SSGMCE SHEGAON

DEPARTMENT OF ELECTRICAL ENGINEERING

COURSE OUTCOMES OF ALL COURSES OF EIGHTH SEMESTER
BE ELECTRICAL (ELECTRONICS & POWER)

8EP01 POWER SYSTEM PROTECTION

After completing this course, student will be able to

1. Explain the construction, working and characteristics of different types of protective relays.
2. Develop the protection systems for Distribution and transmission line.
3. Develop the protection systems for various elements of a power system like Alternators, Transformers, Motors & Busbar.
4. Explain the construction & working of different types of circuit breakers, MCB, ELCB, RCCB & fuses.

8EP02 COMPUTER METHODS IN POWER SYSTEM ANALYSIS

After completing this course, student will be able to

1. Develop mathematical model to represent the power system components
2. Demonstrate the topology of electrical power system.
3. Formulate Bus Impedance & admittance matrices for Power System Network
4. Conduct short circuit studies of electrical power system.
5. Carry out the load flow Analysis of electrical power system.
6. Perform stability study of electrical power system

8EP03 HIGH VOLTAGE ENGINEERING (Professional Elective-V)

After completing this course, student will be able to

1. Explain the breakdown mechanism in solid, liquid, and gaseous dielectrics.
2. Select an appropriate protective device to protect the power system against overvoltage's caused by internal and external causes.
3. Utilize different circuits for the generation of high AC, DC, and impulse voltages.
4. Measure high AC, DC, and impulse voltages.
5. Test the insulation of various high voltage apparatus used in the power system.

8EP03 HVDC and FACTS (Professional Elective-V)

After completing this course, student will be able to

1. Discuss different components of HVDC transmission system.
2. Explain the operation and control of HVDC converters.
3. Identify the suitable reactive power compensation technique and filter for HVDC system.
4. Choose proper FACTS controller for the specific application based on system requirements.
5. Analyze the circuits of static shunt and static series compensators used for the prevention of voltage instability and improvement of transient stability and power damping oscillations.
6. Demonstrate the knowledge of Unified power flow controller (UPFC).

8EP04 POWER QUALITY (Professional Elective-VI)

After completing this course, student will be able to

1. Illustrate the concept, need, and standards of Power Quality
2. Classify Power quality characteristics
3. Select power conditioning device for mitigation of power quality problem
4. Make use of measurement tools for power quality survey

8EP04 ELECTRICAL ENERGY CONSERVATION AND AUDITING (Professional Elective-VI)

After completing this course, student will be able to

1. Summarize Indian and global energy scenario.
2. Explain types of energy Audit and its procedure.
3. Discuss economics of energy conservation
4. Elaborate the concepts of energy conservation and management.
5. Choose Appropriate energy efficient techniques for energy conservation
6. Apply the understanding of energy conservation and management for industrial applications.