K L Deemed to be University
Department of CSE -- KLVZA
Course Handout
2020-2021, Odd Sem

Course Title	:AI
Course Code	:19CS2212
L-T-P-S Structure	: 2-0-2-0
Pre-requisite	:
Credits	: 3
Course Coordinator	:TATAVARTHY SANTHI SRI
Team of Instructors	:
Teaching Associates	:

Syllabus : Introduction to AI: Intelligent Agents, Solving problems by searching, problem-solving agents, well defined problems and solutions with examples. Applications of AI:- ANN, Fuzzy Systems, NLP, Introduction to Expert systems. Uninformed search strategies-BFS, DFS, Iterative deepening, bidirectional search. Heuristic Search Techniques: Greedy BFS, A*, memory bounded, heuristic functions. Local &Adversarial search: Optimization problems, hill climbing search, simulated annealing, local beam search, genetic algorithms. Online search agents and unknown environments. Optimal decisions in games, alpha-beta pruning, cutting of search, forward pruning, Constraint satisfaction problems:-Inference in CSPs, back tracking search for CSPs, Knowledge and reasoning: knowledge based agents, Logic, propositional logics and horn clauses, first order logic, Inference in first order logic, Propositional versus first order inference, unification and lifting, forward & backward chaining, resolution. Handing uncertainty: Quantifying uncertainty, basic probability notation, Baye's theorem, Probabilistic reasoning, representation of conditional distributions, probabilistic reasoning overtime, Hidden Markov model, Kalman filters.

Text Books :1. Russel and Norvig, 'Artificial Intelligence', third edition, Pearson Education, PHI, (2015) 2. Elaine Rich & Kevin Knight, 'Artificial Intelligence', 3nd Edition, Tata McGrawHill Edition, Reprint(2008)

Reference Books :1. Patrick Henry Winston, 'Artificial Intelligence', Pearson Education (2003) 2. G. Luger, W. A. Stubblefield, "Artificial Intelligence", Third Edition, Addison- Wesley,(2007) 3. William F. Clocksin, Christopher S. Mellish-Programming in Prolog-Springer (2003)

Course Rationale : With the usage of Internet and World Wide Web increasing day by day, the field of AI and its techniques are being used in many areas such as machine learning, which directly affect human life. Various techniques for encoding knowledge in computer systems such as predicate logic, production rules, and semantic networks find application in real world problems. The fields of AI such as Game Playing and Probability and uncertainty techniques are also important.

Course Objectives : The emphasis of the course is on understanding the various search algorithms that are useful to solve AI problems, knowledge representation schemes, Game Playing and Probability and uncertainty techniques and to solving AI problems using PYTHON language.

COURSE OUTCOMES (COs):

CO NO	Course Outcome (CO)	PO/PSO	Blooms Taxonomy Level (BTL)
CO1	Understand the problem, well defined problems and their solutions, Uninformed and Informed search.	PSO2,PO1,PO2	2
CO2	Apply adversarial search algorithms to solve Game	PSO2,PO2,PO7	3

	playing problems and Constraint satisfaction problems		
CO3	Distinguish between Building Knowledge and reasoning between propositional logics and first order logic and solve inference based problem using forward and backward reasoning, resolution.	PSO2,PO4,PO6,PO7	4
CO4	Analyzing uncertainty using Bayes theorm, Hidden Markov model and Kalman filters.	PO1,PO3,PO4,PO6,PO7,PSO2	4
CO5	Choose the appropriate programming logic techniques solve any real world AI problems in the laboratory	PSO2,PO5	5

COURSE OUTCOME INDICATORS (COIs)::

Outcome No.	Highest BTL	COI-1	COI-2	COI-3	COI-4	COI-5
CO1	2	**Btl-1** Recall the Foundations of AI, Agents and Structure of Agents	**Btl-2** Understand Uninformed & informed Search Strategies.			
CO2	3	**Btl-1** Recognize the Concepts of Local Search	**Btl-2** Understand Games; Build General Game Tree in Game Playing. Compare and contrast Min Max Algorithms, alpha Beta Pruning	**Btl-3** Apply the Concept of Constrain Satisfaction		
CO3	4	**Btl-1** Recognize the Outline about the Knowledge Based Agents, propositional theorem proving	**Btl-2** Understand knowledge representation using predicate logic Analyse	**Btl-3** Apply the syntax and Semantics of First order logic. Assess knowledge representation using rules	**Btl-4** Analyze Comparison of forward and backward reasoning, Resolution	
CO4	4	**Btl-1** Recognize the Outline of uncertainty using basic probability notation Baye's theorem,	**Btl-2** Understand the Probabilistic Reasoning, Representation of knowledge in uncertain domain	**Btl-3** Apply Probabilistic reasoning over time, Functioning of Hidden Markov Model		
CO5	5	**Btl-1** Illustration of Informed and Uninformed search	**Btl-2** Implementation of game tree on different types of games.	**Btl-3** Applying logical statements on facts.	**Btl-4** Experiment with uncertainty and probability	**Btl-5** Evaluation of hidden markov model and kalman filters.

PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES (POs/PSOs)

Po No.	Program Outcome
PO1	Engineering Knowledge :An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization for the solution of complex engineering problems in engineering
PO2	Problem Analysis :An ability to identify, formulate, research literature, analyze complex engineering problems in mechanical engineering using first principles of mathematics, natural sciences and engineering sciences
PO3	Design/ development of solutions :An ability to design solutions for complex engineering problems and system component or processes that meet the specified needs considering public health & safety and cultural, societal & environment
PO4	Conduct investigations of complex problems :An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to obtain solutions to engineering problems
PO5	Modern tool usage :Ability to create, select and apply appropriate techniques, resources and modern engineering activities, with an understanding of the limitations
PO6	The engineer and society :Ability to apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO7	Environment and sustainability Ability to demonstrate the knowledge of engineering solutions, contemporary issues understanding their impacts on societal and environmental contexts, leading towards sustainable development
PO8	Ethics : An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice
PO9	Individual and team work :An ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings
PO10	Communication :Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities
PO11	Project management and finance :Ability to demonstrate knowledge and understanding of the engineering and management principles and apply those one’s own work, as a member and leader in team, to manage projects and in multi-disciplinary environments
PO12	Lifelong learning An ability to recognize the need for and having the preparation and ability to engage independent and life-long learning in broadest context of technological change
PSO1	An ability to design and develop software projects as well as Analyze and test user requirements.
PSO2	An Ability to gain working Knowledge on emerging software tools and technologies.

Lecture Course DELIVERY Plan:

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
1	CO1	COI-1	Course Handout explanation and Introduction to AI	T BOOK [1],CH 1.4-1.5, Page no 28-30	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
2	CO1	COI-1	Intelligent Agents	T BOOK [1],CH 2.1-2.4, Page no 34-58	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
3	CO1	COI-1	Solving problems by searching	T BOOK [1,2],T.1. CH 3.1-3.2, Page no 64-81T.2. CH2.1, Page no. 25-30	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
4	CO1	COI-2	Uninformed search strategies: BFS, DFS, DLS	T BOOK [1],CH 3.4, Page no 81-91	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
5	CO1	COI-2	Uninformed search strategies: bidirectional search, Heuristic function, informed search strategies: GBFS	T BOOK [1],CH 3.5, Page no 92-103	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
6	CO1	COI-2	Informed search strategies: A* Search	T BOOK [1],CH 3.5, Page no 92-103	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
7	CO2	COI-1	Optimization problems: hill climbing search, simulated annealing, local beam search.	T BOOK [1],CH 4.1-4.1.3.Page no 120-126	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
8	CO2	COI-2	Adversarial Search: Game playing, Mini-Max algorithm	T BOOK [1],CH 5.1-5.2, Page no 161-167	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
9	CO2	COI-2	Alpha-beta pruning, Cutting off search (Self Learning), forward pruning (Self Learning	T BOOK [1],CH 5.3, 5.4.1-5.4.3, Page no 167-169, 171-175	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
10	CO2	COI-1	Genetic algorithms, Introduction to Online search agents and unknown environments, Online DFS Agent	T BOOK [1],CH 4.1.4,4.5, page no 127-129, 147-153	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
11	CO2	COI-3	Constraint Satisfaction Problems (CSP) – Example: Map Colouring	T BOOK [1],CH 6.1, Page no 202-205	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
12	CO2	COI-3	Crypt Arithmetic problem, Backtracking for CSPs, Local Search for CSPs	T BOOK [1],CH 6.1, 6.2 Page no 206-212.CH 6.3-6.4, Page no 214-222	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM1
13	CO3	COI-3	Knowledge based Reasoning: Logical Agents Propositional Logic, Horn Clauses	T BOOK [1],CH 7.1,7.2,7.3,7.4,7.5.3 Page no 238-239,244-253, 256-257	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
14	CO3	COI-1	First Order Logic (Predicate Logic).	T BOOK [1],CH 8.2,8.3,8.4 Page no. 290-313	PPT,Talk	ALM,ATTN,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
15	CO3	COI-1	Unification	T BOOK [1],CH 9.2 Page no 326-329	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
16	CO3	COI-2	Conversion to Clause Form & Resolution in Proposition logic	T BOOK [1],CH 7.5 Page no 249-256	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
17	CO3	COI-2	Resolution in Predicate logic	T BOOK [1],CH 9.5 Page no 350-353	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
18	CO3	COI-3	Forward and Backward chaining	T BOOK [1],CH 9.3 Page no 330-340	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
19	CO4	COI-1	Quantifying uncertainty, Basic Probability Notation	T BOOK [1],CH 13.1,13.2,13.3Page no 480-490	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2

Sess.No.	CO	COI	Topic	Book No[CH No] [Page No]	Teaching-Learning Methods	EvaluationComponents
20	CO4	COI-1	Conditional probability, Baye's Theorem, The Naïve Baye's Classifier	T BOOK [1],CH 13.5 Page no 495-499	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
21	CO4	COI-1	Probabilistic Reasoning: Representation of knowledge under uncertain domain-Bayesian networks	T BOOK [1],CH14.1, 14.2Page no 510-518	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
22	CO4	COI-2	Probabilistic Reasoning over time	T BOOK [1],CH 15.1,15.2 Page no 566-578	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
23	CO4	COI-2	Hidden Markov Models, Kalman Filter(Self Learning)	T BOOK [1],CH 15.3-15.4 Page no 578-590	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2
24	CO4	COI-2	Other approaches to uncertain reasoning: Rule based systems, Fuzzy logic	T BOOK [1],CH 14.7 Page no 546-550	PPT,Talk	ALM,End Semester Exam,Home Assignment,Lab End Semester Exam,Lab In Semester Exam,LCE,SEM-EXAM2

Lecture Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 Student will understand the importance of AI.

Session Outcome: 2 Student will learn the cos and syllabus and evaluation plan of the course.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods

5	Attendance	2	Talk	--- NOT APPLICABLE ---
10	Course Handout explanation	1	PPT	--- NOT APPLICABLE ---
5	Course Handout explanation	1	Talk	--- NOT APPLICABLE ---
5	Clarification of doubts	1	PPT	--- NOT APPLICABLE ---
10	What is artificial Intelligence, Foundations of AI, Applications of AI	1	PPT	--- NOT APPLICABLE ---
5	What is artificial Intelligence, Foundations of AI, Applications of AI	1	PPT	--- NOT APPLICABLE ---
10	Quiz through LMS	1	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 2

Session Outcome: 1 Student will understand Intelligent Agents & Environments AI.

Session Outcome: 2 Student will learn the real world applications.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/popup question	2	Talk	--- NOT APPLICABLE ---
10	Intelligent Agents: Agents & Environments, Good behaviour	2	PPT	--- NOT APPLICABLE ---
5	Intelligent Agents: Agents & Environments, Good behaviour	2	PPT	--- NOT APPLICABLE ---
5	Clarification of doubts	2	Talk	--- NOT APPLICABLE ---
10	Nature of Environments, Different types of environments	2	PPT	--- NOT APPLICABLE ---
5	Nature of Environments, Different types of environments	2	PPT	--- NOT APPLICABLE ---
10	Quiz through LMS	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

Session Outcome: 1 Students will learn about problem solving agents.

Session Outcome: 2 Students will learn precise definitions of various types of problems and their solutions.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/popup question	1	Talk	--- NOT APPLICABLE ---
10	Solving problems by Searching, Toy Problems	2	PPT	--- NOT APPLICABLE ---
5	Solving problems by Searching, Toy Problems	2	PPT	--- NOT APPLICABLE ---
5	Clarification of doubts	2	Talk	--- NOT APPLICABLE ---
10	Real world problems, infrastructure for searching algorithms	2	PPT	--- NOT APPLICABLE ---
5	Real world problems, infrastructure for searching algorithms	2	PPT	--- NOT APPLICABLE ---
5	Discussion/Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

Session Outcome: 1 Student will learn several general-purpose search algorithms that can be used to solve problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	UNINFOMED SEARCH STRATEGIES: BFS, DFS, DLS, IDDFS	2	PPT	--- NOT APPLICABLE ---
5	UNINFOMED SEARCH STRATEGIES: BFS, DFS, DLS, IDDFS	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	Talk	--- NOT APPLICABLE ---
20	Problems as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	2	Talk	--- NOT APPLICABLE

SESSION NUMBER : 5

Session Outcome: 1 Student will learn several general-purpose search algorithms that can be used to solve problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Uninformed Search Strategies: Uniform cost search, Bidirectional Search, Informed Search Strategies: GBFS	2	PPT	--- NOT APPLICABLE ---
5	Uninformed Search Strategies: Uniform cost search, Bidirectional Search, Informed Search Strategies: GBFS	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	Talk	--- NOT APPLICABLE ---
20	Problems on UC/BS/GBFS searches as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

Session Outcome: 1 Student will learn the general-purpose informed (heuristic) search algorithm that can be used to solve problems

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Informed Search Strategies: A* Search	2	PPT	--- NOT APPLICABLE ---
5	Informed Search Strategies: A* Search	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	Talk	--- NOT APPLICABLE ---
20	Problems on A* Search as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE

SESSION NUMBER : 7

Session Outcome: 1 Students will learn about Local Search Algorithms

Session Outcome: 2 Students will learn about state space search based problems

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Local Search Algorithms: hill climbing search, simulated annealing, local beam search	2	PPT	--- NOT APPLICABLE ---
5	Local Search Algorithms: hill climbing search, simulated annealing, local beam search	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	Talk	--- NOT APPLICABLE ---
20	Problems on Local Search algorithms as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

Session Outcome: 1 Students will learn applicability of AI in game playing

Session Outcome: 2 Students will learn Optimal decisions in games

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Adversarial Search: Game playing	2	PPT	--- NOT APPLICABLE ---
5	Adversarial Search: Game playing	2	PPT	--- NOT APPLICABLE ---
20	Problems on Game playing as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

Session Outcome: 1 Students will learn alpha beta pruning

Session Outcome: 2 Students will learn the importance of pruning

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Adversarial Search: Alpha-Beta pruning	2	PPT	--- NOT APPLICABLE ---
5	Adversarial Search: Alpha-Beta pruning	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on Alpha-Beta pruning as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 10

Session Outcome: 1 Students will learn about Genetic Algorithms

Session Outcome: 2 Students will learn about Online search agents

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Genetic Algorithms	2	PPT	--- NOT APPLICABLE ---
5	Genetic Algorithms	2	PPT	--- NOT APPLICABLE ---
5	Clarification of doubts	2	Talk	--- NOT APPLICABLE ---
10	Online search agents	2	PPT	--- NOT APPLICABLE ---
5	Online search agents	2	PPT	--- NOT APPLICABLE ---

10	Quiz through LMS	2	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 11

Session Outcome: 1 Students will learn about Constraint Satisfaction Problems.

Session Outcome: 2 Students will learn about

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Constraint Satisfaction: Map colouring	2	PPT	--- NOT APPLICABLE ---
5	Constraint Satisfaction: Map colouring	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on Genetic Algorithm and online search agents as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

Session Outcome: 1 Students will learn backtracking and local search in Map Coloring

Session Outcome: 2 Students will learn to solve the CSP related problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Back tracking for CSPs, Crypt arithmetic Problem	2	PPT	--- NOT APPLICABLE ---
5	Back tracking for CSPs, Crypt arithmetic Problem	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on Crypt arithmetic as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE

SESSION NUMBER : 13

Session Outcome: 1 Students will learn about knowledge based agents

Session Outcome: 2 Students will learn about axioms and facts present in a statements

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Knowledge and Reasoning: Knowledge based agents, Logic in general	2	PPT	--- NOT APPLICABLE ---
5	Knowledge and Reasoning: Knowledge based agents, Logic in general	2	PPT	--- NOT APPLICABLE ---
5	Clarification of doubts	2	Talk	--- NOT APPLICABLE ---
10	Propositional Logic, horn clauses, Equivalence, validity, satisfiability	2	PPT	--- NOT APPLICABLE ---
5	Propositional Logic, horn clauses, Equivalence, validity, satisfiability	2	PPT	--- NOT APPLICABLE ---
10	Quiz through LMS	2	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 14

Session Outcome: 1 Students will learn difference between propositional logic and first order logic

Session Outcome: 2 Students will learn how to represent facts in first order logic

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	First order logic: Use of predicate logic as a way representing knowledge	2	PPT	--- NOT APPLICABLE ---
5	First order logic: Use of predicate logic as a way representing knowledge	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems predicate logic as Assignment/Quiz (ALM)	2	PPT	--- NOT

				APPLICABLE ---
5	Conclusion	1	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 15

Session Outcome: 1 Students will learn about matching variables(unification) in process of giving inference

Session Outcome: 2 Students will learn about unification algorithm

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Unification Algorithm and examples	2	PPT	--- NOT APPLICABLE ---
5	Unification Algorithm and examples	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on matching process as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 16

Session Outcome: 1 Students will learn about resolution algorithm

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Conversion to clause form & Resolution in Proposition logic	2	PPT	--- NOT APPLICABLE ---
5	Conversion to clause form & Resolution in Proposition logic	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on converting to clause form as	2	PPT	--- NOT

	Assignment/Quiz (ALM)			APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 17

Session Outcome: 1 Students will learn theorem proving using resolution

Session Outcome: 2 Students will learn various properties of resolution

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Resolution in predicate logic: Resolution examples, Resolution algorithm, Question and answering	2	PPT	--- NOT APPLICABLE ---
5	Resolution in predicate logic: Resolution examples, Resolution algorithm, Question and answering	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems forward and backward chaining as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 18

Session Outcome: 1 Students will learn about forward and backward chaining for drawing inferences

Session Outcome: 2 Students will learn difference between forward and backward chaining

Session Outcome: 3 Students will learn pros and cons of different types of chaining

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Forward and Backward Chaining	2	PPT	--- NOT APPLICABLE ---
5	Forward and Backward Chaining	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT

				APPLICABLE ---
20	Problems on Forward and Backward Chaining as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 19

Session Outcome: 1 Student will Learn Quantifying uncertainty

Session Outcome: 2 Student will learn uncertainty and relational decisions

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Quantifying uncertainty, Basic Probability Notation	2	PPT	--- NOT APPLICABLE ---
5	Quantifying uncertainty, Basic Probability Notation	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on basic probability notations as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 20

Session Outcome: 1 1. Students will learn Baye’s theorem and applicability of Baye’s theorem

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Baye’s Theorem, Navie Baye’s classifer	2	PPT	--- NOT APPLICABLE ---
5	Baye’s Theorem, Navie Baye’s classifer	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT

				APPLICABLE ---
20	Problems on basic Bayes' representation as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 21

Session Outcome: 1 Students will learn how to represent knowledge in uncertain domain

Session Outcome: 2 Student will learn about Bayesian Network representation of knowledge

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Representing knowledge in an uncertain domain: Bayesian Network	2	PPT	--- NOT APPLICABLE ---
5	Representing knowledge in an uncertain domain: Bayesian Network	2	PPT	--- NOT APPLICABLE ---
5	Clarifying doubts	2	Talk	--- NOT APPLICABLE ---
10	Semantics of Bayesian Network	2	PPT	--- NOT APPLICABLE ---
5	Semantics of Bayesian Network	2	PPT	--- NOT APPLICABLE ---
5	Quiz through LMS	2	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 22

Session Outcome: 1 Students will learn Probabilistic reasoning over time

Session Outcome: 2 Students will learn basics of hidden markov model & simplified matrix algorithms

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---
10	Probabilistic Reasoning over time: Temporal Probabilistic agent, Inference tasks: Filtering, Prediction, Smoothing, most likely explanation	2	PPT	--- NOT APPLICABLE ---

5	Probabilistic Reasoning over time: Temporal Probabilistic agent, Inference tasks: Filtering, Prediction, Smoothing, most likely explanation	2	PPT	--- NOT APPLICABLE ---
5	CREATING A BREAKOUT ROOM	2	PPT	--- NOT APPLICABLE ---
20	Problems on inference tasks as Assignment/Quiz (ALM)	2	PPT	--- NOT APPLICABLE ---
5	Conclusion	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 23

Session Outcome: 1 Students will learn about Simple Markov Model and Hidden Markov Model

Session Outcome: 2 Students will learn applicability of HMM

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	PPT	--- NOT APPLICABLE ---
10	Introduction to Hidden Markov Models	2	PPT	--- NOT APPLICABLE ---
5	Introduction to Hidden Markov Models	2	PPT	--- NOT APPLICABLE ---
5	Clarifying doubts	2	PPT	--- NOT APPLICABLE ---
10	Examples, Semantics and Issues of HMMs	2	PPT	--- NOT APPLICABLE ---
5	Examples, Semantics and Issues of HMMs	2	PPT	--- NOT APPLICABLE ---
5	Quiz through LMS	2	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 24

Session Outcome: 1 Students will learn about introduction of Rule based system and Fuzzy logic

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Recap/Popup	1	Talk	--- NOT APPLICABLE ---

10	Introduction to Rule based system	2	PPT	--- NOT APPLICABLE ---
5	Introduction to Rule based system	2	PPT	--- NOT APPLICABLE ---
5	Clarifying doubts	2	Talk	--- NOT APPLICABLE ---
10	Fuzzy logic	2	PPT	--- NOT APPLICABLE ---
5	Fuzzy logic	2	PPT	--- NOT APPLICABLE ---
5	Quiz through LMS	2	PPT	--- NOT APPLICABLE ---

Tutorial Course DELIVERY Plan: NO Delivery Plan Exists

Tutorial Session wise Teaching – Learning Plan

No Session Plans Exists

Practical Course DELIVERY Plan:

Tutorial Session no	Topics	CO-Mapping
1	Experimentation on Chatbot program	CO5
2	Experimentation on Sorting water jug problem	CO5
3	Experimentation on uninformed search problems	CO5
4	Experimentation on informed search problems	CO5
5	Experimentation on Mini-max problems problems	CO5
6	Experimentation on Map colouring Problem	CO5
7	Experimentation on predicate logic representation problems	CO5
8	Experimentation on forward-backward chaining problem	CO5
9	Experimentation on Unification problem	CO5
10	Experimentation on probability problems	CO5
11	Experimentation on problem based on Baye’s conditional probability	CO5

Tutorial Session no	Topics	CO-Mapping
12	Experimentation on Navie Baye's problem	CO5

Practical Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 Students will be able to solve Chatbot based programs

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on Chatbot program	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on Chatbot program	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 2

Session Outcome: 1 Students will be able to solve problems using production rules

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on water jug problem	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---

40	Experimentation on Sorting water jug problem	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

Session Outcome: 1 Students will be able to solve problems using uninformed search techniques

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on uninformed search technique	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on uninformed search problems	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

Session Outcome: 1 Students will be able to solve problems using informed search techniques

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on informed search techniques	4	PPT	--- NOT APPLICABLE

5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on informed search problems	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 5

Session Outcome: 1 Students will be able to solve problems using Adversarial Search Technique.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on Mini-max problems	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	4	Talk	--- NOT APPLICABLE ---
40	Experimentation on Mini-max problems problems	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

Session Outcome: 1 Students will be able to solve problems using Constraint Satisfaction

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT

				APPLICABLE ---
10	Experiment Explanation on Constraint Satisfaction problems	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on Map colouring Problem	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 7

Session Outcome: 1 Students will be able to represent knolwedge

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on knowledge representation	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on predicate logic representation problems	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

Session Outcome: 1 Students will be able to solve problems using forward Inference techniques

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on Inference techniques	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	4	Talk	--- NOT APPLICABLE ---
40	Experimentation on forward-backward chaining problem	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

Session Outcome: 1 Students will be able to solve problems using Matching procedure

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on Matching procedure	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on Unification problem	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	PPT	--- NOT APPLICABLE ---

SESSION NUMBER : 10

Session Outcome: 1 Students will be able to solve problems using basic probability notations

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation probability notations	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on probability problems	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 11

Session Outcome: 1 Students will be able to solve problems on conditional probability problems

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on conditional probability problem	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on problem based on Baye’s conditional probability	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---

10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

Session Outcome: 1 Students will be able to solve problems on representation of knowledge in uncertain domain

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
5	Attendance/Poll/Pop Question	4	Talk	--- NOT APPLICABLE ---
10	Experiment Explanation on knowledge in uncertain domain	4	PPT	--- NOT APPLICABLE ---
5	Split to sections	1	Talk	--- NOT APPLICABLE ---
40	Experimentation on Navie Baye’s problem	4	Talk	--- NOT APPLICABLE ---
10	Assessment and Interaction	4	Talk	--- NOT APPLICABLE ---
20	Documenting Results and result submission	4	Talk	--- NOT APPLICABLE ---
10	Submitting as Assignment in LMS	1	Talk	--- NOT APPLICABLE ---

Skilling Course DELIVERY Plan: NO Delivery Plan Exists

Skilling Session wise Teaching – Learning Plan

No Session Plans Exists

WEEKLY HOMEWORK ASSIGNMENTS/ PROBLEM SETS/OPEN ENDEDED PROBLEM-SOLVING EXERCISES etc:

Week	Assignment Type	Assignment No	Topic	Details	co

COURSE TIME TABLE:

	Hour	1	2	3	4	5	6	7	8	9
Day	Component									
Mon	Theory	--	--	--	--	--	--	--	--	--

	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--
Tue	Theory	--	--	--	--	--	--	--	--	--
	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--
Wed	Theory	---	---	--	--	V-S1,V-S2,V-S3,V-S4,V-S5,V-S6,V-S7,V-S8,V-S9,V-S10,V-S11,V-S12	V-S1,V-S2,V-S3,V-S4,V-S5,V-S6,V-S7,V-S8,V-S9,V-S10,V-S11,V-S12	---	---	---
	Tutorial	---	---	--	--	--	--	---	---	---
	Lab	---	---	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8,V-S9,V-S9,V-S10,V-S10,V-S11,V-S11,V-S12,V-S12	V-S1,V-S1,V-S2,V-S2,V-S3,V-S3,V-S4,V-S4,V-S5,V-S5,V-S6,V-S6,V-S7,V-S7,V-S8,V-S8,V-S9,V-S9,V-S10,V-S10,V-S11,V-S11,V-S12,V-S12	--	--	---	---	---
	Skilling	---	---	--	--	--	--	---	---	---
Thu	Theory	---	---	V-S13,V-S14,V-S15,V-S16,V-S17,V-S18,V-S19,V-S20,V-S21,V-S22,V-S23,V-S25	V-S13,V-S14,V-S15,V-S16,V-S17,V-S18,V-S19,V-S20,V-S21,V-S22,V-S23,V-S24,V-S25	--	--	---	---	---
	Tutorial	---	---	--	--	--	--	---	---	---
	Lab	---	---	--	--	V-S13,V-S13,V-S14,V-S14,V-S15,V-S15,V-S16,V-S16,V-S17,V-S17,V-S18,V-S18,V-S19,V-S19,V-S20,V-S20,V-S21,V-S21,V-S22,V-S22,V-	V-S13,V-S13,V-S14,V-S14,V-S15,V-S15,V-S16,V-S16,V-S17,V-S17,V-S18,V-S18,V-S19,V-S19,V-S20,V-S20,V-S21,V-S21,V-S22,V-S22,V-	---	---	---

						S23,V-S23,V-S24,V-S24,V-S25,V-S25	S23,V-S23,V-S24,V-S24,V-S25,V-S25			
	Skilling	---	---	--	--	--	--	---	---	---
Fri	Theory	--	--	--	--	--	--	--	--	--
	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--
Sat	Theory	--	--	--	--	--	--	--	--	--
	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--
Sun	Theory	--	--	--	--	--	--	--	--	--
	Tutorial	--	--	--	--	--	--	--	--	--
	Lab	--	--	--	--	--	--	--	--	--
	Skilling	--	--	--	--	--	--	--	--	--

REMEDIAL CLASSES:

Supplement course handout, which may perhaps include special lectures and discussions that would be planned, and schedule notified according

SELF-LEARNING:

Assignments to promote self-learning, survey of contents from multiple sources.

S.no	Topics	CO	ALM	References/MOOCS

DELIVERY DETAILS OF CONTENT BEYOND SYLLABUS:

Content beyond syllabus covered (if any) should be delivered to all students that would be planned, and schedule notified accordingly.

S.no	Advanced Topics, Additional Reading, Research papers and any	CO	ALM	References/MOOCS

EVALUATION PLAN:

Evaluation Type	Evaluation Component	Weightage/Marks		Assessment Dates	Duration (Hours)	CO1	CO2	CO3	CO4	CO5
End Semester Summative Evaluation Total= 40 %	End Semester Exam	Weightage	25		180	6.25	6.25	6.25	6.25	
		Max Marks	100			25	25	25	25	
	Lab End Semester Exam	Weightage	15		180					15
		Max Marks	50							50
In Semester Summative Evaluation Total= 40 %	Semester in Exam-I	Weightage	15		120	7.5	7.5			
		Max Marks	50			25	25			
	Semester in Exam-II	Weightage	15		120			7.5	7.5	
		Max Marks	50					25	25	
	Lab In Semester Exam	Weightage	10		120					10
		Max Marks	50							50
In Semester Formative Evaluation Total= 20 %	ALM	Weightage	8		20	2	2	2	2	
		Max Marks	80			20	20	20	20	
	Home Assignment and Textbook	Weightage	7		120					7
		Max Marks	50							50
	Continuous Evaluation - Lab Exercise	Weightage	5		120					5
		Max Marks	120							120

ATTENDANCE POLICY:

Every student is expected to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfill all other tasks assigned to him/her in every course
In every course, student has to maintain a minimum of 85% attendance to be eligible for appearing in Semester end examination of the course, for cases of medical issues and other unavoidable circumstances the students will be condoned if their attendance is between 75% to 85% in every course, subjected to submission of medical certificates, medical case file and other needful documental proof to the concerned departments

DETENTION POLICY :

In any course, a student has to maintain a minimum of 85% attendance and In-Semester Examinations to be eligible for appearing to the Semester End Examination, failing to fulfill these conditions will deem such student to have been detained in that course.

PLAGIARISM POLICY :

Supplement course handout, which may perhaps include special lectures and discussions

COURSE TEAM MEMBERS, CHAMBER CONSULTATION HOURS AND CHAMBER VENUE DETAILS:

Supplement course handout, which may perhaps include special lectures and discussions

Name of Faculty	Delivery Component of Faculty	Sections of Faculty	Chamber Consultation Day (s)	Chamber Consultation Timings for each day	Chamber Consultation Room No:	Signature of Course faculty:
VUDATHA	L	23-	-	-	-	-

CHANDRA PRAKASH		MA,1-MA				
VUDATHA CHANDRA PRAKASH	P	23-A,1-A	-	-	-	-
SREEDEVI MARRIBOYINA	P	23-B,1-B	-	-	-	-
SRINIVASA RAO SABBINENI	P	16-B,6-B	-	-	-	-
sekhar babu	L	16-MA	-	-	-	-
sekhar babu	P	16-A,8-B	-	-	-	-
RAMA NARASINGARAO MANDA	P	13-B,2-B	-	-	-	-
Kallipalli Raju	P	12-B,17-B	-	-	-	-
Manna Sheela Rani Chetty	P	3-B,22-B	-	-	-	-
RAJARAJESWARI POTHURAJU	L	2-MA	-	-	-	-
RAJARAJESWARI POTHURAJU	P	2-A,14-B	-	-	-	-
ANJALI MATHUR	L	17-MA,4-MA	-	-	-	-
ANJALI MATHUR	P	4-A,17-A	-	-	-	-
PRAVEENA MANDAPATI	L	13-MA	-	-	-	-
PRAVEENA MANDAPATI	P	7-B,13-A	-	-	-	-
Raju Anitha	L	18-MA,5-MA	-	-	-	-
Raju Anitha	P	5-A,18-A	-	-	-	-
SWARNA KUCHIBHOTLA	L	6-MA,19-MA	-	-	-	-
SWARNA KUCHIBHOTLA	P	19-A,6-A	-	-	-	-
RAJESH PASUPULETI	P	9-B,18-B	-	-	-	-
MOHAMMED MOULANA	L	7-MA,20-MA	-	-	-	-
MOHAMMED MOULANA	P	7-A,20-A	-	-	-	-
MOHAMMED ISMAIL	P	4-B,24-B	-	-	-	-

Chayan Paul	P	11-B,19-B	-	-	-	-
SHASHI MEHROTRA	L	8-MA,21-MA	-	-	-	-
SHASHI MEHROTRA	P	8-A,21-A	-	-	-	-
BHANU PRAKASH KOLLA	P	15-B,5-B	-	-	-	-
VAMSIDHAR ENIREDDY	P	20-B,10-B	-	-	-	-
TATAVARTHY SRI	L	14-MA,3-MA	-	-	-	-
TATAVARTHY SRI	P	3-A,14-A	-	-	-	-
RUDRA NAYAK	P	25-B	-	-	-	-
Choudhary Prakash	L	22-MA,9-MA	-	-	-	-
Choudhary Prakash	P	9-A,22-A	-	-	-	-
vithya Ganesan	L	15-MA,10-MA	-	-	-	-
vithya Ganesan	P	15-A,10-A	-	-	-	-
Ram Prasad Reddy Sadi	L	24-MA,11-MA	-	-	-	-
Ram Prasad Reddy Sadi	P	11-A,24-A	-	-	-	-
PRANEETH CHERAKU	L	25-MA,12-MA	-	-	-	-
PRANEETH CHERAKU	P	12-A,25-A	-	-	-	-
Lakshmi Lalitha Vuyyuru	P	21-B	-	-	-	-

GENERAL INSTRUCTIONS

Students should come prepared for classes and carry the text book(s) or material(s) as prescribed by the Course Faculty to the class.

NOTICES

Most of the notices are available on the LMS platform.

All notices will be communicated through the institution email.

All notices concerning the course will be displayed on the respective Notice Boards.

Signature of COURSE COORDINATOR

(TATAVARTHY SANTHI SRI)

Signature of Department Prof. Incharge Academics & Vetting Team Member

Department Of CSE

HEAD OF DEPARTMENT:

Approval from: DEAN-ACADEMICS
(Sign with Office Seal) [object HTMLDivElement]