



*Ready for
Every Good Work*

SACRED HEART COLLEGE (AUTONOMOUS)

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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 Programme: PGDDS

S No	Title of the Paper	Course Code	Course Objectives	Course Outcomes	Relevance
1	Optimization Techniques	CADD101	<ul style="list-style-type: none"> To understand the basics of optimization. 	<ul style="list-style-type: none"> Choose, Draft and Formulate transportation problems. 	Regional developmental needs
2	Introduction to Data Science	CADD102	<ul style="list-style-type: none"> To learning the founding principles of Datascience. To learn Artifical intelligence concepts, searching and learning algorithms. 	<ul style="list-style-type: none"> Discover and Discuss the various technologies used in data science Recognize and Elicit the founding principles of Data Science. Identify, compare and correlate the Artificial intelligence concepts, searching and learningalgorithms. 	Regional developmentalneeds

				<ul style="list-style-type: none">• Identify and illustrate the methods and techniques commonly used in data science.• Analyze and Evaluate how data analysis, inferential statistics, modeling, machine learning, and statistical computing can be utilized in an integrated capacity.• Observe and Demonstrate the ability to clean and prepare data for analysis and assemble data from a variety of sources.	
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3	Introduction to Data warehouse and Data Mining	CADD10 3	<ul style="list-style-type: none"> • To learn about the basics of Data warehouse and data mining. • To understand clustering and web mining. 	<ul style="list-style-type: none"> • Remember, Understand and explain the fundamentals of Data Warehouse and Data Mining • Apply the concepts of association mining, clustering classification and Regression • Analyze and choose a suitable data mining task for a specific problem and support the choice of approach adopted. • Compare and Correlate the results various data mining techniques for a specific problem. • Identify and Apply real-world problems in business and scientific information using data mining techniques • Draft and Build statistical predictive models using various 	<p>Regional developmentalneeds</p>
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				techniques such as neural networks, decision trees and logistic regression.	
4	Machine Learning	CADD20 2	<ul style="list-style-type: none"> To learn the concepts of machine learning. <ul style="list-style-type: none"> To understand association rules, classification and prediction techniques. 	<ul style="list-style-type: none"> Understand and Comprehend the Machine Learning Concepts Identify the use cases of the supervised and unsupervised learning algorithms Analyse the logic behind the execution of various classifiers Compute and compare the performance of different algorithms for mining data 	Regional needs

				<ul style="list-style-type: none"> • Demonstrate and analyse the clustering methods • Propose solution for real word problems 	
5	Deep Learning	CADD20 3	<ul style="list-style-type: none"> • To understand Linear Regression and Regularization. • To learn the concepts of Deep Learning and its applications. 	<ul style="list-style-type: none"> • Observe and Apply the concepts of Deep Learning and its applications • Identify and Use the configuration of Deep Feed Forward Networks • Comparing and Correlating the Learning and Optimization Algorithms • Identify and Practice Regularization for Deep Learning • Observe and Discuss the concepts of Convolutional networks • Identify, Analyze and Evaluate the applications of Deep Learning 	Regional needs

6	Technologies for Data Science	CADD20 4	<ul style="list-style-type: none"> • To understand the technologies in data science. • To learn the concepts of Hadoop, Map-Reduce, HIVE, SQOOP and PIG. 	<ul style="list-style-type: none"> • Identify and Discover the various technologies used in Data Science • Recognize and Discuss Big Data and its analytics in the real world • Identify, Draft and Develop Big Data Solutions using Hadoop • List and Leverage Hadoop as a reliable, scalable MapReduce framework • Demonstrate and Install and interact the HIVE, SQOOP and PIG tools • Apply and Demonstrate the ability to clean and prepare data for analysis using HIVE, SQOOP and PIG tools 	<p style="text-align: center;">Regional developmental needs</p>
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