

AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
Department of Electrical Engineering
Course Outcomes(CO)

Second Year – 2015 Course			
Course Code	Course Name	Course Outcomes	
Semester - I			
(207006)	Engineering Mathematics-III	CO1	Solve higher order linear differential equation using appropriate techniques for
		CO2	modeling and analyzing electrical circuits.
		CO3	Solve problems related to Laplace transform, Fourier transform, Z-Transform and
		CO4	applications to Signal processing and Control systems.
(203141)	Power Generation Technologies	CO1	Identify operations of thermal power plant with all accessories and cycles.
		CO2	Be aware of the principle of operation, components, layout, location, environmental and
		CO3	social issues of nuclear, diesel and gas power plant.
		CO4	Identify and demonstrate the components of hydro power plant and calculation of turbine
		CO5	Required based on catchment area.
		CO6	Find the importance of wind based energy generation along with its design, analysis and
(203142)	Material Science	CO1	Categorize and classify different materials from Electrical Engineering applications point of view.
		CO2	Explain and summarize various properties and characteristics of different classes of materials.
		CO3	Choose materials for application in various electrical equipment.
		CO4	Explain and describe knowledge of nanotechnology, batteries and solar cell materials.
		CO5	Test different classes of materials as per IS.
(203143)	Analog and Digital Electronics	CO1	Understand conversion of number system, perform binary arithmetic and reduce Boolean expressions by

			K- Map.
		CO2	Demonstrate basics of various types of Flip flops, design registers and counter.
		CO3	Analyze parameter of Op-amp and its applications..
		CO4	Apply the knowledge of Op-amp as wave form generators & filters.
		CO5	Use BJT as amplifier with various configurations.
		CO6	Analysis of uncontrolled rectifier
(203144)	Electrical Measurements and Instrumentation	CO1	Understand various characteristics of measuring instruments, their classification and range extension technique..
		CO2	Classify resistance, apply measurement techniques for measurement of resistance, inductance.
		CO3	Explain construction, working principle and use of dynamometer type wattmeter for measurement of power under balance and unbalance condition.
		CO4	Explain Construction, working principle of 1-phase and 3-phase induction, static energy meter and calibration procedures.
		CO5	Use of CRO for measurement of various electrical parameters, importance of transducers, their classification, selection criterion and various applications.
		CO6	Measurement of various physical parameters using transducers
(203151)	Soft Skills	CO1	Do SWOT analysis.
		CO2	Develop presentation and take part in group discussion.
		CO3	Understand and Implement etiquettes in workplace and in society at large.
		CO4	Work in team with team spirit.
		CO5	Utilize the techniques for time management and stress management
203154	Audit Course I Solar Thermal Systems	CO1	Differentiate between types of solar Concentrators
		CO2	Apply software tool for solar concentrators

		CO3	Design different types of Solar collectors and balance of plant
Semester - II			
(203145)	Power System I	CO1	Recognize different patterns of load curve, calculate different factors associated with it and tariff structure for LT and HT consumers
		CO2	Aware of features, ratings, application of different electrical equipment in power station and selection of overhead line insulators.
		CO3	Analyze and apply the knowledge of electrical and mechanical design of transmission lines.
		CO4	Identify and analyze the performance of transmission lines.
(203146)	Electrical Machines I	CO1	Apply energy conversion principles to different machines.
		CO2	Select machine for specific applications.
		CO3	Test the various machine for performance calculation.
(203147)	Network Analysis	CO1	Developing strong basics for network theory.
		CO2	Develop the problem solving technique for networks by application of theorems.
		CO3	Understand the behavior of the network by analyzing its transient response.
		CO4	Apply their knowledge of network theory for designing special circuits like filters.
(203148)	Numerical Methods and Computer Programming	CO1	Develop algorithms and implement programs using C language for various numerical methods.
		CO2	Demonstrate types of errors in computation and their causes of occurrence.
		CO3	Identify various types of equations and apply appropriate numerical method to solve different equations.
		CO4	Apply different numerical methods for interpolation, differentiation and numerical integration.
		CO5	Apply and compare various numerical methods to solve first and second order ODE.

		CO6	Apply and compare various numerical methods to solve linear simultaneous equations
(203149)	Fundamentals of Microcontroller and Applications	CO1	Differentiate between microprocessor and microcontroller.
		CO2	Describe the architecture and features of various types of microcontroller.
		CO3	Demonstrate programming proficiency using the various addressing modes and all types of instructions of the target microcontroller.
		CO4	Program using the capabilities of the stack, the program counter the internal and external memory, timer and interrupts and show how these are used to execute a programme.
		CO5	Write assemble assembly language programs on PC and download and run their program on the training boards.
		CO6	Design electrical circuitry to the Microcontroller I/O ports in order to interface with external devices.
		CO7	Write assembly language programs and download the machine code that will provide solutions real-world control problems such as fluid level control, temperature control, and batch processes
203155	Audit Course II (A) Solar Photovoltaic Systems	CO1	Will be able to do design of Solar PV system for small and large installations
		CO2	Will be able to handle software tools for Solar PV systems
203155	Audit Course II (B) Course Name: Installation & Maintenance of Electrical appliances	CO1	Observing the safety precautions while working,
		CO2	Test line cord for continuity with test lamp/ multi-meter
		CO3	Dismantle and reassemble an electric iron
		CO4	Heater, kettle, room heater, toaster, hair dryer, mixer grinder etc
		CO5	Install a ceiling fan and the regulator
		CO6	Check a fluorescent lamp chock, starter and install it
		CO7	Domestic installation testing before energizing a domestic installation