Course Name:	Applied Mathematics I		
Course Code	FEC101		
Faculty Name:	Ms. Ashwini,Ms.Sonali, Mr.Satyanarayan,Mr.Datta		
Year	1	Sem	I

CO Number	Course Outcome
FEC101.1	Recall different representations and operations of complex numbers, De-Moivre's theorem, Inverse and transpose of a matrix, the derivatives of standard functions
FEC101.2	Identify different types of matrices, identify the real and imaginary parts of complex numbers appearing in the circular functions, Obtain partial derivatives of elementary functions, nth derivative of functions, obtain functional determinant
FEC101.3	Find partial derivatives of implicit and composite functions and also by using Euler's theorem, separate the real and imaginary parts of complex numbers appearing in hyperbolic and logarithmic functions, classify the vectors as linearly independent or dependent, solve the system of linear equations & transcendal equations by numerical methods,obtain limits of indeterminate forms using L-Hospital's rule
FEC101.4	Apply De Moivre's theorem in finding the powers and roots of complex numbers, determine the rank of a matrix and apply the concept in solving the system of linear equations by analytical methods, apply the concept of matrices to coding theory, apply the concept of partial differentiation in finding maxima and minima of functions , apply the concept of Leibnitz's theorem for successive differentiation, apply Taylor's & Maclaurin's series for expansion of functions as series
FEC101.5	Apply Open source software Scilab to solve system of linear equations using numerical methods and to find maxima minima of functions of two variables.
FEC101.6	Perform mini projects based on Application of Mathematics

Course Name:	Applied Physics I		
Course Code	FEC102		
Faculty Name:	Dr. Vinod Gokarna & Sameer Hadkar		
Year	1	Sem	I

CO Number	Course Outcome
FEC102.1	Students will be able to grasp and recall the basic concepts of core Physics topics like Solid State, Semiconductor, Superconductivity and Wave Mechanics.
FEC102.2	Students will be able to understand and describe the basic concepts and characteristics of core Physics topics like Solid State, Semiconductor, Superconductivity and Wave Mechanics.
FEC102.3	Students will be able to relate and integrate knowledge and explain the principles involved with their engineering disciplines.
FEC102.4	Students will be able to review, explain with examples and apply fundamental principles of Physics to solve numericals and problems relating to wave mechanics, energy and engineering materials.
FEC102.5	Students will be able to demostrate and conclude on the experiment performed and also communicate through tests in topics like Solid State, Semiconductor, Superconductivity and Wave Mechanics.
FEC102.6	Students will be able to perform mini projects which will encourage engineering students to venture into the research field.

Course Name:	Applied Chemistry I		
Course Code	FEC103		
Faculty Name:	Kartiki B. and Anice M.		
Year	1	Sem	I

CO Number	Course Outcome
FEC103.1	Student will be able to define and recall different engineering chemistry concepts and fundamentals in the study of water, polymer, lubricants, cements, nanomaterials and phase rule.
FEC103.2	Student will be able to describe different engineering chemistry concepts and properties involved in the study of water, polymers, lubricants, cements, nanomaterials and phase rule.
FEC103.3	Student will be able to explain the various mechanisms and processes involved in the study of water, polymer, lubricants, cements and nanomaterials and the concept of phase rule for one component and two component sytems.
FEC103.4	Student will be able to reason out and justify the various mechanisms and processes involved in the study of water, polymer, lubricants, cements, nanomaterials and solve numerical problems based on water hardness and lubricant properties.
FEC103.5	Student will be able to perform experiments, obtain data, solve numerical problems, analyze data and draw inference on basis of their study on water and lubricants.
FEC103.6	Seminar/Group Activity : Student will be able to review research literature, analyse complex problems, present new concepts, ideas, propose hypothesis, design experiments in the study of water, polymer, lubricants, cements and nanomaterials .

Course Name:	Engineering Mechanics		
Course Code	FEC104		
Faculty Name:	Mr. Sachin Sheravi, Ms. Babitha Devdas , Ms. Georgena Kannukkadan		
Year	1	Sem	I

CO Number	Course Outcome
FEC104.1	Students will be able to state the fundamental laws, basic principles and definitions that describes the state of rest and motion of rigid bodies under the influence of forces.
FEC104.2	Students will be able to convert a system of coplanar/Non-coplanar forces into its equivalent resultant force system using the understanding of FBD,support reactions, equilibrium equations and distributed loads.
FEC104.3	Students will be able to demonstrate the understanding of Centroid & ICR and its significance and locate the same.
FEC104.4	Students will be able to apply the equilibrium equations for problems on static bodies/structures to determine the internal forces(in members of truss) and external forces(friction etc) in magnitude and direction
FEC104.5	Students will be able to interpret the different types of motion performed by a particle using kinematic and kinetic analysis and solve for the motion parameters(velocity, acceleration,time etc) in magnitude and direction.
FEC104.6	Students will be able to analyse a force system for verification of laws/principles and determine unknown parameters to make necessary deductions from the findings.

Course Name:	BEE		
Course Code	FEC105		
Faculty Name:	Gejo George, Anjum Khan and Freda Carvalho		
Year	1	Sem	I

CO Number	Course Outcome
FEC105.1	The students will be able to define or state the basic principle and definations of an electrical network(DC+AC), basic operation of single phase transformer and DC motors and generators
FEC105.2	The students will be able to explain the fundamentals of DC circuits, single phase AC circuits, three phase AC circuits , construction of transformers and DC motors and generators
FEC105.3	The students will be able to apply the fundamental laws of electricity to solve any given electrical circuit
FEC105.4	The students will be able to analyze the various parameters for the given AC (single andthree phase) and DC circuits and the performance of single phase transformer
FEC105.5	The students will be able to evaluate the various parameters for the given AC (single and three phase) and DC circuits and single phase transformer
FEC105.6	The students will be able to design/ simulate AC and DC circuits and analyze various parameters related to AC and DC networks.

Course Name:	Environmental Studies		
Course Code	FEC106		
Faculty Name:	Kartiki B., Anice M., Dr. Vinod, Sachin S. Renjith V, Dr. Megha Arya		
Year	1	Sem	I

CO Number	Course Outcome
FEC106.1	The student will be able to recall/define the structural and functional features of ecosystem, sustainable development, types of pollution, various renewable energy sources.
FEC106.2	The student will be able to i) explain, justify and describe the structure of ecological pyramids under different conditions, different pollution control measures, renewable energy production methods and disaster management techniques. ii) describe/explain legislative measures to protect the environment, concept and importance of carbon credits, green buildings, measures for sustainable develpoment
FEC106.3	Student will be able to review research literature, present new concepts, ideas, build working models/simulations to demonstrate the technology involved and provide solutions to existing environmental problems.