Mahavir Education Trust's

Shah & Anchor Kutchhi Engineering College,

Chembur, Mumbai 400 088

Information Technology

Academic Year 2021-22

Semester I

Sem	Course Code	Course Name	CO Number	Course Outcome Statements
I	FEC101	Applied Mathematics -I	FEC1011	Apply De Moivre's Theorem to obtain the powers and roots of a complex number.
			FEC1012	Use the relation between circular and hyperbolic functions to separate into real and imaginary parts of hyperbolic and logarithmic functions.
			FEC1013	Develop skills of successive Differentiation, expansion of functions in ascending power of variable and value of the function in the neighborhood of some points.
			FEC1014	Apply the concept of partial differentiation to find total derivative and maxima & minima of a function of two independent variables.
			FEC1015	Apply Numerical Techniques to solve Transcendental equations using Newton- Raphson and Regula-falsi methods.
			FEC1016	Calculate the rank of a matrix by reducing it to Echelon form, Normal form and use this concept to solve the system of linear equations.
I	FEC102	Applied Physics-I	FEC1021	Recall the basic principles, methodologies and crystal structures.
			FEC1022	Understand and describe the concepts pertaining to quantum mechanics, crystallography and semiconductor physics.
			FEC1023	Discuss the principles of interference in thin films, superconductivity and engineering materials.
			FEC1024	Apply the theory of quantum mechanics, crystallography and semiconductor physics for explaining the structure and functionality of atoms, crystals and devices.
			FEC1025	Develop and utilize the concepts of interference in thin films, superconductivity and engineering materials for interpretation under varying conditions.
			FEC1026	Demonstrate the use of concepts learnt in practical applications.
I	FEC103	Applied Chemistry -I	FEC1031	Recall the basic concepts of engineering chemistry such as atomic and molecular structure, phases, industrial polymer
			FEC1032	Explain the concept of microscopic chemistry in terms of atomic and molecular orbital theory and relate it to

				molecular structure
			FEC1033	Illustrate the knowledge of various types of intermolecular forces and relate it to properties of materials
			FEC1034	Describe the concept of phase transformation of a given material
			FEC1035	Illustrate the knowledge of polymers, fabrication method, and conducting polymers in various industrial fields
			FEC1036	Analyze the quality of water and suggest method for treatment
I	FEC104	Engineering Mechanics	FEC1041	Illustrate the concept of force, moment and apply the same in determining resultant of coplanar and non-coplanar system
			FEC1042	Determine centroid of plane lamina.
			FEC1043	Apply the conditions of equilibrium in two-dimensional system with the help of FBD
			FEC1044	Apply laws of friction on bodies lying on horizontal and inclined plane.
			FEC1045	Establish relation between velocity and acceleration of a particle and analyze the motion by plotting relation
			FEC1046	Illustrate different types of motion and establish kinematic relation for a rigid body and analyze particles in motion using force, acceleration, work-energy and impulse momentum principles

			FEC1051	Recall methodologies, procedures and principles of basic electrical engineering
			FEC1052	Understand the various electrical circuit theorems and principles.
			FEC1053	Understand the principle and working of static electrical machines.
			FEC1054	Understand the principle and working of rotating electrical machines.
I	FEC105	Basic Electrical Engineering	FEC1055	Apply network theorems to circuits to determine the circuit response
			FEC1056	Analyze behavior of basic electrical circuits.
			FEL1011	To Plot Miller Indices
			FEL1012	To analyse the working of pn junction diode based on its IV characteristics.
			FEL1013	To study the use of zener diode as voltage regulator.
			FEL1014	To calculate the thickness of paper using wedge shaped thin film based on the concept of interference in thin films.
			FEL1015	To study charging and discharging of supercapacitor
I	FEL101	Engineering Physics-I	FEL1016	To relate theoretical analysis with the experimental data obtained.
			FEL1021	Understand the significance of viscosity and viscosity

I	FEL102	Engineering Chemistry-I		index of material
			FEL1022	Understand importance of estimation of the Chloride in water
			FEL1023	Determine hardness of water to decide treatment of water before use
			FEL1024	Understand the importance of pH value in water quality measurement
			FEL1025	Understand the structure and properties of polymer for its engineering applications
			FEL1026	Document their observations and interpretation after performing the experiment satisfactorily
I	FEL103	Engineering Mechanics	FEL1031	Experiments are designed to illustrate the law of moment, with the help of physical models
			FEL1032	Experiments are designed to illustrate the law of equilibrium with the help of physical models
			FEL1033	Experiments are designed to law of polygon of forces with the help of physical models
			FEL1034	Experiment is designed to estimate the friction force between two surfaces
			FEL1035	Experiment is designed to calculate acceleration due to gravity
			FEL1036	Experiment is designed to find coefficient of restitution between steel ball & glass ball.
I	FEL104	Basic Electrical Engineering	FEL1041	Recall and implement circuits
			FEL1042	Understand the theoretical concept and relate it with practical behavior.
			FEL1043	Understand the construction and working of electrical machines.
			FEL1044	Demonstrate correct usage of a method or procedure.
			FEL1045	Identify the assumptions and differentiate between theoretical and practical results, within permissible limits of errors.
			FEL1046	Analyze the losses and efficiency of static electrical machine.
I	FEL105	Basic Workshop practice I	FEL1051	Study and use of hand tools and power tools
			FEL1052	Performing marking, punching, cutting, filling, drilling, tapping etc. operations on
			FEL1053	Welding of two metal parts by using butt and lap joint
			FEL1054	Identify different components of computer hardware & troubleshooting
			FEL1055	Installation of OS, device drivers and application software
			FEL1056	Identify network devices, network cables & crimping