DON BOSCO INSTITUTE OF TECHNOLOGY, KURLA, MUMBAI

FE (BASIC SCIENCES AND HUMANITIES)DEPARTMENT, (EVEN SEMESTER, 2018-19)

Course Name:	Applied Mathematics II		
Course Code	FEC201		
Faculty Name:	Ms.Sonali, Mr.Satyanarayana, Mr.Datta		
Year	1	Sem	II

CO Number	Course Outcome
FEC201.1	Identify the equations representing standard curves in Cartesian and polar coordinate systems, Identify the Beta and Gamma integrals, Describe and distinguish exact and linear differential equations
FEC201.2	Reduce the differential equation in appropriate form, obtain integrating factor, complementary function and particular integral, Solve the integrals with the equations of Beta and Gamma functions, Solve definite integrals using numerical techniques, Plot the standard curves in Cartesian and Polar coordinate system, locate the region, change order of integration, transformation of coordinate system.
FEC201.3	Solve problems in ordinary differential equations using appropriate method and apply it in solving electrical and mechanical engineering problems
FEC201.4	Apply the principles of Integral Calculus (single, double and triple integrals) to solve a variety of practical problems involving the calculation of length of a curve, the area and volume bounded by the curves etc. Apply the principle of DUIS in solving integrals, Analyzing error involved using numerical techniques for evaluating integrals
FEC201.5	Apply open source software SCILAB to trace standard curves , to solve initial value problems and to solve the first order differential equations using numerical techniques
FEC201.6	Perform mini projects based on Application of Mathematics

Course Name:	Applied Physics II		
Course Code	FEC202		
Faculty Name:	Dr. Vinod Gokarna & Sameer Hadkar		
Year	1	Sem	II

CO Number	Course Outcome
FEC202.1	Students will be able to grasp and recall the basic concepts of core Physics topics like Light, Lasers, Fibre Optics, Electrodynamics, Electromagnetism and Nanotechnology.
FEC202.2	Students will be able to understand and describe the basic concepts of Physics topics like Thin Film Interference, Diffraction, Quantum Processes, Numerical Aperture & Modes of propagation in Fibre, Coordinate Systems, Motion of charged particles with velocity filter and Approaches & Tools in Nanotechnology.
FEC202.3	Students will be able to relate, integrate knowledge and explain the principles involved with their engineering disciplines like Wedge shaped film & Newtons Rings, Powers of Grating, Einstein's equation & Types of lasers, Types of Fibre & losses in it, Fields & Maxwells equation, Bethe's Law & CRO and Methods to synthesize nanomaterials & understand their properties.
FEC202.4	Students will be able to review, elucidate with examples and apply the fundamental principles of Physics to solve numericals and problems relating to Light, Lasers, Fibre Optics, Electrodynamics, Electromagnetism and Nanotechnology.
FEC202.5	Students will be able to demostrate and conclude on the experiment performed in topics like Light, Lasers, Fibre Optics and Electromagnetism, and also communicate through tests in topics like Light, Lasers, Fibre Optics, Electrodynamics, Electromagnetism and Nanotechnology.
FEC202.6	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	FEC203		
Faculty Name:	Kartiki B. and Anice M.		
Year	1	Sem	II

CO Number	Course Outcome
FEC203.1	Student will be able to define and recall the different engineering chemistry concepts and fundamentals especially in the field of corrosion science, fuels chemistry, green chemistry, alloys, powder metallurgy and composite materials.
FEC203.2	Student will be able to describe different engineering concepts and properties involved in the study of corrosion, fuels chemistry, green chemistry, alloys, powder metallurgy and composite materials.
FEC203.3	Student will be able to explain the various phenomenon and processes involved in the field of corrosion science, fuel chemistry, green chemistry, alloys, powder metallurgy and composite materials.
FEC203.4	Student will be able to reason out and justify the various phenomenon and processes involved in the field of corrosion science, fuel chemistry, green chemistry, alloys, powder metallurgy and composite materials and will be able to solve numerical problems in fuels.
FEC203.5	Student will be able to perform experiments, obtain data, solve numerical/problems, analyze data and draw inference on basis of their study on corrosion, fuels, alloys, green chemistry.
FEC203.6	Seminar/Group Activity : Student will be able to review research literature, analyse complex problems, present new concepts, ideas, propose hypothesis, build working models for prprojects based on sustainability, material science and technology.

Course Name:	Engineering Drawing
Course Code	FEC204
Faculty Name:	Ms. Georgena Kannukkadan

Year	1	Sem	II

CO Number	Course Outcome
FEC204.1	Students will be able to reproduce and interpret the basics of engineering conventions in engineering drawing as per I.S
FEC204.2	Students will be able to demonstrate the understanding of the fundamental of projection drawing
FEC204.3	Students will be able to apply the basics of projection drawing to prepare orthographic views, sectional orthographic views and isometric view of machine parts as per I.S
FEC204.4	Students will be able to draw the intricate of section of solid and development of surfaces for the given cutting plane
FEC204.5	Students will be able to use CAD tool to draw different views of a 3D object.
FEC204.6	Students will be able to use CAD tools to draw an object in 3D.

Course Name:	SPA
Course Code	FEC205
Faculty Name:	Mr. Imran Mirza, Ms. Mahalaxmi S, Ms. Deepali K

Year	1	Sem	II

CO Number	Course Outcome
FEC205.1	Illustrate the basic terminology used in computer programming.
FEC205.2	Illustrate the concept of data types, variables and operators using C.
FEC205.3	Design and Implement control statements and looping constructs in C.
FEC205.4	Apply function concept on problem statements.
FEC205.5	Demonstrate the use of arrays, strings, structures and files handling in C.
FEC205.6	Demonstrate the dynamics of memory by the use of pointers to construct various data structures.

Course Name:	Communication Skills
Course Code	FEC206
Faculty Name:	Mr. Renjit, Mr. Sachin S, Ms. Jeffi

Year	1	Sem	II

CO Number	Course Outcome
FEC205.1	Students will be able to recall and define concepts in grammar which include subject-verb agreement, passive and active voice and summarization and comprehension skills
FEC205.2	Students will be able to explain a) the concept and meaning of communication, communication cycle, barriers to communication and methods and networks of communication b) principles of business letters and the parts and formats of business letter c) techniques to define objects and write instructions
FEC205.3	Students will be able to apply the principles of business letters to frame sentences in a letter.
FEC205.4	Students will be able to make use of the concept of active and passive voice while writing instructions and descriptions of process/object
FEC205.5	Students will be able to evaluate the principles of public speaking and communication in a speech using the given rubrics
FEC205.6	Students will be able to a) plan and develop a speech b) compose business letters c) design a blog