



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

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Department of Civil Engineering Program: M.Tech –Energy and Environment Academic Year: 2019-2021

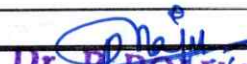
Course Code	Course Name	Description of Course Outcome
19CE5141	Environmental Quality Monitoring	Understand the sampling collection and assessment of sample.
		Understand engineered systems for Gravimetric methods for water and wastewater.
		Understand the various instrumental methods of monitoring the quality of air.
		Understand the various instrumental methods of monitoring the quality of water and soil.
		Determination of quality assessment in water and wastewater.
19CE5142	Renewable Energy Technologies	Understand and analyze the solar thermal applications and solar photovoltaic cells
		Analyze the performance of wind and tidal, wave and Ocean thermal energy conversion systems
		Understand and analyze the operation of geothermal and bio energy conversion
		Understand and analyze the Biogas digesters and bio power plants
		Analysis of different renewable energy technologies
19CE5143	Technical English	To demonstrate effective listening comprehension strategies
		To use oral communication and speaking techniques while giving presentations and in public speaking
		To develop good reading strategies and to apply good comprehending skills for technical materials
		To employ written communication skills for written discourses
19CE5144	Physicochemical, Biological Principles and Processes	Understand the resource management, mass transfer, transport and chemistry
		Understand the Chemical kinetics and isotherm models
		Understand the Biochemistry and Microbiology of wastewater treatment
		Understand the Principles of biological processes.
19CE5145	Advanced Statistical Methods	Analyzing the relation between variables using correlation and Regression
		Apply statistical tests for large and small samples to test the hypothesis
		Predict the future analysis using different forecasting models
		Analyze the variance by using completely randomized, randomized, Latin square designs and also apply queuing models to the real world problems.
		LAB using R
		Understand the basics of solid waste and management and options available for disposal

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19CE51R2	Solid and Hazardous Waste Management	Understand engineered systems for solid waste management and conversion and recovery of materials and energy
		Understand Familiarize with landfills , site selection design and operation, collection of gas and lechate , treatment of lechate and CPCBand MOEF guidelines
		Understand Familiarize with clay and geo synthetic lining systems and their designing
19CE5246	Energy Auditing and Conservation Techniques	Understand the present power scenario in India and need for energy estimation and Audit.
		Analyze the the cost- benefit analysis of various investment alternatives for meeting the energy needs of the organization.
		Quantify the energy conservation opportunities in different thermal systems
		Identify and evaluate the common energy conservation opportunities in different energy intensive industrial equipments
19CE5247	Design of Water and Wastewater Treatment Systems	Analysis of different energy audit and conservation technologies
		Municipal Water Supply, Sources Quantity and Quality
		Conventional Unit Operations used in Water Treatment
		Wastewater Characterization and Disposal, Pre- and Primary Wastewater Treatment, Secondary Wastewater Treatment
		Advanced Unit Operations used in Water and Wastewater Treatment, Residual Management
19CE5248	Environmental Impact Assessment	Design of water, wastewater treatment plant.
		To acquire the Knowledge of EIA Process and methodology
		To attain assessment of Impacts of Development activities
		To attain Environmental Impact assessment on water and air
19CE52Q6	Energy in Built Environment	To know the preparation of Environmental Audit Report
		To enable essential and practical understanding of the basic energy requirements in buildings
		Understand the solar energy use and energy processes in building
		To understand the external and internal energy processes which control the built environment
19CE52Q8	Waste to Energy Conversion	to understand energy audit and energy conservation measures in buildings
		Identify different sources of solid waste and characteristics of municipal solid waste
		Classify the methods in disposal of solid waste and the emission of gases, leach ate from landfills
		Illustrate sources of thermo chemical energy generation and understand Biochemical conversion of biomass for energy application
19CE52R6	Mathematical Modeling in Environmental Engineering	Understand Biochemical conversion of bio-mass for energy application and global scenario of environmental concerns and health hazards by the generation of E- waste
		Understanding the terminology, processes and systems of Environment
		Understanding the Modelling of Homogeneous and Heterogeneous Reactors
		Understanding the Modelling of Surface and Subsurface Environmental Systems
19CE52R4	Energy, Environment and Climate Change	Understanding Water Quality Modelling
		Understand the sampling collection and assessment of sample.
		Understand engineered systems for Gravimetric methods for water and wastewater.
		Understand the various instrumental methods of monitoring the quality of air.
19CE52R4	Energy, Environment and Climate Change	Understand the various instrumental methods of monitoring the quality of water and soil.
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Academic Professor I/C


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