GOAPAL KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY
GOURAHARI VIHAR, PO: RANIPUT, JEYPORE – 764 005

LESSON PLAN

Name of the Subject: CSPC3003 ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
Session : 2025-26
Name of the Faculty: Amod kumar Bagh / Pranati Nayak
Semester: 5th **Branch:** Computer Sc. & Engg.
Semester From: JULY, 2025 **No. of Weeks:** 16 Weeks

Week	Day	THEORY TOPICS	Classes
		Module-I: Introduction To AI	**10rs**
1	1	Introduction To AI	50Min
	2	Foundations of Artificial Intelligence	50Min
	3	Agents and Environments	50Min
2	4	Intelligent Agent	50Min
	5	Good Behaviour -The Concept of Rationality	50Min
	6	Nature of Environments, Structure of Agents	50Min
3	7	Problem-solving and searching in AI- Iterative search	50Min
	8		50Min
	9	Uninformed search (Breadth-first search, Depth-first search, Uniform cost search)	50Min
4	10	Informed (Heuristic) Search Strategies (Greedy best-first search, A* Search)	50Min
	11	Constraint Satisfaction Problem (CSP).	50Min
		Module-II: Adversarial search	**10Hrs**
	12	Adversarial search – Games	50Min
5	13	The Mini-Max algorithm	50 Min
	14	Alpha-Beta Pruning	50 Min
	15	Knowledge Representations & Reasoning– logical agents	50 Min
6	16	Knowledge-Based Agents	50 Min
	17	Logic: Reasoning Patterns in Propositional Logic	50 Min
	18	Logic: First-Order Logic	50 Min
7	19	Resolution Using Propositional logic	50 Min
	20	Resolution Using First-Order Logic	50 Min
	21	Unification and Lifting	50 Min
8	22	Forward Chaining, Backward Chaining,	50 Min
		Module-III: Uncertainty	**8Hrs**
	23	Reasoning with uncertainty	50 Min

	24	Bayes' rule	50 Min
9	25	Bayesian Network Representation	50 Min
	26	Markov Models	50 Min
	27	Independence and Inference.	50 Min
10	28	Expert Systems	50 Min
	29	Representing and Using Domain Knowledge	50 Min
	30	Expert System Shells	50 Min
11	31	Explanation & Knowledge Acquisition	50 Min
		Module-IV: Learning methods	**6Hrs**
	32	Statistical Learning	50Min
	33	Rote Learning	50 Min
12	34	Learning by Taking Advice	50 Min
	35	Learning in Problem-solving	50 Min
	36	Learning from Examples: Induction	50Min
13	37	Explanation-based Learning.	50Min
		Module-V: Machine learning	**8Hrs**
	38	Machine learning: Supervised learning	50Min
	39	Machine learning: Unsupervised learning	50Min
14	40	Machine learning: Reinforcement learning	50Min
	41	Machine Learning Paradigms- Regression	50Min
	42	Classification (decision trees, KNN, support vector machine, Naïve Bayes Classifier)	50Min
15	43	Model Evaluation Metrics	50Min
	44	Overfitting and underfitting	50Min
	45	Clustering & Dimensionality Reduction,	50Min
16	46	Neural Network basics, Ensemble learning.	50Min