Amrutvahini College of Engineering, Sangamner

Department of Electrical Engineering

Records of course outcomes (Cos) of all courses

Course Code	Course Title	Course Outcom	Course Outcome						
		e Number							
	BE Electrical Engineering (Semester-VII)								
		C401.1	Identify and analyse the dynamics of power system and suggest means to						
		C401.1	improve stability of system.						
		C401.2	Comprehend the effect of reactive power on Power system and suggest the						
	Power System		suitable means of reactive power management.						
	Operation and Control	C401.3	Selection of appropriate FACTs devices						
		C401.4	Analyse the generation-load balance in real time operation and its effect on						
			frequency and develop automatic control strategies with mathematical relations						
		C401.5	Formulate objective functions for optimization tasks such as unit commitment						
		C401.6	and Economic load dispatch and get solution using computational techniques.						
		C401.0	Evaluate renability indices of Power system						
		C402.1	Develop block diagram of PLC and explain the working.						
		C402.2	Classify input and output interfacing devices with PLC.						
		C402.3	Execute, debug and test the programs developed for digital and analog						
	Advanced	C102.4	operations.						
	Control System	C402.4	Applications of PLC for developing the industrial systems						
		C402.5	Develop architecture of SCADA and explain the importance of SCADA in						
			Critical initiastucture.						
		C402.6	development of verious industrial applications using DLC and SCADA						
		C402.1	To identify importance of PO Jasues						
		C403.1	Fetimation of PO Monitoring						
	403143A: PLC	C403.2	Analyse verious causes and affect of PO problems						
	and SCADA	C403.3	Analyse PO parameter and carry out of PO analysis						
		C403.4	Select cost effective mitigation technique for various PO Problem						
		C403.5	Use IEEE standard for harmonic compliance						
		C403.0	Review history Social and environmental importance of Hybrid and Electric						
	Electric and	C404.1	vehicles.						
		C404.2	Describe the performance and selection of energy storage systems						
		C404.3	Analyze battery management system						
	Hybrid Venicle	C404.4	Distinguish between the performance and architecture of various drive trains.						
		C404.5	Describe the different Instrumentation and Control used for electric vehicles						
		C404.6	Differentiate between Vehicle to Home, Vehicle to Vehicle and Vehicle to						
		C404.0	Grid energy systems concepts.						
		C405.1	Recognize the importance of digital control system.						
		C405.2	Evaluate pulse transfer function						
	Drojaat Staga I	C405.3	Analyze digital controllers.						
	Project Stage I	C405.4	Convert system in state space format.						
		C405.5	Solve state equation and Design observer for system						
		C405.6	To investigate stability analysis of control system.						

Course Code	Course Title	Course Outcom	Course Outcome

		e Number					
BE Electrical Engineering (Semester-VIII)							
		C408.1	Describe arc interruption methods in circuit breaker.				
		C408.2	Derive expression for restriking voltage and RRRV in circuit breaker				
	Switchgear and Protection	C408 3	Explain construction and working of different high voltage circuit breakers				
		C408.5	such as ABCB,SF6 CB, and VCB.				
C408		C408.4	Classify and Describe different type of relays such as over current relay,				
			Reverse power relay, directional over current relay, Differential relay, Distance				
			relay, Static relay and numerical relay				
		C408.5	Describe various protection schemes used for transformer, alternator and busbar				
		C408.6	Describe transmission line protection schemes				
	Power Electronic	C409.1	Demonstrate motor load dynamics and multi quadrant operation of drives				
		C409.2	Analyze operation of converter fed and chopper fed drives				
		C409.3	Classify braking methods of D.C. and induction motor drives				
C409	Controlled Drives	C409.4	Evaluate vector control for induction motor drive				
	Elective –III	C409.5	Develop synchronous motor drive.				
		C409.6	Identify classes and duty cycles of motor and applications of drives in				
			industries				
		C410.1	Identify, describe and analyze the breakdown theories of solid, liquid and				
		C410.1	gaseous materials				
	(High Voltage Engineering) Elective –IV	C410.2	Describe as well as use different methods of generation of high AC, DC,				
		C410.2	impulse voltage and current				
C410		C410.3	Demonstrate and use different methods of measurement of high AC, DC,				
C410		C410.3	impulse voltage and current				
		C410.4	Identify the occurrence of overvoltage and to provide remedial solutions				
		C410.5	Demonstrate an ability to carry out different tests on high voltage equipment and devices				
		C410.6	Design the high voltage laboratory with all safety measures				
	(Smart Grid)	C411.1	Differentiate Conventional and Smart Grid				
		C411.2	Identify the need of Smart Grid, Micro Grid, Smart metering, Smart storage,				
			Hybrid Vehicles, Home Automation, Smart Communication				
		C411.3	Comprehend the issues of micro grid				
C411		C411.4	Get introduced to new upcoming concepts in electrical from Utility to				
C-111			Consumers				
		C411.5	Comparing and getting acquainted with emerging technologies and current				
			professional issues in electric Grid.				
		C411.6	Express the necessity of global smart communication system				
C412	Project Stage II	C412.1	Demonstrate compliance with required standards/safety standards and				
			environmental factors by implementing identified technical issues.				
		C412.2	Plan, implement and demonstrate the performance of the project and make the				
		C412.2	right conclusion.				
		C412.3	Supporting effective oral and written communication through project report,				
			research paper and project poster presentation.				

Prof. T. R. Bhanegaonkar Cr. 3 Coordinator Dr. K. V. Bhadane NBA Coordinator Dr. S. S. Kadlag HOD