MCA-28: Artificial Intelligence Lab

General Course Information:

Course Code: MCA-28 Course Credits: 2 Type: Professional Core Lab. Course Contact Hours: 2 hours/week Mode: Lab practice and assignments	**Course Assessment Methods (internal: 30; external:70)** The internal and external assessment is based on the level of participation in lab. sessions and the timely submission of lab experiments/assignments, the quality of solutions designed for the assignments, the performance in VIVA-VOCE, the quality of lab. file and ethical practices followed. The internal examination is conducted by the course coordinator. The external examination is conducted by external examiner (appointed by the Controller of Examination) in association with the internal examiner appointed by the Chairperson of the Department.

Prerequisite

Basic knowledge of HTML, XML, ASP, JSP and Web Designing.

About the Course

In this course, the learners will be able to develop expertise related to general purpose problem solving, Representation of knowledge, Reasoning under uncertainty, Planning and Natural Language processing

Course Outcomes: By the end of the course students will be able to:

CO1. **Outline** various Artificial Intelligence techniques.
CO2. **Illustrate** reasoning under uncertainty.
CO3. **Apply** search and knowledge representation techniques to solve AI problems.
CO4. **Compare** strengths and weaknesses of AI algorithms.
CO5. **Combine** various AI techniques to solve intelligent systems' problems.

List of Experiments:

1. Write a program to implement BFS/DFS Traversal?
2. Write simple facts for the statements and querying it.
3. Write a program for Family-tree.
4. Write Program for Monkey-banana Problem.
5. Write a program to implement Tic-Tac-Toe game.
6. Write programs for computation of recursive functions like factorial Fibonacci numbers, etc.
7. Write program to solve 5-queens problem.
8. Write a Program for water jug problem.
9. Write a program for travelling salesman problem.
10. Write a program to implement all set operations.

Note:

The actual experiments/assignments will be designed by the course coordinator. One assignment should be designed to be done in groups of two or three students. The assignments must meet the objective of the course and the levels of the given course outcomes. The list of assignments and schedule of submission will be prepared by the course coordinator at the beginning of the semester.