3EP200PC – Numerical Methods and Optimization Techniques

Course Outcomes:

After completing this course students will be able to

1. Solve linear and Simultaneous Equations with the help of Numerical Methods.
2. Apply various Numerical methods to fit the curve.
3. Solve Numerical differentiation, integration, and Differential Equations.
4. Solve linear, non-linear and problem by various methods.
5. Determine the optimum scheduling by using CPM and PERT.

3EE201PC/3EP201PC - Electrical Circuit Analysis

Course Outcomes:

After completing this course student will be able to:

1. Analyze electric circuit using basic circuital laws
2. Analyze the circuit using Network simplification theorems.
3. Solve circuit problems using concepts of electric network topology.
4. Evaluate transient response of different circuits using Laplace transform
5. Evaluate two-port network parameters and network functions.

3EE202PC/3EP202PC- Electrical Measurements & Instrumentation

Course Outcomes:

A student completing this course will be able to:

1. Explain the various measuring instruments like PMMC, MI, Electrodynamometer, and Induction type instruments.
2. Demonstrate the construction & working of Instrument Transformers and special purpose meters.
3. Analyze various methods for measurement of resistance, inductance, and capacitance using AC/DC bridges.
4. Explain the working of various Digital measuring instruments.
5. Explain the generalized Instrumentation system & working of different transducers.

3EE206M/3EP206M - Electrical Energy Generation

Course Outcome

After successful completion of this course, a student will be able to:

1. Explain the current energy scenario in India and the various load- Generation factors.
2. Illustrate the working of Thermal, Hydro & Nuclear power plants.
3. Explain the working of solar & Wind energy conversion systems.

3EE207OE/3EP207OE - Power Supply System

Course Outcome

After successful completion of this course, a student will be able to:

1. Explain the working of thermal & Hydro-electric power plants.
2. Understand the basics of solar and wind energy and their conversion.
3. Demonstrate the knowledge of various types of substations and distribution systems
4. Demonstrate the knowledge of electrical wiring installation and earthing system.

3EE208EM/3EP208EM - Entrepreneurship Development

Course Outcomes:

On successful completion of this course, the students will be able to:

1. Explain the fundamentals of entrepreneurship and its role in economic development.
2. Apply innovation and design thinking to develop business ideas.
3. Prepare a feasibility study and basic business plan for entrepreneurial ventures.

3EE209VE/3EP209VE - Environmental Science

Course Outcome:

Upon successful completion of the course the students will be able to

1. Understand the multidisciplinary nature of environment and Renewable and non-renewable resources

2. Understand natural environment and its relationship with human activities.

3. Understand the basic concepts and problems and follow sustainable development practices.

4EE210PC/4EP210PC- Electrical Machine – I

Course Outcomes:

After Completion of this course, students will be able to:

1. **Explain** the Construction, working operation, of DC Machines.
2. **Illustrate** the different Characteristics, types, their Application and Parallel Operation of DC Generator.
3. **Demonstrate** the various types of DC motor, characteristics, starting method, testing method, speed control method and braking operation on DC motors.
4. **Explain** the Construction, working, types of Single-Phase Transformer and testing of Single-phase transformer.
5. **Explain** the Construction, working, different connections, applications and testing of three phase transformers.

4EE211PC/4EP211PC - Control System

Course Outcomes:

After completing this course, student will be able to:

1. Demonstrate the fundamental concepts of automatic Control and mathematical modeling of the Systems.
2. Analyze the transfer functions, Signal flow graphs and feedback system for stability and noise reduction.
3. Examine the functionality and applications of various control system components like motors and encoders.
4. Analyze time response characteristics of first and second order system with error analysis.
5. Apply stability criteria using Routh-Hurwitz and frequency response methods.
6. Assess system stability through Bode plots, Nyquist plots and gain/phase margin analysis.

4EE212PC/4EP212PC - Electromagnetic Fields

Course outcomes:

At the end of the course the student will be able to:

1. Demonstrate the basic mathematical concepts related to electromagnetic vector fields.
2. Apply the principles of electrostatics to the solutions of problems relating to electric field a
3. Apply the principles of magneto statics to the solutions of problems relating to magnetic field.
4. Apply Maxwell's equation in different forms (differential and integral) to diverse engineering problems.

4EE215M/4EP215M - Electrical Measurements

Course Outcomes:

A student completing this course, should be able to:

1. Classify the various measuring instruments like PMMC, MI, Electrodynamic type.
2. Explain the measurement of power and energy by wattmeter and energy meter.
3. Analyze various methods for measurement of resistance, inductance, and capacitance using AC/DC bridges.

4EE217OE/4EP217OE: Electrical Drives

Course Outcomes:

After completing this course, Students will be able to:

1. Explain the basic of electrical drives and Power Electronics devices
2. Demonstrate various modern speed control techniques of DC drives
3. Demonstrate various modern speed control techniques of AC drives

4EE218EM/4EP218EM - Engineering Economics

Course Outcomes –

After successful completion of the course, students will be able to -

1. Apply the concepts economics to assess demand and, including elasticity and laws of returns.
2. Demonstrate the understanding of cost and revenue structures, market types and inflationary trends, and banking principles.
3. Make use of the principles of time value of money, economic equivalence, and depreciation to evaluate engineering projects through various methods.