COER
COLLEGE OF ENGINEERING ROORKEE

Department of Electrical & Electronics Engineering

Course Name: Network analysis and synthesis Code: TEE-305

Year of Study: 3rd Semester: 5th

Course Outcomes: The student will be able to:

	Course Outcomes	Bloom's Taxonomy	Bloom's Level (B.L)
TEE-305.1	Understands basic terminologies used in graph and will be able to solve electrical circuits with Graphs.	Remember	B.L.1
TEE-305.2	Understand basic electrical circuits with nodal and mesh analysis, various theorems for solving electrical networks.	Remember	B.L.1
TEE-305.3	To apply Laplace transform for steady state and transient analysis.	Apply	B.L.2
TEE-305.4	Evaluate frequency response, behavior of different passive elements, different network parameters and enabling the design of complex circuits depending on specifications.	Evaluate	B.L-4
TEE-305.5	Understand concepts of pole and zeroes, Properties of LC, RC and RL driving point functions and Synthesis of LC, RC and RL driving point admittance functions.	Remember and Create	B.L-1,5

B.L – Bloom's Taxonomy Levels
(1- Remember, 2 – Apply, 3 – Analyze, 4 – Evaluate, 5 - Create)

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Course Name: Automatic Control System Course Code: TEC-501

Year of Study: 3rd Semester: 5th

Course Outcomes: The student will be able to:

	Course Outcomes	Bloom's Taxonomy	Bloom's Level (B.L)
TEC-501.1	Understand the different ways of system representations such as Transfer function representation, Signal flow graph and to assess the system dynamic response.	Remember	B.L.1
TEC-501.2	Assess the system performance using time domain analysis and methods for improving it	Analyze	B.L-3
TEC-501.3	Assess the system performance using frequency domain analysis and techniques for improving the performance.	Analyze	B.L-3
TEC-501.4	Design various controllers and compensators to improve system performance	Create	B.L-5
TEC-501.5	Test system Controllability and Observability using state space representation and applications of state space representation to various systems.	Evaluate	B.L-4

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Course Name: System Engineering Course Code: TEE-502

Year of Study: 3rd Semester: 5th

Course Outcomes: The student will be able to:

	Course Outcomes	Bloom's Taxonomy	Bloom's Level (B.L)
TEE-502.1	Illustrate the Control System &its type; servomechanism; analogy between physical systems, transfer function effects of feedback & disturbance over the transfer function.	Apply	B.L.2
TEC-501.2	Apply Laplace transformation, Block diagram algebra, & Signal flow graph, for formation of of transfer functions for various input signals	Apply	B.L-2
TEC-501.3	Illustrate LTI systems, discrete time systems, sample & hold circuits, pulse transfer function, representation by differential equations	Apply	B.L.2
TEC-501.4	Analyze the Able to Acquire knowledge about state space Acquire Knowledge About the Interconnection of Elements In representation of system Classification of Signals & Basic Operations on Signals Using Z Transform	Analyze	B.L-4
TEC-501.5	Describe the basic nonlinear system	Analyze	B.L-4

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Course Name: EMFT Code: TEE-501

Year of Study: 3rd Semester: 5th

Course Outcomes: The student will be able to:

	Course Outcomes	Bloom's Taxonomy	Bloom's Level (B.L)
TEE-501.1	Define and recognize different co-ordinate systems to describe the spatial variations of the physical quantities dealt in electromagnetic field theory as they are functions of space and time. Apply different techniques of vector calculus to understand different concepts of electromagnetic field theory.	Remember	B.L.1
TEE-501.2	Explain fundamental laws governing electromagnetic fields and evaluate the physical quantities of electromagnetic fields (Field intensity, Flux density etc.) in different media using the fundamental laws.	Apply	B.L-2
TEE-501.3	Determine the electromagnetic force exerted on charged particles, current elements, working principle of various electric and electromagnetic energy conversion devices are based on this	Apply	B.L.2
TEE-501.4	Design electromagnetic energy storage devices like capacitor, inductor which are frequently used in electrical systems and choose suitable materials required to assemble such electromagnetic energy storage devices.	Create	B.L-5
TEE-501.5	Deduce and Generalize the concepts of electromagnetic waves, and concepts of guided structures like transmission line,	Apply	B.L-2

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Course Name: Utilization of Electrical Energy and Traction Code: TEE-011

Year of Study: 4th Semester: 7th

Course Outcomes: The student will be able to:

	Course Outcomes	Bloom's Taxonomy	Bloom's Level (B.L)
TEE-011.1	To understand the operating principles and characteristics of traction motors with respect to speed, temperature, loading condition	Remember	B.L.1
TEE-011.2	To acquaint with the different types of heating and welding techniques	Remember	B.L.1
TEE-011.3	To enumerate the basic principles of illumination and its measurement	Apply	B.L.2
TEE-011.4	To inspect the relationship of speed– time curves for different traction services	Analyze	B.L-3
TEE-011.5	To determine the various traction system for braking, acceleration, retardation and other related parameters, including demand side management	Create	B.L-5