udaya Bhaskar, Cengage Learning.
2. A Textbook of Environmental Studies, Shaashi Chawla, TMH, New Delhi
3. Environmental Studies, Benny Joseph, Tata McGraw Hill Co, New Delhi
4. Perspectives in Environment Studies, Anubha Kaushik, C P Kaushik, New Age International Publishers, 2014