SACRED HEART COLLEGE (AUTONOMOUS)

Tirupattur – 635 601, Tamil Nadu, S.India

**Ready for
Every Good Work**

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A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

Name of the Course	Course Code	Name of the Program	Activities with direct bearing on Employability/ Entrepreneurship/ Skill development	Year of introduction
Differential Calculus	M116	B Sc Mathematics	Skill Development: Contents:Successive Differentiation, Rolle's and Mean value Theorems, Partial Differentiation, Curvature and Evolutes, Envelopes and Asymptotes. Activities: To make them understand the maxima and minima of the function, the consequences of mean value theorem for differentiable functions, to learn Euler's theorem of homogeneous function, finding the curvature and evolutes of the curve in Cartesian and Polar coordinates, finding the Envelopes and Asymptotes of the curve through Problem solving	2021-22

			sessions, Class tests and Assignments.	
Mechanics	M543	B Sc Mathematics	Skill Development: Contents: Kinematics, Forces on a particle and a rigid body,Frictional Forces, Simple Harmonic Motions, Projectiles and Impact Activities: Knowing the fundamental concepts of Kinematics, understanding of Forces on a rigid body, knowing frictional forces and their applications through problem solving techniques, Deveoping skills by learning about Rectilinear motion under varying forces, Simple Pendulum and Seconds Pendulum through problem solving techniques and Assignments	2021-22
Mathematical Modeling with Difference and	M545B	B Sc Mathematics	Skill Development: Contents: Mathematically Modeling Discrete	2021-22

			Processes , Continuous Models using Ordinary Differential Equations , Mathematical Models through Ordinary Differential Equations of Second Order . Activities: To make predictions of the behavior of a given physical system based on the analysis of its mathematical model, to recognise the power of mathematical modelling and analysis and be able to apply their understanding to their further studies, to relate dynamical problems with other concepts, to prepare models for real life situations	
differential Equations				
Graph Theory	M545C	B Sc Mathematics	Skill Development: Contents: Trees and Matchings , Planarity and colourability Activities: To Relate concepts of trees and bipartite graphs , Preparing a model using four colour problem	2021-22

Mathematics for Competitive Examinations I	NMA504	B Sc Mathematics	Skill Development: Contents: Average,Problems on numbers.Ratio and proportion. Time and work,Time and distance. Simple interest and compound Interest. Permutations and combinations. Activities: To train students to approach competitive examinations with less anxiety and fear by solving problems on various topics	2021-22
Linear Algebra	M643	B Sc Mathematics	Skill development: Contents: To study the transformations, Matrices, Systems of Linear Equations, Determinants and Diagonalization in Vector Space. Activities: To impart deeper insight to the students on various concepts pf Matrix operations, linear transformations, vector spaces and innerproduct spaces	2021-22
Resource Management Techniques	M646	B Sc Mathematics	Skill Development: Contents: Linear Programming Problem, Transportation Problem Activities: Solving problems in	2021-22

			InventoryTheory and Network Models	
Mathematical Statistics	M647	B Sc Mathematics	Skill development: Contents: Multiple and partical correlation , time series, Sampling, F-test and Chi-square test. Activities: Solving Problems in Correlation, time series and sampling techniques and samll sample tests.	2021-22