



Semester – I

Unique Course Number: FEC101

Course Name: Engineering Mathematics-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
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	Apply the concept of partial differentiation to find the total derivative and extreme values & Apply Euler's Theorem and Corollaries to Homogeneous and Non-Homogeneous functions
FEC1014	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 and compare the method with Gauss Seidel Iteration Method.
FEC1015	Apply Numerical Techniques to solve the Transcendental equations
FEC1016	Determine the nth derivative of function/product of function.

Unique Course Number: FEC102

Course Name: Engineering Physics-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC1021	Recall the basic principles, methodologies in Physics.
FEC1022	Describe the concepts pertaining to quantum mechanics, crystallography and semiconductor physics.
FEC1023	Explain the principles of interference in thin films, superconductivity and Engineering materials.
FEC1024	Apply the theory of quantum mechanics, crystallography and semiconductor physics for solving problems.
FEC1025	Utilize the concepts of interference in thin films, superconductivity and engineering materials for solving problems.
FEC1026	Demonstrate the use of concepts learnt in practical applications.

Unique Course Number: FEC103

Course Name: Engineering Chemistry-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC1031	Discuss the basic concepts of engineering chemistry such as atomic and molecular structure, intermolecular forces, phases, polymers and hardness of Water
FEC1032	Apply 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	Interpret phase transformation of a given material with the concept of phase Rule.
FEC1035	Select polymers and its fabrication method in various industrial fields.
FEC1036	Analyze the quality of water and suggest method for treatment



Unique Course Number: FEC104

Course Name: Engineering Mechanics

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC1041	Explain the basic concepts of Engineering Mechanics such as System of Coplanar Forces and Non-Coplanar Forces, Centroid, Equilibrium, Friction, Kinematics of particle and rigid body & Kinetics of particle.
FEC1042	Apply the concept of Varignon's theorem, center of gravity, law of equilibrium, laws of friction, Newton's laws of motion
FEC1043	Illustrate the knowledge of various types of systems of forces, different types of motions with & without considering forces and relate it to different engineering applications.
FEC1044	Interpret the state of the body either at rest or in motion by using the concept of friction.
FEC1045	Analyze Equilibrium conditions of bodies, forces in space, Friction, Impact & Kinematics of rigid bodies.
FEC1046	Determine the support reactions, unknown loads on the beam & coefficient of friction for different surfaces.

Unique Course Number: FEC105

Course Name: Basic Electrical Engineering

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEC1051	Explain methodologies, procedures and principles of basic electrical engineering.
FEC1052	Describe the various electrical circuit theorems and principles.
FEC1053	Explain the working principle of static electrical machines using various tests and calculate the efficiency.
FEC1054	Explain the working principle of rotating electrical machines and compare their types.
FEC1055	Apply network theorems to circuits to determine the circuit response.
FEC1056	Analyze behavior of basic electrical circuits.

Unique Course Number: FEL101

Course Name: Engineering Physics Lab-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL1011	To Plot Miller Indices
FEL1012	To calculate the thickness of paper using wedge shaped thin film based on the concept of interference in thin films.
FEL1013	To analyse the working of pn junction diode based on its IV characteristics.
FEL1014	To study the use of Zener diode as voltage regulator.
FEL1015	To study charging and discharging of supercapacitor
FEL1016	To relate theoretical analysis with the experimental data obtained.

Unique Course Number: FEL102

Course Name: Engineering Chemistry Lab-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL1021	Explain- the principle of the experiment.
FEL1022	Describe the procedure of the experiment.
FEL1023	Solve the numerical equation using experimental findings.
FEL1024	Select and use the appropriate Apparatus/Instrument for the experiment.
FEL1025	Infer the conclusion from the experimental observations.
FEL1026	Assess the quality and predict application



Unique Course Number: FEL103

Course Name: Engineering Mechanics Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL1031	Explain the principle of the experiment.
FEL1032	Describe the procedure of the experiment.
FEL1033	Solve the numerical equation using experimental findings.
FEL1034	Select and use the appropriate Apparatus/Instrument for the experiment.
FEL1035	Infer the conclusion from the experimental observations.
FEL1036	Assess the quality and predict application

Unique Course Number: FEL104

Course Name: Basic Electrical Engineering Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL1041	Recall and implement electric circuits.
FEL1042	Explain the theoretical concept and relate it with practical behavior of electric circuits.
FEL1043	Describe the construction and working of electrical machines.
FEL1044	Demonstrate correct usage of a method or procedure for electric circuits.
FEL1045	Identify the assumptions and differentiate between theoretical and practical results, within permissible limits of errors in the electric circuit.
FEL1046	Analyze the losses and efficiency of static electrical machines.

Unique Course Number: FEL105

Course Name: Basic Workshop practice-I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
FEL1051	Study and use of hand tools and power tools
FEL1052	Performing marking, punching, cutting, filing, drilling, tapping etc. operations on fitting job
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