



Shri Balasaheb Mane Shikshan Prasarak Mandal's
ASHOKRAO MANE GROUP OF INSTITUTIONS
Vathar Tarf Vadgaon | Kolhapur | Maharashtra



Department: Electrical Engineering

Course Outcomes

Final Year – Odd and Even semester

Semester	Course Code	Course Name	Course Outcome
VII	BTEEC 701	High Voltage Engineering	Illustrate the concept of electric field stresses, applications of insulating materials
			Explain the breakdown process in solid, liquid, and gaseous materials.
			Analyze methods for generation and measurement of High Voltages and Currents (both ac and dc)
			Describe the phenomenon of overvoltage and choose appropriate insulation coordination levels based on IS & IEC Standards
			Understand the methods for Nondestructive testing of equipment like transformers, insulators, isolators, bushings, lightning arrestors, cables, circuit breakers and surge diverters
VII	BTEEC 702	Power System Operation & Control	Explain the fundamental concept of power system.
			Design the mathematical model of synchronous machine.
			Design the mathematical model Excitation system and speed governing system.
			Analyze the transient stability of power system using swing equation and equal area criteria.
			Analyze the economic operation of power system.
VII	BTEEPE 703A	Group F (Energy Audit and conservation)	Understand the basic process involved in the energy audit and the terminologies associated in the process.
			Develop audit reports of any firm including large and small scale industries, residential and commercial establishments.
			Understand the appropriate method for the planning and monitoring of any energy conservation project
			Analyze various energy conservation in generation, transmission, distribution
			to get knowledge about Planning, Implementation & monitoring of energy conservation project
VII	BTEEOE 704C	Group G Mechatronics	Understand the different types of mechatronics system
			Analyze the types of sensors and transducer
			Select appropriate mechanical actuation systems
			Understand concepts of microcontroller and microprocessor.
			Understand concept of PLC.

VII	BTEEOE 705B	Group H (Electric and Hybrid Electric Vehicle)	To aware students about social and environmental importance of hybrid and electric vehicles
			To understand different electric and hybrid drive train topologies.
			To understand the difference between electric and conventional propulsion system
			To understand different energy storage devices used in EVs and HEVs
			To understand the role of power electronics and energy management system in EVs and HEVs.
VII	BTHM706	Engineering Operations and Project Management	Explain operations planning concepts.
			Explain operations decision making.
			Explain system design and capacity.
			Explain aggregate planning and master scheduling.
			Explain project scheduling and controlling production activities
VII	BTEEL 707	High Voltage Engineering Lab	Measure high voltages accurately using appropriate instruments.
			Perform dielectric strength tests on insulating materials and equipment
			Study and implement insulation coordination principles in high voltage systems
			Understand the calibration and limitations of measurement equipment.
			Learn basic maintenance practices for high voltage equipment.
VII	BTEEM 708	Project Part-I	Demonstrate an understanding of the fundamental principles of Electrical Engineering and apply them to the design and development of a complex electrical system
			Conduct research and analyze existing literature in the field of Electrical Engineering to identify the latest trends and technologies
			Use advanced software tools and techniques to design , simulate and test electrical system
			Work effectively in a in a team to plan manage and execute the project and communicate progress and outcomes
			Document and report on project with outcomes
VII	BTEEP 609	Internship	Develop practical skills, critical thinking, problem solving skills by working on projects.
			Apply theoretical knowledge to real world problem.
			Build communication and teamwork skills.
			Develop a professional network and gain exposure. Reflect on personal strengths and areas for professional development and career advancement.

VIII	BTEEPE 801	Introduction to Industry 4.0 & Industrial Internet of Things	Understand sensors, actuators, communication and Networking.
			Understand Cyber Physical Systems and Cyber security in Industry 4.0
			Knowledge of theory related to Industrial IoT Systems
			Ability to implement real case studies by gained knowledge of Industrial applications with IoT capability.
VIII	BTEEP 802	Project – II	Demonstrate an understanding of the fundamental principles of electrical Engineering and apply them to the design and development of a complex electrical system
			Conduct research and analyze existing literature in the field of Electrical Engineering to identify the latest trends and technologies
			Use advanced software tools and techniques to design , simulate and test electrical system
			Work effectively in a in a team to plan manage and execute the project and communicate progress and outcomes
			Developed skills in project management, time management and organization