

LECTURE PLAN

FUZZY LOGIC AND NEURAL NETWORKS

<u>CO</u>	<u>Topic to be covered</u>	<u>No.of lectures</u>
<u>CO1</u>	Unit 1: Artificial Neural Network history Overview Of Biological Neuro-System,	<u>2</u>
	Mathematical Models Of Neurons, ANN architecture Learning Rules, Learning Paradigms-Supervised, Unsupervised and Reinforcement Learning,	<u>3</u>
	ANN training Algorithms-perceptions, Training rules, , Back Propagation Algorithm, K Means clustering, Probabilistic Neural Network, Multilayer Perception Model, Hopfield Networks, Associative Memories	<u>3</u>
	Applications of Artificial Neural Networks.	<u>1</u>
<u>CO2</u>	UNIT II Fuzzy Logic: Introduction to fuzzy logic, Classical and fuzzy sets: Overview of Classical Sets, Membership Function and Fuzzy rule Generation.	<u>2</u>
	Operation on Fuzzy Sets: Compliment, Intersection, Unions, Combinations of Operations, Aggregation Operations	<u>3</u>
	Fuzzy Arithmetic: Fuzzy numbers, Linguistic variables, arithmetic operations on Intervals & Numbers, Lattice of Fuzzy Numbers, Fuzzy Equations	<u>4</u>
<u>CO3</u>	UNIT III Fuzzy Logic: Classical Logic, Multivalued logics, Fuzzy Propositions, Fuzzy Qualifiers, Linguistic Hedges.	<u>4</u>
	Uncertainty based Information: Information& Uncertainty	<u>3</u>
	Nonspecificity of Fuzzy & Crisp Sets, and Fuzziness of Fuzzy Sets.	<u>2</u>
<u>CO4</u>	UNIT - IV Introduction of Neuro Fuzzy Systems	<u>3</u>
	Architecture of Neuro Fuzzy Networks	<u>3</u>
	Application of Fuzzy Logic & Neural Networks in Intelligent Machine Design	<u>3</u>