

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - CYBER SECURITY

Lesson Plan & Work-done Diary for AY:2026-27, Even Semester

Course with Code: Machine Learning– BIC703					Faculty: Mrs. Suhasini			Semester & Section: 7 th	
Module	Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1	1		Introduction: Need for Machine Learning	Chalk and Talk					
	2		Machine Learning Explained, Machine Learning in Relation to other Fields	PPT					
	3		Types of Machine Learning	Chalk and Talk					
	4		Machine Learning Process	PPT					
	5		Challenges of Machine Learning, Machine Learning Applications	PPT					
	6		Understanding Data-1: Introduction	PPT					
	7		Big Data Analysis Framework,	PPT					
	8		Descriptive Statistics	PPT					
	9		Univariate Data Analysis and Visualization	PPT					
	10		Univariate Data Analysis and Visualization continuation	Chalk and Talk					



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MODULE-2	11		Bivariate Data	PPT					
	12		Multivariate Data, Multivariate Statistics	PPT					
	13		Essential Mathematics for Multivariate Data	Chalk and Talk					
	14		Matrix Decompositions	Chalk and Talk					
	15		Feature Engineering and Dimensionality Reduction Techniques	Chalk and Talk					
	16		Problems on Dimensional Reduction Techniques	Chalk and Talk					
	17		Basic Learning Theory: Design of Learning System	PPT					
	18		Introduction to Concept of Learning	PPT					
	19		Modelling in Machine Learning	PPT					
	20		Problems on FIND-S and Candidate elimination methods.	Chalk and Talk					





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MODULE-3	21		Similarity-based Learning: Nearest-Neighbour Learning	Chalk and Talk					
	22		Weighted K-Nearest-Neighbor Algorithm, Nearest Centroid Classifier	Chalk and Talk					
	23		Locally Weighted Regression	Chalk and Talk					
	24		Regression Analysis: Introduction to Regression, Linear Regression	Chalk and Talk					
	25		Multiple Linear Regression, Polynomial Regression	Chalk and Talk					
	26		Logistic Regression Decision Tree Learning: Introduction	Chalk and Talk					
	27		Decision Tree Induction Algorithms – ID3	Chalk and Talk					
	28		Problems on C4.5	Chalk and Talk					
	29		Problems on CART	Chalk and Talk					
	30		Problems on Regression trees	Chalk and Talk					





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MODULE-4	31		Bayesian Learning: Introduction to Probability-based Learning	PPT					
	32		Fundamentals of Bayes Theorem	Chalk and Talk					
	33		Classification Using Bayes Model	PPT					
	34		Naïve Bayes Algorithm for Continuous Attributes	Chalk and Talk					
	35		Artificial Neural Networks: Introduction	PPT					
	36		Biological Neurons, Artificial Neurons	PPT					
	37		Perceptron and Learning Theory	Chalk and Talk					
	38		Perceptron continuation, Types of Artificial Neural Networks	PPT					
	39		Popular Applications of Artificial Neural Networks	PPT					
	40		Advantages and Disadvantages of ANN, Challenges of ANN	PPT					





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MODULE-5	41		Clustering Algorithms: Introduction to Clustering Approaches	PPT					
	42		Proximity Measures, Hierarchical Clustering Algorithms	Chalk and Talk					
	43		Partitional Clustering Algorithm	Chalk and Talk					
	44		Density-based Methods, Grid-based Approach	PPT					
	45		Reinforcement Learning: Overview, Scope	PPT					
	46		Reinforcement Learning as Machine Learning, Components of Reinforcement Learning	PPT					
	47		Markov Decision Process	PPT					
	48		Multi-Arm Bandit Problem and Reinforcement Problem Types	PPT					
	49		Model-based Learning, Model Free Methods	PPT					
	50		Q-Learning, SARSA Learning	PPT					



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	Activity	Planned	Actual	Remarks
1	Theory Classes	50		
2	Assignments/Quizzes/ Self study	2		
3	Tutorials/ Extra classes	0		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	50%		
Planning			Execution	
Faculty Signature: Mrs. Suhasini			Faculty Signature: Mrs. Suhasini	
HOD Signature:			HOD Signature:	

