PVP SIDDHARTHA INSTITUTE OF TEHNOLOGY, KANURU, VIJAYAWADA (AUTONOMOUS)

INFORMATION TECHNOLOGY

FUNDAMENTALS OF ARTIFICIAL INTELLEGENCE

Course Code		Year	IV	Semester	I
	OE4				
Course Category		Branch	IT	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	-
Continuous Internal		Semester			
Evaluation:	30	End Evaluation:	70	Total Marks:	100

Course Outcomes							
Upon su	Upon successful completion of the course, the student will be able to						
CO1	Know the challenges and concepts of AI.	L2					
CO2	Solve problems using heuristics search algorithms	L3					
CO3	Transform knowledge into rules.	L3					
CO4	Demonstrate Symbolic reasoning under uncertainty	L3					
CO5	Acquainted with expert systems.	L3					

	Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)										f			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3												2	3
CO2		3											3	3
CO3		3											3	3
CO4		3					3						3	3
CO5				3									3	3

	Syllabus					
Unit No	('ontents					
I	What is AI: The AI Problems, What is an AI Techniques, Criteria for Successes? Problems and problem spaces and Search: Problem as a state space search, Production systems, Problem Characteristics, Production system characteristics.	CO1				
II	Heuristic search technique: Generate and test, Hill climbing, Best First search, Problem reduction, Constraint satisfaction.	CO1, CO2				
III	Knowledge Representation issues: Representations and mappings. Representing knowledge using rules: Procedural knowledge Vs Declarative knowledge, Forward Vs Backward reasoning, matching.	CO3				
IV	Symbolic reasoning under uncertainty: Introduction to Non monotonic reasoning, Implementation in DFS and BFS. Weak, strong slot and filler structures: Semantic nets, Frames,	CO4				
V	Planning: Goal stack planning, Hierarchical planning Expert Systems: Expert system shells, Knowledge acquisition.	CO5				

Learning Recourses

Text Books

1. Artificial Intelligence, 2nd Edition, E.RichandK. Knight (TMH).

References

- 1. Artificial Intelligence and Expert Systems-Patterson PHI
- 2. Expert Systems Principles and Programming-Fourth Edn, Giarrantana/Riley, Thomson
- 3. PROLOG Programming for Artificial Intelligence. Ivan Bratka-Third Edition–PearsonEducation.

e-Resources & other digital material

http://www.jntuk-coeerd.in/

http://nptel.ac.in/video.php?subjectId=106105079

http://nptel.iitk.ac.in/courses/Webcourse-

contents/IIT%20Kharagpur/Artificial%20intelligence/New_index1.html