

FOURTH YEAR SECOND SEMESTER

| Course Code & Title | Course Outcomes |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A80237&FUNDAMENTALS OF HVDC AND FACTS | CO1: Identify significance of DC over AC transmission system, types and application of HVDC links in practical power systems. |
| | CO2: Identify and analyse converter configurations used in hvdc and list the performance matrices. |
| | CO3: Understand controllers for controlling the power flow through a dc-link. |
| | CO4: Compute the filter parameters for elimination of voltage and current harmonics and Understand the role of impedance control, phase angle control and voltage control in controlling real and reactive power in transmission systems. in hvdc system. |
| | CO5: Identify configuration of facts controller required for a given application. |
| A80324&RENEWABLE ENERGY SOURSES | CO1: Understand the basic principles and instruments for measuring solar radiation. |
| | CO2: Explain the classification of concentrating collectors, storage methods and applications. |
| | CO3: Identify the sources and potentials of generating wind and bio mass energy. |
| | CO4: Describe the methods of harnessing the geothermal and ocean energy. |
| | CO5: Explain the principle of direct energy conversion. |
| A80235&EHV AC TRANSMISSION | CO1: Know the necessity, merits and demerits of EHVAC transmission and mechanical aspects. |
| | CO2: Able to compute the breakdown strength of gas-filled insulation systems with simple geometries. |
| | CO3: Able to describe the principles for measurement of capacitance and dielectric loss. |
| | CO4: Able to compute phase resolved partial discharge patterns from simple models. |
| A80087&INDUSTRIY ORIENTED MINI PROJECT | CO1: Identify the real world power system problems. |
| | CO2: Analyze, design and implement solution methodologies. |
| | CO3: Apply modern engineering tools for solution. |
| | CO4: Analyze the practical industry oriented problems. |
| | CO5: Develop hardware kits. |
| A80089&SEMINAR | CO1: identify and analyse the real time power system problems. |
| | CO2: Acquire awareness on latest technology and current trends in the field of power systems. |
| | CO3: Document and present technical reports. |
| | CO4: Participate in discussions for enhancement of knowledge. |
| | CO5: Adapt professional ethics. |
| A80088&PROJECT WORK | CO1: Identify the real world power system problems. |
| | CO2: Analyze, design and implement solution methodologies. |
| | CO3: Apply modern engineering tools for solution. |
| | CO4: write technical reports following professional ethics. |
| A80090&COMPREHENSIVE | CO1: Apply the concepts of Electrical engineering. |
| | CO2: Improve communication skills. |