

**CHOUKSEY ENGINEERING COLLEGE**  
**DEPARTEMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**  
**B.Tech Eight Semester**

<b>Subject Name- Computer Aided power system</b>	<b>Subject Code- D025811(025)</b>
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1. Develop proper mathematical models for analysis of a selected problem like load flow study or fault analysis.
2. Student able to analysis of different type fault in a power system.
3. Student able to understands different load flow techniques.
4. Student able to understand stability analysis of power system.
5. Student able to understand the power system concepts of contingency analysis.

<b>Subject Name- Computer Aided Power System Lab</b>	<b>Subject Code- D025821(025)</b>
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- 1 Create appropriate mathematical models for a particular problem's analysis, such as fault analysis or load flow studies.
- 2 Analyze various types of power system faults. Student able to understands different load flow techniques.
- 3 Comprehend the power system stability analysis.
- 4 Comprehend the contingency analysis power system concepts.

<b>Subject – Installation ,Maintenance and Testing of Electrical Equipments lab</b>	<b>Subject Code- D025822(025)</b>
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- 1 Acquire knowledge on safety measures and calibration of different meters.
- 2 Prepare the steps of various maintenance methods / techniques.
- 3 Understand the process of commissioning.
- 4 Perform required testing procedure for different equipment using proper tools and methods.

## Professional Elective-IV

<b>Subject Name- Power Apparatus System</b>	<b>Subject Code- D025831(025)</b>
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1. Discuss various transmission system components along with calculation of sag and tension and distribution of voltage over string of insulator.
2. Design various Distribution System depending upon the distribution voltage & calculation of voltage drop in AC and DC system.
3. Discuss various Power System Earthing techniques along with their advantages & disadvantages.
4. Discuss causes of over voltage Lightning, need of Arrester along with proper rating & Insulation Co-ordination.
5. Understand various Reliability models of Transmission & Distribution System along with the calculation of Reliability parameters.

<b>Subject Name- Power System Dynamics and Control</b>	<b>Subject Code- D025832(025)</b>
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1. Understand the problem of power system stability and its impact on the system.
2. Analyze linear dynamical systems and use of numerical integration methods.
3. Model different power system components for the study of stability.
4. Understand the methods to improve stability.

<b>Subject Name- Control Systems Design</b>	<b>Subject Code- D025833(025)</b>
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1. Analyze various design specifications in time domain and frequency domain and effect of pole/zero addition on system performance.
2. Design controllers to satisfy the desired design specifications using simple controller structures (P, PI, PID, compensators).
3. Design controllers using the state-space approach.

<b>Subject Name- EHV AC &amp; DC Transmission</b>	<b>Subject Code- D025834(025)</b>
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1. Students could grasp the key technology and system composition in modern HVAC & HVDC design.
2. Students could get familiar with the process of scientific research and report writing.
3. Students could develop the abilities to put forward, analyze and solve problems.
4. Students could intensify capacity in scientific research and innovation.

<b>Subject Name- Flexible AC Transmission System</b>	<b>Subject Code- D025835(025)</b>
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1. Student will be able to describe operating principle of FACT devices.
2. Students will also gain the knowledge of Advanced Power Electronics devices.

## Open Elective-III

<b>Subject Name- Power Plant Engineering</b>	<b>Subject Code- D000820(025)</b>
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1. Demonstrate a thorough understanding of the various types of power plants.
2. Analyze the efficiency, performance, and environmental impact of energy conversion processes in different power plant systems.
3. Use modern engineering tools and techniques to simulate, optimize, and manage operations in power plants effectively.

<b>Subject Name- Utilization of Electrical Energy and Electric Traction</b>	<b>Subject Code- D000820(025)</b>
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1. Demonstrate knowledge of the principles and methods of utilizing electrical energy efficiently in various applications such as heating, lighting, and welding.
2. Analyze the performance, characteristics, and control of electric drives used in industrial applications and electric traction systems.
3. Design and evaluate lighting schemes for residential, commercial, and industrial spaces, ensuring energy efficiency and compliance with standards.

<b>Subject Name- Management Concept Techniques</b>	<b>Subject Code- D000823 (076)</b>
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1. Students can successfully design and execute project.
2. Students will be capable of understanding the correlation between physical, market and human resources.