

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

Subject Name- Power System Protection	Subject Code- D025711(025)
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1. Design the relevant protection systems for the main elements of a power system.
2. Analyze with over current, differential, and ratio protection devices and their application in a coordinated protection scheme.
3. Do the stability problems and clearing of faults to mitigate these problems.

Subject Name- Electrical Drive	Subject Code- D025712(025)
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1. Electric drive systems for different mode of operations.
2. Performance and ratings of drive on the basis of heating and cooling.
3. Operation of tractions drive.
4. Speed control of DC and AC machines using Power Electronics devices.
5. Operation of tractions drive.

Subject Name- High Voltage Engineering	Subject Code- D025713(025)
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1. Describe the various breakdown theories for gaseous, liquid and solid dielectric.
2. Describe the generating methods for high DC, AC, and impulse
3. Describe the measuring methods for high DC, AC and impulse.
4. Compute the breakdown strength of gas filled insulation systems with sphere gap.

Subject Name- Power System Protection Lab	Subject Code- D025721(025)
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1. Provide the necessary protection mechanisms for a power system's key components.
2. Examine the use of ratio, differential, and over current protection devices in a coordinated protection strategy.
3. Address stability issues and fault clearance to lessen these issues.

Subject Name- High Voltage Engineering lab	Subject Code- D025711(025)
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1. Explain the different breakdown theories of solid, liquid, and gaseous dielectrics.
2. Explain the high DC, AC, and impulse generation techniques.
3. Measure high DC, AC, and impulse.
4. Determine the gas-filled insulation systems' breakdown strength with a sphere gap.
5. Evaluate the string efficiency of a string.

Professional Elective-III

Subject Name- Soft Computing Techniques

Subject Code- D025731(025)

1. Understand the artificial neural networks and its applications. Analyze various neural network architectures based on supervised learning.
2. Analyze various neural network architectures based on unsupervised learning.
3. Develop the fuzzy logic sets and membership function and de fuzzification techniques.
4. Analyze the genetic algorithms and their applications.

Subject Name- Illumination Engineering

Subject Code- D025732(025)

1. Apply an appropriate measurement and analysis technique of artificial lighting for different specific purposes.
2. Investigate on various types of electric bulbs as well as can evaluate their performance in terms of their colour rendering and luminous efficacy.
3. Develop a clear idea on various illumination techniques and hence can design lighting schemes for specific applications.
4. Select as well as apply an appropriate light fitting method for any specific application
5. Understand the operation of refrigeration and air-conditioning control techniques.

Subject Name- Industrial Electrical Systems

Subject Code- D025733(025)

1. Understand the electrical wiring systems for residential, commercial and industrial consumers, representing the systems with standard symbols and drawings, SLD.
2. Understand various components of industrial electrical systems.
3. Understand and design lighting system for different applications.
4. Analyze and select the proper size of various electrical system components.
5. Design and Analyze the role of PLC and other Electrical system for automation .

Subject Name- Electric and Hybrid vehicle

Subject Code- D025734(025)

1. Analyze the working of Electric and Hybrid Electric Vehicle.
2. Analyze the various electric drive train and power management scheme.
3. Describe the role of Electric Propulsion System in the development of Electric and Hybrid Electric Vehicle.
4. Understand the different strategies related to energy storage systems and energy management strategies.

Subject Name- VLSI Design

Subject Code- D025735(025)

1. Acquire basic knowledge of IC design.
2. Explain IC fabrication techniques.
3. Develop the concept of layout design rules.
4. Design various combinational and sequential circuits.
5. Acquire knowledge subsystem design process.

Open Elective II

Subject Name-Non Conventional Energy Sources	Subject Code- D000724(025)
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1. Demonstrate the generation of electricity from various Non-Conventional sources of energy, have a working knowledge on types of fuel cells.
2. Estimate the solar energy, Utilization of it, Principles involved in solar energy collection and conversion of it to electricity generation.
3. Explore the concepts involved in wind energy conversion system by studying its components, types and performance.
4. Illustrate ocean energy and explain the operational methods of their utilization.
5. Acquire the knowledge on geothermal energy.

Subject Name-Sensors and Transducers	Subject Code- D000725(025)
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1. Explain the basic principle of operation of Transducers and Sensors.
2. Distinguish different sensors and transducers.
3. Identify suitable transducer by comparing different industrial standards and procedures for measurement of physical parameters.
4. Estimate the performance of different transducers.
5. Design real life electronics and instrumentation measurement systems.
6. Apply smart sensors, bio-sensors, PLC and Internet of Things to different applications.

Subject Name-Switched Mode Power Converter	Subject Code- D000722(025)
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1. Model and develop switching power converters topologies.
2. Describe the role of switch mode power converters in various applications.
3. Design magnetic components for DC-DC converters.

Subject Name-Internet of Things	Subject Code- D000723(025)
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1. Understand the meaning of IOT.
2. Apply IoT in various applications in day to day life.