BANGALORE INSTITUTE OF TECHNOLOGY
K R ROAD, V V PURAM, BENGALURU-04
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE OBJECTIVE AND OUTCOMES-2025-26
Batch 2023

Course Title :Artificial Intelligence | **Course Code : BCS515B**
No. of Lecture Hrs./Week : 03 | **Exam Hours : 03**
Total No. of Lecture Hrs. : 40 | **Exam Marks : 50**
Internal Marks : 50

Prerequisites

1. Discrete Mathematical Structures (BCS405A)
2. Design and Analysis of Algorithms (BCS401)

COURSE LEARNING OBJECTIVES (CLO)

This course will enable students to

CLO1 Gain a historical perspective of AI and its foundations.
CLO2 Become familiar with basic principles of AI toward problem solving.
CLO3 Apply AI techniques to solve real-world problems, including search algorithms, classical planning, optimization, and decision-making processes.
CLO4 Understand First-Order Logic and Propositional logic for Knowledge representation

COURSE OUTCOMES (CO)

After completion of this course, the students will be able to:

CO1 Understand the architecture and components of intelligent agents, including their interaction with the environment in designing AI applications
CO2 Apply problem-solving agents and various search strategies to solve a given problem.
CO3 Demonstrate proficiency in logical reasoning and knowledge representation using propositional and first-order logic to solve problems.
CO4 Analyze and apply inference techniques such as backward chaining and resolution, and evaluate classical planning strategies for solving AI problems.

CO-PO-PSO MAPPING 2022-26

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2										2	
CO2		2	2		3				3	3		1	3	2
CO3	2	2	2										2	
CO4		2	2										1	

CO-PO MAPPING JUSTIFICATION

BCS515B	**CO1**	**PO1**	**3**	Students will be able to apply knowledge of intelligent agent architectures and their interactions to design intelligent AI applications.
		PO2	**3**	Students will be able to analyze problem characteristics and identify appropriate intelligent agent to provide solution.
		PO3	**2**	Understanding agent architecture lays the groundwork for the students to design autonomous agent-based applications.
	CO2	**PO2**	**2**	Students will be able to analyze and apply searching and reasoning techniques to find the solution to problems.
		PO3	**2**	Students will be able to design intelligent agents with efficient search strategy for optimal solution
		PO5	**3**	By learning to apply problem-solving agents and search strategies, students develop practical skills in using modern engineering tools to tackle complex problems. This equips them to design, model, and simulate solutions effectively.
		PO9	**3**	By applying problem-solving agents and search strategies to solve any problem, students can collaboratively work in teams to tackle the problems. Students learn the essence of group effort by breaking down the problem, sharing ideas, strategizing and integrating different aspects for optimal solution.
		PO10	**3**	Students develop the ability to clearly communicate the logic, steps, and results of problem-solving processes by presenting the designed and developed problem-solving agents and search strategies
		PO12	**1**	Students will be able to establish transferable problem-solving skills that are essential for advancement in artificial intelligence and related computing fields.
	CO3	**PO1**	**2**	Students will be able to apply knowledge of logical constructs helping them to gain proficiency in representing knowledge and drawing conclusions
		PO2	**2**	Students will be able to develop skills in analyzing, reasoning and structuring the problem to be solved with

				good representation. This will help to break down complex issues systematically and identify solutions.
		PO3	**2**	Students will be able to design and develop solutions using structured knowledge and make effective logical reasoning and inferences from this knowledge applying first order logic and propositional logic.
	CO4	**PO2**	**2**	Students will be able to provide the solution for a given real world problems by applying planning strategies and inference mechanisms to achieve the required goals.
		PO3	**2**	Students will be able to develop solutions to AI problems by applying planning and inference techniques.

CO-PO MAPPING JUSTIFICATION

BCS515B	**CO1**	**PSO1**	**2**	With the knowledge of architecture of intelligent agents, students will be able apply suitable learning method to design AI applications
	CO2	**PSO1**	**3**	Students will be able to apply problem-solving agents and search strategies to design the applications
		PSO2	**2**	Graduates will be able to apply the knowledge of problem-solving agents and search strategies, pursue research in path finding, and design intelligent systems capable of efficient navigation in complex environments.
	CO3	**PSO1**	**2**	Graduates can use the proficiency in logical reasoning and knowledge representation using propositional and first-order logic to build software products.
	CO4	**PSO1**	**2**	Graduates can use the knowledge in problem-solving, to design and build intelligent products that can autonomously plan, reason, and act in suitable environments.

Faculty-Incharges

Course Coordinator **Module Coordinator** **IQAC** **Programme coordinator**