



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY

TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement
23IT5E01	Artificial Intelligence	V	IT	6	2025-26	09-07-2025

COURSE OUTCOMES

1	Study the concepts of Artificial Intelligence.
2	Learn the methods of solving problems using Artificial Intelligence.
3	Introduce the concepts of Expert Systems.
4	Understand the applications of AI, namely game playing, theorem proving, and machine learning.
5	Learn different knowledge representation techniques.

UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Ref	Contact Hour	Delivery Method
I	CO – 1		Unit-1: Introduction:			
		1.1	AI problems	T1	1	Chalk & Board
		1.2	Foundation of AI	T1	1	
		1.3	History of AI	T1	1	
		1.4	intelligent agents	T1	1	
		1.5	Agents and Environments	T1	2	
		1.6	The concept of rationality	T1	1	Power point presentations
		1.7	The nature of environments	T1	1	
		1.8	Structure of agents	T1	2	
		1.9	problem solving agents	T1	1	Assignment Test
		1.10	problem formulation	T1	1	
Content beyond syllabus		1.11	Challenges of AI	R1	1	

Total

13

II	CO – 2		Unit-2: Searching			
		2.1	Searching for solutions	T1,T2	1	Chalk & Board
		2.2	Uniformed search strategies – Breadth First Search, Depth First Search	T1,T2	1	
		2.3	Search with partial information (Heuristic search) Hill climbing	T1,T2	1	Power point presentations Assignment Test
		2.4	A*, AO* Algorithms	T1,T2	1	
		2.5	Problem reduction,	T1,T2	1	



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

		2.6	Game Playing-Adversial search	T1	1	NPTEL Video
		2.7	Games, mini-max algorithm	T1,T2	2	
		2.8	Optimal decisions in multiplayer games	T1,T2	1	
		2.9	Problem in Game playing, Alpha-Beta pruning	T1,T2	1	
		2.10	Evaluation functions	T1,T2	1	
Content beyond syllabus		2.11	Case studies on A* and AO* algorithms	T1,T2	1	
Total					12	
III	CO – 3		Unit-3: Representation of Knowledge			Chalk & Board Power point presentations Assignment Test
		3.1	Knowledge representation issues	T1,T2	1	
		3.2	Predicate logic- logic programming	T1,T2	2	
		3.3	Semantic nets- frames and inheritance	T1,T2	2	
		3.4	Constraint propagation, representing knowledge using rules	T1,T2	1	
		3.5	Rules based deduction systems	T1,T2	1	
		3.6	Reasoning under uncertainty	T1,T2	2	
		3.7	Review of probability	T1,T2	1	
		3.8	Bayes' probabilistic interferences and	T1,T2	1	
		3.9	Dempster Shafer theory	R1	1	
Content beyond syllabus		3.10	Crypto Puzzles	R1	1	Experimental Learning
Total					13	
IV	CO – 4		Unit-4: Logic concepts			Chalk & Board Power point presentations Assignment Test
		4.1	First order logic.	T1,T2	1	
		4.2	Inference in first order logic	T1,T2	2	
		4.3	propositional vs. first order inference	T1,T2	1	
		4.4	Unification & lifts	T1,T2	1	
		4.5	Forward chaining, Backward chaining	T1,T2	1	
		4.6	Resolution, Learning from observation	T1,T2	1	
		4.7	Inductive learning, Decision trees	T1,T2	2	
		4.8	Explanation based learning, Statistical Learning methods	T1,T2	2	
	4.9	Reinforcement Learning	T1,T2	1		
Content beyond syllabus		4.10	Case studies on learning methods	T2	1	NPTEL Video
Total					13	
V	CO – 5		Unit-5: Expert Systems			Chalk & Board Power point presentations Assignment Test
		5.1	Architecture of expert systems	T2,R3	2	
		5.2	Roles of expert systems –	T2,R3	1	
		5.3	Knowledge Acquisition Meta knowledge Heuristics	T2,R3	1	
		5.4	Typical expert systems – MYCIN, DART, XCON	T2,R3	2	
		5.5	Expert systems shells	T1,T2	1	



Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapuram, Narsapur – 530280 (Andhra Pradesh)

Content beyond syllabus	5.8	Watson Expert System	T2, R1	1	Experimental Learning
Total				08	
Cumulative Proposed Periods				60	

Text Books:

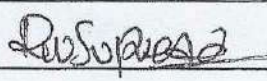
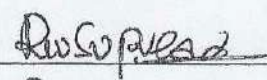
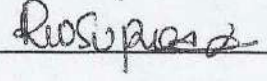
S. No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	S. Russel and P. Norvig, "Artificial Intelligence – A Modern Approach", Second Edition, Pearson Education, 2003.
2	Kevin Night and Elaine Rich, "Artificial Intelligence (SIE)", Mc Graw Hill. 2010.

Reference Books:

S. No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	David Poole, Alan Mackworth, Randy Goebel, "Computational Intelligence: a logical approach", Oxford University Press, 2008.
2	G. Luger, "Artificial Intelligence: Structures and Strategies for complex problem solving", Fourth Edition, Pearson Education, 2008.

Web Details:

1	https://ai.google/
2	https://swayam.gov.in/nd1_noc19_me71/preview

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


Principal