Lesson Teaching Plan

Subject: Artificial Intelligence	**Branch:** Computer Application	
Semester: 5th Sem	**Faculty name:** Bighnaraj Naik	

Module	Topic	No. of classes
1	Introduction to Artificial Intelligence: The Foundations of Artificial Intelligence	1
	The History of Artificial Intelligence, and the State of the Art.	1
	Intelligent Agents: Introduction, How Agents should Act, Structure of Intelligent Agents, Environments.	1
	Solving Problems by Searching: problem-solving Agents, Formulating problems	1
	Example problems, and searching for Solutions,	1
	Search Strategies	1
	Uninformed search: BFS and DFS	1
	Informed search: Best first search	1
	A* search	1
	AO* search	1
	Hill climbing search	1
	Min-Max search	1
	α-β pruning	1
	Avoiding Repeated States, and Constraint Satisfaction Search.	1
	Heuristic Functions, Memory Bounded Search, and Iterative Improvement Algorithms.	1
2	Agents That Reason Logically; A Knowledge-Based Agent, The Wumpus World Environment	1
	Representation, Reasoning & Logic prepositional Logic : A very simple Logic,	1
	An agent for the Wumpus World.	1
	First-Order Logic; Syntax and Semantics, Extensions and National, Variations, using First Order Logic,	1
	Logical Agents for the Wumpus World, A Simple Reflex Agent, Representing Charge in the World,	1
	Deducing Hidden Properties of the World, Preferences Among Actions, Toward A Goal-Based Agent.	1
	Building a Knowledge Base; Properties of Good and Bad Knowledge Bases, Knowledge Engineering.	1
	The Electronic Circuits Domain, General Outology, The Grocery Shopping World.	1
	Inference in First-Order Logic : Inference Rules Involving Quantifiers, An Example Proof. Generalized Modus Ponens,	1
	Forward and Backward, Chaining & Completeness, Resolution: A complete Inference Procedure, Completeness of Resolution.	1
3	Planning A Simple Planning Agent Form Problem Solving to Planning.	1
	Planning in Situation Calculus. Basic Representations for Planning. A Partial-Order planning Example, A partial Order planning algorithm,	1
	Planning With partially Instantiated Operators, Knowledge Engineering for Planning.	1
	Making Simple Decision: Combining Beliefs and desires under uncertainty.	1

		The Basis of Utility Theory, Utility Functions. Multi attribute utility Functions, Decision Networks.	1
		The Value of Information. Decision – Theoretic Expert Systems.	1
		Learning in Neural and Belief Networks' How the Brain Works, Neural Networks, perceptions	1
		Multi-layered Feed Forward Networks	1
		Applications Back propagation algorithm, Applications of Neural Networks	1
4		Knowledge in Learning: Knowledge in Learning, Explanation-based Learning	1
		Learning Using Relevance Information, Inductive Logic Programming. Agents that Communicate: Communication as action, Types of Communicating Agents	1
		A Formal Grammar for A subset of English Syntactic Analysis (Parsing), Definite Clause Grammar (DCG), Augmenting A Grammar.	1
		Semantic Interpretation. Ambiguity and Disambiguation. A Communicating Agent.	1
		Practical Natural Language processing Practical applications. Efficient Parsing Scaling up the lexicon. Scaling up the Grammar Ambiguity. Discourse Understanding.	1
		Total no. of classes:	40