

Counselling Code : MTEC

Estd : 1999

JNTUH College Code : 86



MOTHER THERESA COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by A.I.C.T.E, New Delhi & Affiliated to J.N.T.U Hyderabad)

P.P.Colony (Po.), Peddabonkuru (Vill), PEDDAPALLI (Mdl. & Dist.) - 505174, Telangana State.

Website : www.mtec86.ac.in E-mail: mtec.86@gmail.com Contact : +919849472523, +91 9542709545, +91 9989959556

R18 B TECH ECE III YEAR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD B.Tech. in ELECTRONICS AND COMMUNICATION ENGINEERING

III YEAR COURSE STRUCTURE AND SYLLABUS (R18) Applicable From 2018-19 Admitted Batch

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC501PC	Microprocessors & Microcontrollers	3	1	0	4
2	EC502PC	Data Communications and Networks	3	1	0	4
3	EC503PC	Control Systems	3	1	0	4
4	SM504MS	Business Economics & Financial Analysis	3	0	0	3
5		Professional Elective - I	3	0	0	3
6	EC505PC	Microprocessors & Microcontrollers Lab	0	0	3	1.5
7	EC506PC	Data Communications and Networks Lab	0	0	3	1.5
8	EN508HS	Advanced Communication Skills Lab	0	0	2	1
9	*MC510	Intellectual Property Rights	3	0	0	0
Total Credits			18	3	8	22

III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC601PC	Antennas and Propagation	3	1	0	4
2	EC602PC	Digital Signal Processing	3	1	0	4
3	EC603PC	VLSI Design	3	1	0	4
4		Professional Elective - II	3	0	0	3
5		Open Elective - I	3	0	0	3
6	EC604PC	Digital Signal Processing Lab	0	0	3	1.5
7	EC605PC	e - CAD Lab	0	0	3	1.5
8	EC606PC	Scripting Languages Lab	0	0	2	1
9	*MC609	Environmental Science ✓	3	0	0	0
Total Credits			18	3	8	22

*MC - Environmental Science – Should be Registered by Lateral Entry Students Only.



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PRINCIPAL,
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R18 B.TECH EEE III YEAR

*MC609: ENVIRONMENTAL SCIENCE

III Year B.Tech. EEE II-Sem

L	T	P	C
3	0	0	0

Course Objectives:

- Understanding the importance of ecological balance for sustainable development.
- Understanding the impacts of developmental activities and mitigation measures
- Understanding the environmental policies and regulations

Course Outcomes:

Based on this course, the Engineering graduate will understand /evaluate / develop technologies on the basis of ecological principles and environmental regulations which in turn helps in sustainable development

UNIT - I

Ecosystems: Definition, Scope and Importance of ecosystem, Classification, structure, and function of an ecosystem, Food chains, food webs, and ecological pyramids, Flow of energy, Biogeochemical cycles, Bioaccumulation, Biomagnification, ecosystem value, services and carrying capacity, Field visits

UNIT - II

Natural Resources: Classification of Resources: Living and Non-Living resources, **water resources:** use and over utilization of surface and ground water, floods and droughts, Dams, benefits and problems, **Mineral resources:** use and exploitation, environmental effects of extracting and using mineral resources, **Land resources:** Forest resources, **Energy resources:** growing energy needs, renewable and non renewable energy sources, use of alternate energy source, case studies.

UNIT - III

Biodiversity And Biotic Resources: Introduction, Definition, genetic, species and ecosystem diversity, Value of biodiversity, consumptive use, productive use, social, ethical, aesthetic and optional values, India as a mega diversity nation, Hot spots of biodiversity, Field visit, Threats to biodiversity, habitat loss, poaching of wildlife, man-wildlife conflicts, conservation of biodiversity, In-Situ and Ex-situ conservation, National Biodiversity act.



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UNIT - IV

Environmental Pollution and Control Technologies: Environmental Pollution: Classification of pollution. **Air Pollution:** Primary and secondary pollutants, Automobile and Industrial pollution, Ambient air quality standards. **Water pollution:** Sources and types of pollution, drinking water quality standards. **Soil Pollution:** Sources and types, Impacts of modern agriculture, degradation of soil. **Noise Pollution:** Sources and Health hazards, standards, **Solid waste:** Municipal Solid Waste management, composition and characteristics of e-Waste and its management. **Pollution control technologies:** Wastewater Treatment methods, Primary, secondary and Tertiary. Overview of air pollution control technologies, Concepts of bioremediation. **Global Environmental Problems and Global Efforts:** Climate change and impacts on human environment, Ozone depletion and Ozone depleting substances (ODS) Deforestation and desertification, International conventions / Protocols, Earth summit, Kyoto protocol, and Montréal Protocol.

UNIT - V

Environmental Policy, Legislation & EIA: Environmental Protection act, Legal aspects Air Act- 1981, Water Act, Forest Act, Wild life Act, Municipal solid waste management and handling rules, biomedical waste management and handling rules, hazardous waste management and handling rules, EIA, EIA

R18 B TECH EEE III YEAR

structure, methods of baseline data acquisition, Overview on Impacts of air, water, biological and Socio-economical aspects, Strategies for risk assessment, Concepts of Environmental Management Plan (EMP). **Towards Sustainable Future:** Concept of Sustainable Development, Population and its explosion, Crazy Consumerism, Environmental Education, Urban Sprawl, Human health, Environmental Ethics, Concept of Green Building, Ecological Foot Print, Life Cycle assessment (LCA), Low carbon life style.

TEXT BOOKS:

1. Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha for University Grants Commission.
2. Environmental Studies by R. Rajagopal, Oxford University Press.



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