



PRAGATI ENGINEERING COLLEGE

(Autonomous)

(Approved by AICTE, Permanently Affiliated to JNTUK Kakinada & Accredited by NBA)
1-378, ADB Road, Surampalem - 533 437, Near Peddapuram, E.G. Dist., A.P.

Ph: (08852) - 252233, 252234, 252235 Fax: (08852) - 252232



BOARD OF STUDIES

2019-2020

3rd August, 2019

DEPARTMENT OF ENVIRONMENTAL STUDIES

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BOARD OF STUDIES (BOS) – Meeting **DEPARTMENT OF ENVIRONMENTAL STUDIES**

Date: 03-08-2019

Agenda for BOS Meeting (BS&H):

1. Welcome Address by Chairman-BOS
2. Sharing the information regarding the list of subjects for which syllabi has to be finalized.
3. Discussion on proposed syllabus of above subjects and ratification of the same.
4. Finalization of text books and reference books.
5. Any other item.


Chairman-BOS

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Department of Environmental studies Composition of the Board of Studies

S.No	Recommended Composition	Name
1	Head of the Department concerned (Chairman)	Dr.P.V.S.Machi Raju
2	The entire faculty of each specialization	1.Mrs.P.sravani 2.Mrs.N.Prasanthi 3.Mrs.S.Bhargavi
3	Two experts in the subject from outside the college to be nominated by the Academic Council.	1.Prof.K. KameswaraRao Department of Environmental Sciences Andhra University, Visakhapatnam Ph: 09440974032 2.Dr.T.Damodharam, Head & Assoc. professor, Department of Environmental Sciences Sri Venkateswara University, Tirupati. Ph: 09290648816
4	One experts to be nominated by the vice-chancellor from a panel of Six recommended by the college principal.	Prof. P.V.V.PrasadaRao Department of Environmental Sciences Andhra University, Visakhapatnam Ph:9493801658
5	One representative from industry/corporate sector/allied area relating to placement	Dr.N.KrishnaPrakasam, Consultant for Polymers Hyderabad
6	One postgraduate meritorious alumnus to be nominated by the principal.	-----

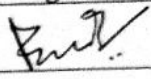
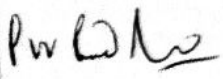

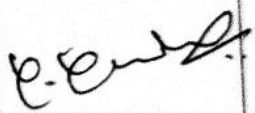
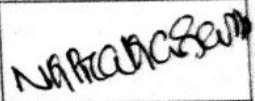
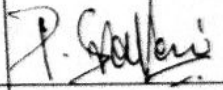
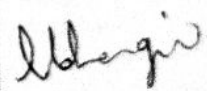
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Department of Environmental Studies

Signature of the Members Who attended the Board of Studies (BOS) meeting of Environmental studies

S. No	Name	Designation	Signature
1	Dr.P.V.S.Machiraju	HOD& Chairman-BOS	
2	Prof.P.V.V.PrasadaRao	Professor of Environmental Sciences, Andhra University Visakhapatnam	
3	Dr. T.Damodaram,	Head & Assoc. Prof, Dept.of Environmental sciences, Sri VenkateswaraUniversity,Tirupati	
4	Prof. K.KameswarRao	Professor of Environmental Sciences, Andhra University Visakhapatnam	
5	Dr. N. Krishna Prakasham	Director, Visista chemical Solutions, Indrapalem, Kakinada	
6	Mrs. P. Sravani	Assistant Professor of Environmental Studies	
7	Mrs. S. Bhargavi	Assistant Professor of Environmental Studies	
8	Mrs. N. Prasanthi	Assistant Professor of Environmental Studies	

Environmental Studies (Common to All Branches)		Course Code	19BE1MC01
Course Category	Basic Sciences	L-T-P-C	3-0-0-0
Course Type	Theory	Internal Assessment	0
Prerequisites	Basic Knowledge in Environment and protection.	Semester End Examination	0
		Total Marks	0

COURSE OBJECTIVE:

1

To make the students to get awareness on environment, to understand the importance of protecting natural resources, ecosystems for future generations and pollution causes due to the day to day activities of human life to save earth from the inventions by the engineers.

COURSE OUTCOMES

Upon successful completion of the course, the student will be able to:

CO1	Recognize the interconnectedness of human dependence on the earth's ecosystems	LEVEL -II
CO2	Comprehend environmental problems from multiple perspectives with emphasis on human modern lifestyles and developmental activities	LEVEL -I
CO3	Demonstrate knowledge relating to the biological systems involved in the major global environmental problems of the 21st century	LEVEL -II
CO4	Gain a higher level of personal involvement and interest in understanding and solving environmental problems.	LEVEL -II
CO5	Learn the management of environmental hazards and to mitigate disasters and have a clear understanding of environmental concerns and follow sustainable development practices	LEVEL -III
CO6	Influence their society in proper utilization of goods and services.	LEVEL -I

Contribution of Course Outcomes towards achievement of Program

Outcomes (1 - Low, 2 - Medium, 3 - High)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1	0	1	0	0	1	2	0	0	0	1	0	0	0
CO2	0	1	0	0	0	0	1	0	0	0	0	0	0	0
CO3	0	0	0	0	2	0	1	0	0	0	0	0	0	0
CO4	0	0	0	0	1	1	3	0	0	0	0	0	0	0
CO5	0	0	0	0	0	0	3	1	0	0	0	0	0	0

Course contents:**UNIT - I**

Multidisciplinary nature of Environmental Studies: Definition, Scope and Importance-Need for public awareness.

Natural Resources:

Forest resources : deforestation - Mining, dams and other effects on forest and tribal people.

Water resources : Use and over utilization of surface and groundwater.

Food resources: World food problems, effects of modern agriculture, fertilizer-pesticide problems.

Energy resources: renewable and nonrenewable energy sources.

Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

LEARNING OUTCOMES:

Students will be able to

1. Articulate the basic structure, functions, and processes of key social systems affecting the environment
2. Explain why renewable and non-renewable energy resources are important..
3. Explain how water resources should be used.

UNIT-II; Ecosystems, Biodiversity and its conservation: Definition of Ecosystem and its structure, Functions

Biodiversity Definition-Value of biodiversity, India as a mega-diversity nation, Threats to biodiversity, Conservation of biodiversity

LEARNING OUTCOMES:

Students will be able to

1. Get a clear picture of structure and functions of ecosystems.
2. Demonstrate knowledge and understanding of theories in the field of Biodiversity and Systematic in the broad sense.

UNIT-III: Environmental Pollution: Definition, Cause, Effects of Air pollution, Water pollution, Noise pollution, Radioactive pollution, Role of an individual in prevention of pollution.

Solid Waste Management: Sources, effects and control measures of urban and industrial waste

LEARNING OUTCOMES Students will be able to

1. Understand Cause, effects and control measures of air pollution
2. Explain the enforcement of Environmental legislation
3. Understand solid waste management

UNIT-IV: Social Issues and the Environment: Air (Prevention and Control of Pollution) Act 1981, Water (Prevention and control of Pollution) Act 1974, EPA act 1986, issues involved in enforcement of environmental legislation, Rain water harvesting, Global Environmental challenges climate change and mitigations and Adaptations (Engineering technologies)

LEARNING OUTCOMES:

Students will be able to

1. Explain the enforcement of Environmental legislations
2. Acquire knowledge on various environmental challenges induced due to unplanned anthropogenic activities

UNIT-V: Human population and the Environment:

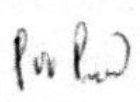
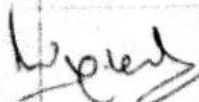
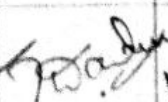


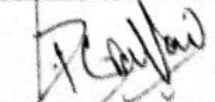

Population growth, Women and child welfare, Role of Information technology in environment and human health Awareness to Environmental Assessment & clearance, Audit, Environmental Governance in india E-Waste management Rules (Biomedical Waste, Solid Waste) **Field work:** A mini project related to Environmental issues / To visit a local polluted site (Submission of project by every student)

LEARNING OUTCOMES Students will have

1. Explain various types of information technologies
2. Explain the theories of population explosion

TEXT BOOKS	
1.	Environmental Studies for undergraduate courses by ErachBharucha,UGC.
2.	A Textbook of Environmental Studies by Dr.S.AzeemUnnisa,Academic publishing company.
3.	Environmental Studies by P.N. Palanisamy, P. Manikandan, A. Geetha, and K. Manjula Rani; Pearson Education, Chennai
4.	A Textbook EIA Notification 2006(2019)
REFERENCE BOOKS	
1.	Text Book of Environmental Studies by Deeshita Dave & P. UdayaBhaskar, Cengage learning.
2.	Glimpses of Environment by K.V.S.G. Murali Krishna Published by Environmental Protection Society, Kakinada, A.P.
3.	Environmental Studies by Benny Joseph, Tata McGraw Hill Co, New Delhi
WEB RESOURCES	
1.	UNIT-1: MULTI DISPLINARY NATURE OF ENVIRONMENT and NATURAL RESOURCES http://www.defra.gov.uk/environment/climatechange
2.	UNIT-2: ECOSYSTEM, BIODIVERSITY AND ITS CONSERVATION http://conbio.net/vl/ and www.biodiversitya-z.org/content/biodiversity
3.	UNIT-3: ENVIRONMENTAL POLLUTION https://www.omicsonline.org/environment-pollution-climate-change.php and
4.	UNIT-4: Social Issues and the Environment http://www.publichealthnotes.com/solid-waste-management/
5.	UNIT-5: HUMAN POPULATION AND THE NVIRONMENT http://IPCC.com

Signatures of Members of BOS

University Nominee	Expert	Expert	Industry Personnel	BOS Chairman	Member	Member
						

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Minutes of the BoS Meeting

The BOS meeting of Environmental Studies is held on 03-08-2019 at 10.00 A.M in the T&P cell (Admission room) and the following members attended the meeting.

After discussion on the agenda the following are the suggestions and resolutions of BOS meeting of Environmental Studies

Item No -3: Discussion is made on the proposed syllabus and the syllabus is approved and ratified with the following inclusions from Unit-IV and Unit-V.

Considered Item No.3

Suggestions on Unit-IV: The topics Climate Change, Mitigations and adaptations are to be included in Unit-IV and the topics are to be taught with Engineering Technologies.

Suggestions on Unit-V: The topics on Awareness to Environmental Assessment, Environmental Clearance and Audit and E-Waste management rules are to be included in Unit-V

Considered Item No-4

Under item-IV, the following text books reference books and web references are suggested for study of the topics in the subject and the same are included and ratified..

- Climate Change - Action Plan of India (2019)
- A Textbook EIA Notification 2006(2019)
- <http://IPCC.com>

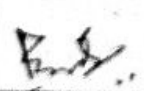
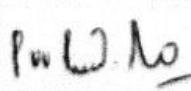
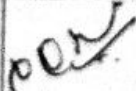
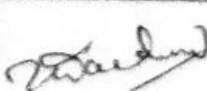
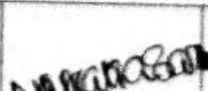
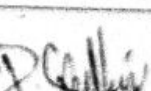

Considered Item:- 5:

Under Item-5, Any other item

The expert members of the BOS in Environmental Studies have observed that the Environmental Studies course being taught to the students of Engineering was made as a noncredit course by the university and some other institutions like AICTE, APSCHE etc.,

However, the members are of view that it should be a credited course on par with the other credit course with practicals so as to comply with the spirit of introducing Environmental studies in engineering colleges

Signatures of Members of BOS:

						
Dr.P.V.S.Machi Raju	Dr.P.V.V.Prasada Rao	Dr.K. Kameswara Rao	Dr.T.Damodharam	Dr.N.KrishnaPra kasam,	Mrs.P.Sravani	Mrs.S.Bhargavi