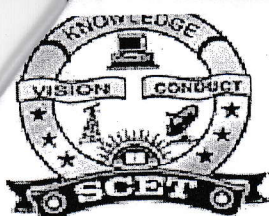


SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

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DEPARTMENT OF INFORMATION TECHNOLOGY TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
16IT3T01	Artificial Intelligence	V	IT	5	2021-22	01-10-2021
COURSE OUTCOMES						
CO1	Define the fundamentals of AI techniques and search techniques.					
CO2	Compare the Knowledge representation rules.					
CO3	Explain the various Reasoning Techniques					
CO4	Understand the concepts of Game playing, Learning and Natural Language Processing.					
CO5	Acquire the knowledge in Planning system and Expert system.					
UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Reference	Contact Hour	Delivery Method
I	CO-1		Introduction:			Chalk & Board Power point presentations Assignment Test
		1.1	Artificial Intelligence definition, AI problems, Problem Spaces	T1	1	
		1.2	Problem as a State Space Search	T1,R1	1	
		1.3	problem characteristics	T1	1	
		1.4	production Systems	T1	1	
			Basic Search Strategies:			
		1.5	Issues in the design of search programs	T1,R1	1	
		1.6	Uninformed Search Breadth-First, Depth-First Search	T1	1	
		1.7	Heuristic Search Generate-And- Test, Hill Climbing	T1	1	
		1.8	Best-First Search	T1	1	
		1.9	A* Algorithm, Problem Reduction	T1,R1	1	
		1.10	AO*Algorithm	T1,R1	1	
		1.11	Constraint Satisfaction	T1,R1	1	
		1.12	Means-Ends Analysis	T1,R1	1	
Content beyond syllabus		1.13	Trends in Artificial Intelligence	T1,R1	2	
Total					14	
II	CO-2		Knowledge Representation Issues:			Chalk &
		2.1	Representation and Mapping, Simple Facts in Predicate Logic	T1,T2	1	



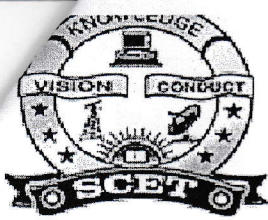
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		2.2	Representing Instance & ISA Relation	T1,T2	1	Board	
		2.3	Computable Functions and Predicates	T1,T2	1		Power point presentations
		2.4	Resolution	T1,T2	1		
		2.5	Natural Deduction	T1,T2	1		
			Representing Knowledge Using Rules:				Assignment
		2.6	Procedural Vs Declarative Knowledge	T1,T2	1		
		2.7	Logic Programming,	T1	1	Test	
		2.8	Forward Vs Backward Reasoning	T1	1		
		2.9	Matching, Control Knowledge	T1	1		
		Content beyond syllabus	2.10	Implementation of Filler structures	T1,T2	2	
				Total	11		
III	CO – 3		Reasoning under Uncertainty:	T1,R1	1	Chalk & Board	
		3.1	Introduction to Non-Monotonic Reasoning	T1,R1	1		Power point presentations
		3.2	Logics for non-monotonic reasoning	T1,R1	1		
		3.3	Implementation of DFS Dependency-Directed Back tracking	T1,R1	1		
		3.4	Justification-Based Truth Maintenance System, LBT Management System	T1,R1	1	Assignment	
		3.5	Implementation of BFS.	T1,R1	1		
			Statistical Reasoning:			Test	
		3.6	Probability and Bayes Theorem,	T1	1		
		3.7	Certainty Factors and Rule-Based Systems	T1	1		
		3.8	Bayesian Networks	T1	1		
3.9	Bayesian Networks	T1	1				
Content beyond syllabus	3.10	Modelling of Bayesian Networks	T1,T2	2			
				Total	11		
IV	CO – 4		Game Playing:			Chalk & Board	
		4.1	Overview- Minimax Search,	T1,T2	1		
		4.2	Alpha – Beta Cutoffs	T1,T2	1	Power point presentations	
			Learning:				
		4.3	Rote Learning, learning by taking advance	T1,T2	1		
		4.4	learning in problem-solving	T1,T2	1		
		4.5	learning by examples-Induction, Explanation based learning	T1,T2	1	Assignment	
			Natural Language Processing:				
		4.6	Steps in the Natural Language Processing	T1,T2	1		
		4.7	Syntactic Processing	T1,T2	1		
		4.8	Augmented Transition Nets	T1,T2	1		
4.9	Semantic Analysis	T1,T2	1	Test			
4.10	NLP Understanding Systems	T1,T2	1				
Content beyond syllabus	4.11	Case studies of Learning approaches		2			



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			Total	12	
V	CO – 5	Planning:	T1	1	Chalk & Board Power point presentations Assignment Test
		5.1 Components of a Planning System	T1	1	
		5.2 Goal Stack Planning	T1	1	
		5.3 Non-linear Planning using Constraint Posting	T1	1	
		5.4 Hierarchical Planning	T1	1	
		Experts Systems:	T1		
		5.5 Overview of an Expert System	T2	1	
		5.6 Architecture of an Expert Systems	T2	1	
		5.7 Different Types of Expert Systems- Rule Based	T2	1	
		5.8 Frame Based	T2	1	
		5.9 Decision Tree based	T2	1	
5.10 Case Based Architectures	T2	1			
Content beyond syllabus	5.11 Introduction to Machine Learning		2		
			Total	12	
CUMULATIVE PROPOSED PERIODS				60	
Text Books:					
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION				
1.	E. Rich and K. Knight, Artificial Intelligence, 3rd Edn., (TMH), 2017				
2	Dan W Patterson, Introduction to Artificial Intelligence & Expert Systems, PHI.,2010				
Reference Books:					
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION				
1	Stuart Russell, Peter Norvig, Artificial Intelligence A Modern Approach, Second Edition, PHI/ Pearson Education, 2015				
2	Saroj Kaushik, Artificial Intelligence, Cengage Learning India, 2018.				
Web Details:					
1	https://www.tutorialride.com/artificial-intelligence/artificial-intelligence-tutorial.htm				
2	https://data-flair.training/blogs/ai-tutorials-home/				
3	https://intellipaat.com/blog/tutorial/artificial-intelligence-tutorial/				
4	www.edureka.co > blog > artificial-intelligence-tutorial				

		Name	Signature with Date
i.	Faculty	Dr. RVVSV Prasad	
ii.	Module Coordinator	Dr. RVVSV Prasad	
iii.	Programme Coordinator	Dr. RVVSV Prasad	

11/01/2021

Principal