JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF CSE - ARTIFICIAL INTELLIGENCE & DATA SCIENCE

I Year - I Semester		L	T	P	C
		2	0	0	0
	ENVIRONMENTAL SCIENCE (MC1101)				

Course Objectives:
The objectives of the course are to impart:
- Overall understanding of the natural resources.
- Basic understanding of the ecosystem and its diversity.
- Acquaintance on various environmental challenges induced due to unplanned anthropogenic activities.
- An understanding of the environmental impact of developmental activities.
- Awareness on the social issues, environmental legislation and global treaties.

UNIT I

Multidisciplinary nature of Environmental Studies: Definition, Scope and Importance – Sustainability: Stockholm and Rio Summit–Global Environmental Challenges: Global warming and climate change, acid rains, ozone layer depletion, population growth and explosion, effects. Role of information technology in environment and human health.

Ecosystems: Concept of an ecosystem. - Structure and function of an ecosystem; Producers, consumers and decomposers. - Energy flow in the ecosystem - Ecological succession. - Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems.

UNIT II

Natural Resources: Natural resources and associated problems.

Forest resources: Use and over – exploitation, deforestation – Timber extraction – Mining, dams and other effects on forest and tribal people.

Water resources: Use and over utilization of surface and ground water – Floods, drought, conflicts over water, dams – benefits and problems.

Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.

Food resources: World food problems, changes caused by non-agriculture activities-effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.

Energy resources: Growing energy needs, renewable and non-renewable energy sources use of alternate energy sources.

Land resources: Land as a resource, land degradation, Wasteland reclamation, man induced landslides, soil erosion and desertification; Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

UNIT III

Biodiversity and its conservation: Definition: genetic, species and ecosystem diversity-classification - Value of biodiversity: consumptive use, productive use, social-Biodiversity at national and local levels. India as a mega-diversity nation - Hot-sports of biodiversity - Threats to biodiversity: habitat loss, man-wildlife conflicts. - Endangered and endemic species of India – Conservation of biodiversity: conservation of biodiversity.

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UNIT IV

Environmental Pollution: Definition, Cause, effects and control measures of Air pollution, Water pollution, Soil pollution, Noise pollution, Nuclear hazards. Role of an individual in prevention of pollution. - Pollution case studies, Sustainable Life Studies. Impact of Fire Crackers on Men and his well being.

Solid Waste Management: Sources, Classification, effects and control measures of urban and industrial solid wastes. Consumerism and waste products, Biomedical, Hazardous and e – waste management.

UNIT V

Social Issues and the Environment: Urban problems related to energy -Water conservation, rain water harvesting-Resettlement and rehabilitation of people; its problems and concerns. Environmental ethics: Issues and possible solutions. Environmental Protection Act -Air (Prevention and Control of Pollution) Act. –Water (Prevention and control of Pollution) Act - Wildlife Protection Act -Forest Conservation Act-Issues involved in enforcement of environmental legislation. -Public awareness.

Environmental Management: Impact Assessment and its significance various stages of EIA, preparation of EMP and EIS, Environmental audit. Ecotourism, Green Campus – Green business and Green politics.
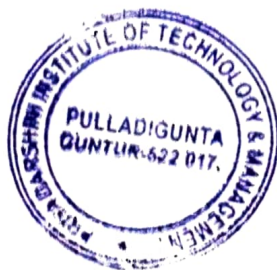
The student should Visit an Industry / Ecosystem and submit a report individually on any issues related to Environmental Studies course and make a power point presentation.

Text Books:

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 Books:

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

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

II Year I Semester		L	T	P	C
		2	0	0	0
	PROFESSIONAL ETHICS & HUMAN VALUES				

Preamble:

This course is a mandatory course introduced to impart the Ethics and Human Values to the students in engineering education.

Course Objectives:
- To create an awareness on Engineering Ethics and Human Values.
- To instill Moral and Social Values and Loyalty
- To appreciate the rights of others
- To create awareness on assessment of safety and risk

UNIT -I
Human Values:

Morals, Values and Ethics-Integrity-Work Ethic-Service learning – Civic Virtue – Respect for others –Living Peacefully –Caring –Sharing –Honesty -Courage-Cooperation– Commitment – Empathy –Self Confidence Character –Spirituality.

Learning outcomes:
1. Learn about morals, values & work ethics.
2. Learn to respect others and develop civic virtue.
3. Develop commitment
4. Learn how to live peacefully

UNIT -II
Engineering Ethics:

Senses of 'Engineering Ethics-Variety of moral issued –Types of inquiry –Moral dilemmas – Moral autonomy –Kohlberg's theory-Gilligan's Theory-Consensus and controversy –Models of professional roles-Theories about right action-Self-interest -Customs and religion –Uses of Ethical theories –Valuing time –Cooperation –Commitment.

Learning outcomes:
1. Learn about the ethical responsibilities of the engineers.
2. Create awareness about the customs and religions.
3. Learn time management
4. Learn about the different professional roles.

UNIT -III
Engineering as Social Experimentation:

Engineering As Social Experimentation –Framing the problem –Determining the facts – Codes of Ethics –Clarifying Concepts –Application issues –Common Ground -General Principles –Utilitarian thinking respect for persons.

Learning outcomes:
1. Demonstrate knowledge to become a social experimenter.
2. Provide depth knowledge on framing of the problem and determining the facts.
3. Provide depth knowledge on codes of ethics.
4. Develop utilitarian thinking

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UNIT -IV
Engineers Responsibility for Safety and Risk:

Safety and risk –Assessment of safety and risk –Risk benefit analysis and reducing risk- Safety and the Engineer-Designing for the safety-Intellectual Property rights (IPR).

Learning outcomes:

1. Create awareness about safety, risk & risk benefit analysis.
2. Engineer's design practices for providing safety.
3. Provide knowledge on intellectual property rights.

UINIT- V
Global Issues:

Globalization –Cross-culture issues-Environmental Ethics –Computer Ethics –Computers as the instrument of Unethical behavior –Computers as the object of Unethical acts – Autonomous Computers-Computer codes of Ethics –Weapons Development -Ethics and Research –Analyzing Ethical Problems in research.

Learning outcomes:

1. Develop knowledge about global issues.
2. Create awareness on computer and environmental ethics
3. Analyze ethical problems in research.
4. Give a picture on weapons development.

Course outcomes:

Students will be able to:

- Identify and analyze an ethical issue in the subject matter under investigation or in a relevant field
- Identify the multiple ethical interests at stake in a real-world situation or practice
- Articulate what makes a particular course of action ethically defensible
- Assess their own ethical values and the social context of problems
- Identify ethical concerns in research and intellectual contexts, including academic integrity, use and citation of sources, the objective presentation of data, and the treatment of human subjects
- Demonstrate knowledge of ethical values in non-classroom activities, such as service learning, internships, and field work
- Integrate, synthesize, and apply knowledge of ethical dilemmas and resolutions in academic settings, including focused and interdisciplinary research.

Text Books:

1) "Engineering Ethics includes Human Values" by M.Govindarajan, S.Natarajan and, V.S.Senthil Kumar-PHI Learning Pvt. Ltd-2009
2) "Engineering Ethics" by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.
3) "Ethics in Engineering" by Mike W. Martin and Roland Schinzinger –Tata McGraw-Hill–2003.
4) "Professional Ethics and Morals" by Prof.A.R.Aryasri, DharanikotaSuyodhana-Maruthi Publications.
5) "Professional Ethics and Human Values" by A.Alavudeen, R.KalilRahman and M. Jayakumaran, Laxmi Publications.
6) "Professional Ethics and Human Values" by Prof.D.R.Kiran-"Indian Culture, Values and Professional Ethics" by PSR Murthy-BS Publication

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REPORT ON WOMEN EMPOWERMENT

Women Empowerment Day was Celebrated under the chairmanship of Honorable Principal prof. DR. Thakur Rushi Santhosh Singh PITM, Guntur on dated 15th July,2021at 11:00 AM in the seminar hall with the innovation and technology for gender equality. And women's empowerment but mission encourages women to be self-reliant. So that she can have positive self-esteem and generate potential in herself to compete with the world and to make the position of her choice. This is only possible if equal opportunities in society will also be available for women. Also to critically reflect on accomplishments and strive for a greater momentum towards gender equality. All the students and Staffs were invited to this program. The meeting has started with welcome gesture by Head, Departments. Mrs.Vijaya Lakshmi Garu and with the lighting of the dais by the dignitaries in front of the Lord jagannath. Mis D.Mary Kumari She extended her warm welcome to guests and expressed her gratitude to them for attending the program and the guests are felicitated by the Diploma and Engineering students. Speaking on the occasion, Honorable Principal said that all possible measures shall be taken to empowerment of the Women and the difficulties face by them. He stressed on educating girl child so that they become productive members of the society. Miss. P. Kamala Garu, Miss. Shaik. Firdose Garu, Mr. Y. Rajkumar garu among all the respected dignitaries were felicitated and made awareness among the students about the greatness of women in 21st century. After all the valuable suggestions by the dignitaries, the program ended with Mrs. Madhuridevi Garu proposing the vote of thanks and extending her warm regards to everyone present at the Women Empowerment Day.

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Dias Graced By the Guests

Mr. K. Srinivasa Rao Garu felicitated by the Faculty

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REPORT ON GENDER EQUITY SENSITIZATION DAY

Gender equity sensitization program was celebrated under the chairmanship of Principal prof. DR. Rushi Santhosh Singh PITM, Guntur on dated 21 October, 2021at 11:00 AM in the seminar hall with the creating awareness regarding gender equality issues and modifying the behavior and views that people hold about themselves and other genders.. All the students and Staffs were invited to this program. The meeting has started with welcome gesture by Head, Departments. Mrs.Vijaya Lakshmi Garu and with the lighting of the dais by the dignitaries in front of the Lord Jagannath. Miss. D.Mary Kumari She extended her warm welcome to guests and expressed her gratitude to them for attending the program and the guests are felicitated by the Diploma and Engineering students. Speaking on the program, Honorable Principal said that all possible measures shall be taken Gender equity sensitization. He stressed on people are not treated equally on the basis of gender. This inequality can be caused by gender discrimination or sexism. The treatment may arise from distinctions regarding biology, psychology, or cultural norms prevalent in the society. Mr.B.Rambabu garu Mr.shaik nagur sharief garu miss. Shaik simrana garu among all the respected dignitaries were felicitated and made awareness among the students about the greatness in 21st century. After all the valuable suggestions by the dignitaries, the program ended with Mrs. Madhubala proposing the vote of thanks and extending her warm regards to everyone present at the Gender equity sensitization celebration

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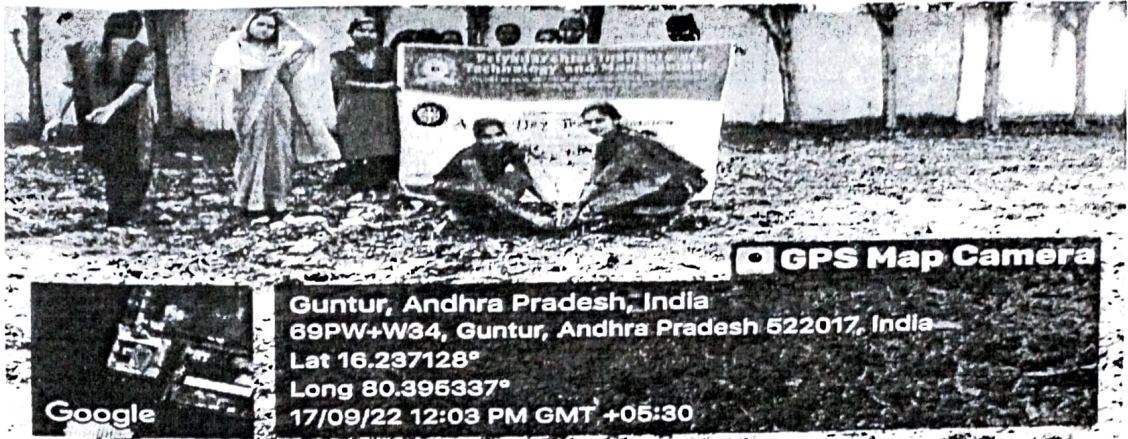KORNEPADU (Vil), Vatticherukuru (M)
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Anchoring by Prof. Mrs.D.D.G.N.R.Manaswanigaru

G.V.Gopala Krishna Reddy garu felicitated by the faculty

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NSS UNIT

Date: 17/09/2022

Programme Report	
NSS UNIT CODE	90214727
Title of the Event:	Tree plantation programme
Event Start Date:	17/09/2022
Event End Date:	17/09/2022
Collaboration	Pulladigunta village
Description	A Tree plantation programme was conducted by our college NSS unit during monsoon season on 17/09/2022 with collaboration of Pulladigunta village. Our college NSS PO, volunteers and some of students are participated in this programme.

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EVENT PHOTOS

Plantation of saplings by students.

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