

MET's Institute of Engineering

Department of Electrical Engineering

SEM: I

Pattern: 2019

Course: Seminar(303146)

Class: TE Electrical Engineering

Course Code	Course Outcome
303146.1	Relate with the current technologies and innovations in Electrical engineering.
303146.2	Improve presentation and documentation skill
303146.3	Apply theoretical knowledge to actual industrial applications and research activity.
303146.4	Communicate effectively.

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Department of Electrical Engineering

Unitwise CO Mapping

SEM: II

Course: Internship (303152)

Class: TE Electrical Engineering

Course Code	Course Outcome
303152.1	Understand the working culture and environment of the Industry and get familiar with various departments and practices in the industry.
303152.2	Operate various meters, measuring instruments, tools used in industry efficiently and develop technical competence.
303152.3	Apply internship learning in other course completions and final year project management, i.e. topic finalization, project planning, hardware development, result interpretations,
303152.4	Create a professional network and learn about ethical, safety measures, and legal practices.
303152.5	Appreciate the responsibility of a professional towards society and the environment.
303152.6	Identify career goals and personal aspirations.

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Department of Electrical Engineering

Unitwise CO Mapping

SEM: I

Course: Advanced Microcontroller and Embedded System (303145A)

Class: TE Electrical Engineering

Course Code	Course Outcome
303145A.1	Explain architecture of PIC 18F458 microcontroller, its instructions and the addressing modes
303145A.2	Use Ports and timers for peripheral interfacing and delay generation.
303145A.3	Interface special and generate events using CCP module.
303145A.4	Effectively use interrupt structure in internal and External interrupt mode.
303145A.5	Effectively use ADC for parameter measurement and also understand LCD interfacing
303145A.6	Use Serial Communication and various serial communication protocols.

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Department of Electrical Engineering

SEM: II

Course: Electrical Installation, Design and Condition Based Maintenance(303144)

Class: TE Electrical Engineering

Course Code	Course Outcome
303144.1	Classify different types of distribution supply system and determine economics of distribution system. compare and classify various substations, bus-bars and Earthing systems.
303144.2	Demonstrate the importance and necessity of maintenance.
303144.3	Analyse and test different condition monitoring methods
303144.4	Carry out estimation and costing of internal wiring for residential and commercial installations
303144.5	Apply electrical safety procedures

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SEM: I

Course: Electrical Machine II (303143)

Class: TE Electrical Engineering

Course Code	Course Outcome
303143.1	Learn construction, working principle of three phase Synchronous Machines, Induction Motors, A.C. Series Motor and Special Purpose Motors.
303143.2	Understand characteristics of three phase Synchronous Machines, Induction Motors, A.C. Series Motor and Special Purpose Motors.
303143.3	Select the above machines in Power System, industrial, household & Military Engineering applications.
303143.4	Testing of machines to evaluate the performance through experimentation.

MET's Institute of Engineering

Department of Electrical Engineering

SEM: II

Course: Industrial and Technology Management (303141)

Class: TE Electrical Engineering

Course Code	Course Outcome
303141.1	Differentiate between different types of business organizations and discuss the fundamentals of economics and management.
303141.2	Explain the importance of technology management and quality management.
303141.3	Explain the importance of IPR and role of Human Resource Management.
303141.4	Understand the importance of Quality and its significance.
303141.5	Describe the characteristics of marketing & its types and overview of financial Management.
303141.6	Discuss the qualities of a good leader and road map to Entrepreneurship.

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SEM: I

Course: Power Electronics (303142)

Class: TE Electrical Engineering

Course Code	Course Outcome
303142.1	Develop characteristics of different power electronic switching devices
303142.2	Reproduce working principle of power electronic converters for different types of loads.
303142.3	Choose the appropriate converter for different applications

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Department of Electrical Engineering

SEM: II

Course: Computer Aided Design of Electrical Machines(303149)

Class: TE Electrical Engineering

Course Code	Course Outcome
303149.1	Summarize temperature rise, methods of cooling of transformer and consider IS 2026 in transformer design.
303149.2	Design the overall dimensions of the transformer
303149.3	Analyze the performance parameters of transformer
303149.4	Design overall dimensions of three phase Induction motor
303149.5	Analyze the performance parameters of three phase Induction motor.
303149.6	Implement and develop computer aided design of transformer and induction motor

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SEM: II Control System Engineering

Course: 303150: Control System Engineering

Class: TE Electrical Engineering

Course Code	Course Outcome
303150.1	Construct mathematical model of Electrical and Mechanical system using differential equations and transfer function and develop analogy between Electrical and Mechanical systems.
303150.2	Determine time response of systems for a given input and perform analysis of first and second order systems using time domain specifications.
303150.3	Investigate closed loop stability of system in s-plane using Routh Hurwitz stability criteria and root locus.
303150.4	Analyze the systems in frequency domain and investigate stability using Nyquist plot and Bode plot
303150.5	Design PID controller for a given plant to meet desired time domain specifications.

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Unitwise CO Mapping

SEM: II

Course: Energy Management(303151D)

Class: TE Electrical Engineering

Course Code	Course Outcome
303151D.1	Describe BEE Energy policies, Energy ACT.
303151D.2	List and apply demand side management measures for managing utility systems.
303151D.3	Explore and use simple data analytic tools.
303151D.4	Use various energy measurement and audit instruments.
303151D.5	Evaluate economic feasibility of energy conservation projects.
303151D.6	Identify appropriate energy conservations methods for electric and thermal utilities.

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SEM: II

Course: Power System-II (303148)

Class: TE Electrical Engineering

Course Code	Course Outcome
303148.1	Solve problems involving modelling, design and performance evaluation of HVDC and EHVAC power transmission lines.
303148.2	Calculate per unit values and develop Y bus for solution power flow equations in power transmission networks.
303148.3	Calculate currents and voltages in a faulted power system under both symmetrical and asymmetrical faults, and relate fault currents to circuit breaker ratings.