



**SRINIVAS UNIVERSITY**  
**COLLEGE OF ENGINEERING & TECHNOLOGY**  
 Department Of Computer Science and Engineering  
**TEACHING/LESSON PLAN (EVEN Semester 2021-22)**

Subject Code		19SCS62	Title	Machine Learning			Class		VI sem	
Prerequisites					Faculty Name		Ms. Dyanila Neeta Ferrao			
Credits	4	Hours/week	L-T-P: 4		CIE Marks	50	SEE Marks	50	Total Hours	50

**Course Objectives:**

- Define machine learning and problems relevant to machine learning.
- Differentiate supervised, unsupervised and reinforcement learning
- Apply neural networks, Bayes classifier and k nearest neighbour, for problems appear in machine learning.
- Perform statistical analysis of machine learning techniques.
- Applying K nearest Neighbour and reinforcement learning

**Course Outcomes of the Course:**

On Completion of this Course the Student was able to,

CO id	Course Outcome
CO1	Identify the problems for machine learning. And select the either supervised, unsupervised or reinforcement learning.
CO2	Explain theory of probability and statistics related to machine learning
CO3	Investigate concept learning, ANN, Bayes classifier, k nearest neighbor, Q, software
CO4	Explain about Bayes theorem
CO5	Analyse the Instant Learning

**CO-PO Mapping:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓										
CO2		✓	✓									
CO3	✓	✓										
CO4	✓	✓	✓									
CO5	✓	✓	✓									

**Lesson/Teaching Plan of the Course:**

Hour No.	Plan Date	Actual Date	Topic to be covered	CO Mapping	Mode of Delivery	Text/ Reference book
1	14.03.2022		Introduction: Well posed learning problems,	CO1	Chalk and talk	T1
2	15.03.2022		Designing a Learning system,	CO1	Chalk and talk	T1
3	17.03.2022		Perspective and Issues in Machine Learning.	CO1	Chalk and talk	T1
4	18.03.2022		Concept Learning: Concept learning task,	CO1	Chalk and talk	T1
5	21.03.2022		Concept learning as search,	CO1	Chalk and talk	T1

6	22.03.2022		Find-S algorithm,	CO1	Chalk and talk	T1
7	24.03.2022		Version space,	CO1	Chalk and talk	T1
8	25.03.2022		Candidate Elimination algorithm,	CO1	Chalk and talk	T1
9	28.03.2022		Candidate Elimination algorithm,	CO1	Chalk and talk	T1
10	29.03.2022		Inductive Bias.	CO1	Chalk and talk	T1
11	31.03.2022		Decision Tree Learning: Decision tree representation,	CO2	Chalk and talk	T1
12	01.04.2022		Appropriate problems for decision tree learning,	CO2	Chalk and talk	T1
13	04.04.2022		Appropriate problems for decision tree learning,	CO2	Chalk and talk	T1
14	05.04.2022		Basic decision tree learning algorithm,	CO2	Chalk and talk	T1
15	07.04.2022		Basic decision tree learning algorithm,	CO2	Chalk and talk	T1
16	08.04.2022		hypothesis space search in decision tree learning,	CO2	Chalk and talk	T1
17	11.04.2022		hypothesis space search in decision tree learning,	CO2	Chalk and talk	T1
18	12.04.2022		Inductive bias in decision tree learning,	CO2	Chalk and talk	T1
19	26.04.2022		Inductive bias in decision tree learning,	CO2	Chalk and talk	T1
20	28.04.2022		Issues in decision tree learning.	CO2	Chalk and talk	T1
21	29.04.2022		Artificial Neural Networks: Introduction,	CO3	Chalk and talk	T1
22	02.05.2022		Neural Network representation,	CO3	Chalk and talk	T1
23	05.05.2022		Neural Network representation,	CO3	Chalk and talk	T1
24	06.05.2022		Appropriate problems,	CO3	Chalk and talk	T1

25	09.05.2022		Appropriate problems,	CO3	Chalk and talk	T1
26	10.05.2022		Perceptrons,	CO3	Chalk and talk	T1
27	12.05.2022		Perceptrons,	CO3	Chalk and talk	T1
28	13.05.2022		Backpropagation algorithm.	CO3	Chalk and talk	T1
29	16.05.2022		Backpropagation algorithm.	CO3	Chalk and talk	T1
30	17.05.2022		Backpropagation algorithm.	CO3	Chalk and talk	T1
31	19.05.2022		Bayesian Learning: Introduction,	CO4	Chalk and talk	T1
32	20.05.2022		Bayes theorem,	CO4	Chalk and talk	T1
33	23.05.2022		Bayes theorem and concept learning,	CO4	Chalk and talk	T1
34	24.05.2022		Bayes theorem and concept learning,	CO4	Chalk and talk	T1
35	26.05.2022		learning, ML and LS error hypothesis,	CO4	Chalk and talk	T1
36	27.05.2022		ML for predicting probabilities,	CO4	Chalk and talk	T1
37	30.05.2022		MDL principle,	CO4	Chalk and talk	T1
38	31.05.2022		Naive Bayes classifier,	CO4	Chalk and talk	T1
39	06.06.2022		Bayesian belief networks,	CO4	Chalk and talk	T1
40	07.06.2022		EM algorithm.	CO4	Chalk and talk	T1
41	09.06.2022		Instance Based Learning: Introduction,	CO5	Chalk and talk	T1
42	10.06.2022		k-nearest neighbor learning,	CO5	Chalk and talk	T1
43	13.06.2022		k-nearest neighbor learning,	CO5	Chalk and talk	T1

44	14.06.2022		locally weighted regression,	CO5	Chalk and talk	T1
45	16.06.2022		locally weighted regression,	CO5	Chalk and talk	T1
46	17.06.2022		Radial basis function,	CO5	Chalk and talk	T1
47	20.06.2022		cased-based reasoning.	CO5	Chalk and talk	T1
48	21.06.2022		Learning Task,	CO5	Chalk and talk	T1
49	23.06.2022		Q-Learning.	CO5	Chalk and talk	T1
50	24.06.2022		Q-Learning.	CO5	Chalk and talk	T1

**TEXT/REFERENCE BOOKS:**

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Tom M. Mitchell, Machine Learning, India Edition 2013, McGraw Hill Education.
R1	Trevor Hastie, Robert Tibshirani, Jerome Friedman, h The Elements of Statistical Learning, 2nd edition, springer series in statistics.
R2	EthemAlpaydın, Introduction to machine learning, second edition, MIT press.

**Faculty Member**

Date:

**HOD**