

DON BOSCO INSTITUTE OF TECHNOLOGY, KURLA, MUMBAI

FE (BASIC SCIENCES AND HUMANITIES) DEPARTMENT, (ODD SEMESTER, 2023-24)

Course Name:	Engineering Mathematics I		
Course Code	FEC101		
Faculty Name:	Prof. Manisha S, Prof. Sonali J,		
Year	1	Sem	I
CO Number	Course Outcome		
FEC101.1	Students will be able to define Complex numbers, Hyperbolic and complex logarithmic functions, De Moivre's Theorem, types of Matrices, rank and derivatives of standard functions.		
FEC101.2	Students will be able to obtain		
FEC101.3	Students will be able to use,		
FEC101.4	Students will be able to		
FEC101.5	Students will be able to identify appropriate methods to find nth order derivative at a particular point and Inverse of a matrix.		
FEC101.6	Students will be able to create Scilab Code for solving System of Linear equations and transcendental functions.		
Course Name:	Engineering Physics I		
Course Code	FEC102		
Faculty Name:	Dr. Vinod Gokarna and Mr. 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 Quantum Physics, Crystallography,		
FEC102.2	Students will be able to understand and describe the basic concepts of Physics topics like Quantum Physics, Crystallography,		
FEC102.3	Students will be able to relate, integrate knowledge and explain the principles involved with their engineering disciplines like		
FEC102.4	Students will be able to review, elucidate with examples and apply the fundamental principles of Physics to solve numericals and		
FEC102.5	Students will be able to demonstrate and conclude on the experiment performed in topics like Quantum Physics, Crystallography,		
FEC102.6	Students will be able to perform mini projects which will encourage engineering students to venture into the research field.		
Course Name:	Engineering Chemistry I		
Course Code	FEC103		
Faculty Name:	Ms.Kartiki B. and Ms. Anice M		
Year	1	Sem	I
CO Number	Course Outcome		
FEC 103.1	Students will be able to define and recall fundamental concepts in atomic and molecular structures, aromaticity, intermolecular forces, phase rule, water quality, and polymers.		
FEC 103.2	Students will be able to describe the various methods or processes involved in the softening and purification of water, synthesis and		
FEC 103.3	Students will be able to determine the properties of important engineering material like water, polymers, homogenous and		
FEC 103.4	Students will be able to analyze data and solve numerical problems based on estimation of hardness, COD, BOD of water,		
FEC 103.5	Students will be able to justify and select the appropriate methods for treatment of water, fabrication of polymers, justify the		
FEC 103.6	Students will be able to do mini project/participate in seminars related to engineering chemistry /gather information to design and		

Course Name:	Engineering Mechanics			
Course Code	FEC104			
Faculty Name:	Mr. Hemant & Mr. Sachin & Mr.			
Year	1	Sem	I	
CO Number	Course Outcome			
FEC 104.1	Students will be able to state the fundamental laws, basic principles and definitions that describe the state of rest and motion of rigid			
FEC 104.2	Students will be able to convert a system of coplanar/Non-coplanar forces into its equivalent resultant force system using the			
FEC 104.3	Students will be able to demonstrate the understanding of basic concepts and principles learnt in the subject.			
FEC 104.4	Students will be able to apply the equilibrium equations for problems on static bodies/structures to determine the internal forces and			
FEC 104.5	Students will be able to interpret the different types of motion performed by a particle using kinematic and kinetic analysis and solve			
FEC 104.6	Students will be able to apply the basic principles/laws learnt in the subject to determine unknown parameters.			
Course Name:	Basic Electrical Engineering			
Course Code	FEC105			
Faculty Name:	Ms. Pratibha D. and Mr. Joshua			
Year	1	Sem	I	
CO Number	Course Outcome			
FEC 105.1	Students will be able to define the various laws, theorems, terms related to dc circuits, ac circuits, generation of three phase voltage,			
FEC 105.2	Students will be able to explain the fundamental concepts related to dc circuits, ac circuits, generation of three phase voltage,			
FEC 105.3	Students will be able to solve problems by applying fundamentals laws, theorems of electricity to given dc and ac circuits and			
FEC 105.4	Students will be able to analyse the various parameters related to dc circuits, single phase and three phase ac circuits and			
FEC 105.5	Students will be able to evaluate the given single phase, three phase ac circuits, and transformers. (Evaluating)			
FEC 105.6	Students will be able to simulate dc and ac circuits involving independent sources.			
Course Name:	Engineering Physics I			
Course Code	FEL101			
Faculty Name:	Dr. Vinod Gokarna and Mr. Sameer Hadkar			
Year	1	Sem	I	
CO Number	Course Outcome			
FEL 101.1	Perform the experiments based on interference in thin films and analyze the results.			
FEL 101.2	Verify the theory learned in the module crystallography.			
FEL 101.3	Perform the experiments on various semiconductor devices and analyze their characteristics.			
FEL 101.4	Perform simulation study on engineering materials.			
Course Name:	Engineering Chemistry I			
Course Code	FEL102			
Faculty Name:	Ms.Kartiki B. and Ms. Anice M			
Year	1	Sem	I	
CO Number	Course Outcome			

FEL 102.1	Students will be able to define and recall fundamental concepts related to properties of water (like pH, water hardness and softening),		
FEL 102.2	Students will be able to describe / explain the various mechanisms and processes/procedures involved in		
FEL 102.3	Students will be able to perform experiments, handle instruments/use apparatus obtain data, solve numerical problems on basis of		
FEL 102.4	Students will be able to obtain data/results on basis of the experiments performed, and analyze the data, discuss the results, draw the		
FEL 102.5	Student will be able to judge and select the type of water for different engineering applications, reason out and justify the efficacy of		
FEL 102.6	Students will be able to do mini project/participate in seminars related to engineering chemistry /gather information to design and		
Course Name:	Engineering Mechanics		
Course Code	FEL103		
Faculty Name:	Mr. Hemant H. & Mr. Juned A.		
Year	1	Sem	I
CO Number	Course Outcome		
FEL 103.1	Students will be able to explain the fundamental laws, basic principles state of rest and in motion of rigid bodies under the influence of		
FEL 103.2	Students will be able to solve for support reactions.		
FEL 103.3	Students will be able to apply the various procedures and techniques for the experiments .		
FEL 103.4	Students will be able to apply the mathematical concepts/equations/laws to obtain unknown forces.		
FEL 103.5	Students will be able to apply the mathematical concepts/equations/laws for unknown motion parameters.		
FEL 103.6	Students will be able to analyse kinematics and kinetics of particles.		
Course Name:	Basic Electrical Engineering		
Course Code	FEL104		
Faculty Name:	Ms. Prathibha D. and Ms. Gejo G.		
Year	1	Sem	I
CO Number	Course Outcome		
FEL 104.1	The students will be able to define or state the basic principle and definitions of an electrical network(DC+AC), basic operation of		
FEL 104.2	The students will be able to explain the fundamentals of DC circuits, single phase AC circuits, three phase AC circuits , construction		
FEL 104.3	The students will be able to apply the fundamental laws of electricity to solve any given electrical circuit		
FEL 104.4	The students will be able to analyze the various parameters for the given AC (single and three phase) and DC circuits and the		
FEL 104.5	The students will be able to evaluate the various parameters for the given AC (single and three phase) and DC circuits and single		
FEL 104.6	The students will be able to design/ simulate AC and DC circuits and analyze various parameters related to AC and DC Networks.		