ELECTRICAL AND ELECTRONICS ENGINEERING
III year-I Sem

POWER SYSTEM – II
(EE502PE)

Course Outcomes:

· Analyze transmission line performance.

1) Apply load compensation techniques to control reactive power
2) Understand the application of per unit quantities.
3) Design over voltage protection and insulation coordination
4) Determine the fault currents for symmetrical faults
5) Determine the fault currents for unbalanced faults

BUSINESS ECONOMICS AND FINANCIAL ANALYSIS
(SM504MS)

Course Outcomes:

The students will understand the various Forms of Business and the impact of

1) Economic variables on the Business.
2) The Demand, Supply, Production, Cost, Market Structure,
3) Pricing aspects are learnt.
4) The Students can study the firm's financial position by analysing the
5) Financial Statements of a Company.

POWER ELECTRONICS
(EE501PE)

Course Outcomes:

At the end of this course students will demonstrate the ability to

1) Understand the differences between signal level and power level devices.
2) Analyze controlled rectifier circuits.
3) Analyze the operation of DC-DC choppers.
4) Analyze the operation of voltage source inverters.
5) Understand the Future Trends in Power Electronics

ADVANCED COMMUNICATION SKILLS LAB
(EN508HS)

Course Outcomes:

1) Gathering ideas and information to organise ideas relevantly and coherently.
2) Making oral presentations.
3) Writing formal letters.
4) Transferring information from non-verbal to verbal texts and vice-versa.
5) Writing project/research reports/technical reports.
6) Participating in group discussions.
7) Engaging in debates.
8) Facing interviews.
9) Taking part in social and professional communication.

POWER ELECTRONICS LAB
(EE506PC)

Course Outcomes:

After completion of this course, the student is able to
1) Understand the operating principles of various power electronic converters.
2) Use power electronic simulation packages& hardware to develop the power converters.
3) Analyze and choose the appropriate converters for various applications

MEASUREMENTS AND INSTRUMENTATION LAB
(EE507PC)

Course Outcomes:

After completion of this lab the student is able to
1) to choose instruments
2) test any instrument
3) find the accuracy of any instrument by performing experiment
4) calibrate PMMC instrument using D.C potentiometer

HIGH VOLTAGE ENGINEERING (Professional Elective-I)
(EE512PE)

Course Outcomes:

At the end of the course, the student will demonstrate

1) Understand the basic physics related to various breakdown processes in solid, liquid and gaseous insulating materials.
2) Understand the basic physics related to various breakdown processes in solid, liquid and gaseous insulating materials.
3) Knowledge of generation and measurement of D. C., A.C., & Impulse voltages.
4) Knowledge of tests on H. V. equipment and on insulating materials, as per the standards.
5) Knowledge of how over-voltages arise in a power system, and protection against these

POWER SYSTEM SIMULATION LAB
(EE512PE)

Course Outcomes:

After completion of this lab, the student will be able to

1) Perform various transmission line calculations
2) Understand Different circuits time constants
3) Analyze the experimental data and draw the conclusions.

MEASUREMENTS AND INSTRUMENTATION
()E503PE

Course Outcomes:

After completion of this course, the student able to

1) Understand different types of measuring instruments, their construction, operation and characteristics
2) Understand different types of measuring instruments characteristics
3) Identify the instruments suitable for typical measurements
4) Apply the knowledge about transducers and instrument transformers to use them effectively.
5) Apply the knowledge of smart and digital metering for industrial applications

CYBER SECURITY

Course Outcomes:

1) Understand cyber-attacks, types of cybercrimes, cyber laws and also howtoprotectthem self and ultimately the entire Internet community from such attacks
2) Understand the Fundamentals of Cyber Security
3) Apply Security Principles to Network Infrastructure
4) Learn about Cryptography and Encryption
5) Analyze and Defend Against Common Cyber Attacks

INTELLECTUAL PROPERTY RIGHTS
(*MC510)

Course Outcomes:

On successful completion of this course the student should be able to:

1) Distinguish and Explain various forms of IPRs.
2) Identify criteria's to fit one's own intellectual work in particular form of IPRs.
3) Apply statutory provisions to protect particular form of IPRs.
4) Analyse rights and responsibilities of holder of Patent, Copyright, Trademark, Industrial Designetc.
5) Identify procedure to protect different forms of IPRs national and international level.

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ELECTRICAL AND ELECTRONICS ENGINEERING
III year-II Sem

POWER SYSTEM OPERATION AND CONTROL
(EE604PC)

Course Outcomes:

At the end of the course the student will be able to:

1) Understand operation and control of power systems.
2) Analyze various functions of Energy Management System (EMS) functions.
3) Analyze whether the machine is in stable or unstable position.
4) Understand power system deregulation and restructuring

Non Conventional Energy Sources

Course Outcomes:

1) Understand the Basics of Non-Conventional Energy Sources
2) Analyze Solar Energy System
3) Explore Wind Energy Systems
4) Learn About Biomass and Biogas Energy
5) Study Geothermal Energy Systems

POWER SEMICONDUCTOR DRIVES (Professional Elective - II)
(EE612PE)

Course Outcomes:

1) After completion of this course the student is able to
   Identify the drawbacks of speed control of motor by conventional methods.
2) Differentiate Phase controlled and chopper-controlled DC drives speed-torque characteristics merits and demerits
3) Understand Ac motor drive speed–torque characteristics using different control strategies its merits and demerits
4) Differentiate Phase controlled and chopper-controlled DC drives speed-torque characteristics merits and demerits
5) Describe Slip power recovery schemes

MICROPROCESSORS & MICROCONTROLLERS
(EE602PC)

Course Outcomes:

1) Upon completing this course, the student will be able to
   Understands the internal architecture, organization and assembly language programming of 8086 processors.
2) Understands the interfacing techniques to 8086 and 8051 based systems.
3) Understands the internal architecture, organization and assembly language programming of 8051/controllers
4) Understands the interfacing techniques to 8086 and 8051 based systems.
5) Understands the internal architecture of ARM processors and basic concepts of advanced ARM processors.

MICROPROCESSORS & MICROCONTROLLERS LAB
(EE606PC)

Course Outcomes:

1) Understand the Architecture of Microprocessors and Microcontrollers
2) Perform Basic Assembly Language Programming
3) Interface External Devices to Microprocessors and Microcontrollers

POWER SYSTEM LAB
(EE605PC)

Course Outcomes:

After completion of this lab, the student will be able t
1) Perform various load flow techniques
2) Understand Different protection methods
3) Analyze the experimental data and draw the conclusions.

POWER SYSTEM PROTECTION
(EE603PC)

Course Outcomes:

At the end of the course the student will be able to:

1) Compare and contrast electromagnetic, static and microprocessor-based relays
2) Apply technology to protect power system components.
3) Select relay settings of over current and distance relays.
4) Apply technology to protect power system components
5) Analyze quenching mechanisms used in air, oil and vacuum circuit breakers

SIGNALS AND SYSTEMS
(EE601PC)

Course Outcomes:

Upon completing this course, the student will be able to

1) Differentiate various signal functions.
2) Represent any arbitrary signal in time and frequency domain.
3) Understand the characteristics of linear time invariant systems.
4) Represent any arbitrary signal in time and frequency domain
5) Analyze the signals with different transform technique

SIGNALS AND SYSTEMS LAB
(EE607PC)

Course Outcomes:

At the end of this course, students will demonstrate the ability to

1) Understand the concepts of continuous time and discrete time systems.
2) Analyse systems in complex frequency domain.
3) Understand sampling theorem and its implications.

Fundamentals of AI

Course Outcomes:

4) Understand the Basics of Artificial Intelligence
5) Learn about Problem-Solving and Search Techniques
6) Study Knowledge Representation and Reasoning
7) Study Natural Language Processing
8) Learn About Expert Systems and Decision Making

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