



# **RSR RUNGTA COLLEGE OF ENGINEERING & TECHNOLOGY**

**Rungta Knowledge City**

**Kohka – Kurud Road, Bhilai (C.G.)-490024**

Recognized by AICTE, New Delhi and Affiliated to CSVTU, Bhilai.

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Power System Dynamics**

**Semester: I**

**Course Code : 559111 (24)**

CO1: Study of modelling of Synchronous Machine.

CO2: Development of mathematical models for synchronous machine

CO3: Simulation of Synchronous Machines and its linear model

CO4: Effect of Excitation Systems on Stability of Machines

CO5 Study of Multi Machine System

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Power System Optimization**

**Semester: I**

**Course Code : 575112 (24)**

CO1: To Understand the Linear Programming.

CO2: To Understand the Non - Linear Programming

CO3: To Understand the Constrained Optimization Problem

CO4: To understand the dynamic programming

CO5 To get familiar with Applications of Power Systems



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## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** Power System Protection

**Semester: I**

**Course Code :** 559113 (24)

CO1: To understand protective relaying

CO2: To gain knowledge about different types of Relays

CO3: To understand the protection of different power system components

CO4: To gain the knowledge about Numerical Relays

CO5 To understand different aspects of Circuit Breakers

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** Non-linear Control

**Semester: I**

**Course Code :** 575112 (24)

CO1: To understand about state space analysis, Controllability, Observability

CO2: To gain the knowledge about different types of Non Linearities, their describing functions and Phase Plain analysis

CO3: To understand about state space analysis methods

CO4: To gain the knowledge about different types of Non Linearities, their describing functions and Phase Plain analysis

CO5 To gain the knowledge about different types of Non Linearities, their describing functions and Phase Plain analysis



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## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** Flexible AC transmission  
System

**Semester: I**

**Course Code 575131 (24)**

CO1: To understand FACTS concepts and general system considerations

CO2: To gain the knowledge about Static Shunt Compensation

CO3: Understand the working principle of FACTS devices and their operating characteristics

CO4: To understand about static series compensation

CO5 To understand about UPFC and IPFC

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** EHV-AC & DC

**Semester: II**

**Course Code 559211 (24)**

CO1: To gain the knowledge about reactive Power Compensation of EHVAC lines

CO2: To Understand DC Power Transmission Technology

CO3: To understand HVDC Converters & HVDC System Control

CO4: To gain the knowledge about Converter Faults and Protection

CO5 To understand about Reactive Power Control



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## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Power Quality**

**Semester: II**

**Course Code 559212 (24)**

CO1: differentiate between different types of power quality problems.

CO2: explain the sources of voltage sag, voltage swell, interruptions, transients, long duration over voltages and harmonics in a power system.

CO3: analyze power quality terms and power quality standards.

CO4: explain the principle of voltage regulation and power factor improvement methods.

CO5 demonstrate the relationship between distributed generation and power quality.

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Power System Stability &  
Control**

**Semester: II**

**Course Code 559211 (24)**

CO1: To gain the knowledge about Power System Structure and components

CO2: To understand Control of Power and Frequency in a power System

CO3: To gain the knowledge about the Control of voltage and Reactive Power in a Power System

CO4: To understand Concept of Stability

CO5 To understand Techniques for the improvement of stability



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## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** Optimal Control Systems

**Semester: II**

**Course Code 585211 (24)**

CO1: To Understand Linear Spaces and Linear operators

CO2: To Understand General Mathematical Procedures for optimal Control Problem

CO3: To Understand Optimal Feedback Control

CO4: To gain the knowledge about State Regulators

CO5 To gain the knowledge about Stochastic Optimal Linear Estimation and Control

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name :** Distribution System  
Automation

**Semester: II**

**Course Code 559233 (24)**

CO1: To understand Distribution System Automation and Planning

CO2: To understand Electrical Design Aspects of Industrial, Commercial Buildings

CO3: To understand the Power Quality

CO4: To Understand Deregulated Systems

CO5 To gain the knowledge about Project planning for distribution automation



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## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Digital Control Systems**

**Semester: III**

**Course Code 559233 (24)**

O1: To understand the significance of sampling and reconstruction of a to d and d2a converter, evaluation of z transform, illustrate the plane analysis of discrete time

CO2: To evaluate state space analysis by using discrete time state space equation, test for controllability and observability

CO3: Mapping between s plane And z plane. liapunov stability analysis

CO4: Design of discrete time control system by lead lag compensator and digital PID controllers

CO5: Design of state feedback controllers, observers

## **Department of Electrical Engineering**

### **Course Outcomes**

**Programme: Master of Technology**

**Course Name : Energy Conservation & Audit**

**Semester: III**

**Course Code 559331 (24)**

CO1: Familiarizing with management especially with management in energy sector engineering.

CO2: Fundamentals of electric motors, electric drives with efficiency and control strategies, optimal selection

CO3: To understand transformer loading, efficiency, losses and capacitor losses, peak demand load.

CO4: To evaluate Energy conservation in Lighting Schemes, cogeneration technologies

CO5: To understand Energy conservation measures, Electrolytic Process of Air conditioning & Refrigeration and Electric water heating equipment