

## Teaching Plan

Name of the Faculty: Sumit Kumar Baberwal

Name of the Course: B.Sc. (H) Computer Science

Semester : VI Sec (if any): B

Title of the Paper : Artificial Intelligence

### Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Identify problems that are amenable to solution by specific AI methods
2. Represent knowledge in Prolog and write code for drawing inferences.
3. Identify appropriate AI technique for the problem at hand.
4. Compare strengths and weaknesses of different artificial Intelligence techniques.
5. Sensitive towards development of responsible Artificial Intelligence.

Month	Topics Covered	References
January	Chapter- 1,2 Introduction to Artificial Intelligence, Intelligent Agents, their structure, behavior and environment. Chapter-4 Knowledge Representation First Order Predicate Logic, Resolution Principle Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.5 Chapter 2: 2.1, 2.2 Chapter 3: 3.1, 3.2, 3.4 Practical: 1-6, TEST	<ul style="list-style-type: none"> <li>• Russell, S.J. &amp; Norvig, P. (2015) Artificial Intelligence - A Modern Approach. 3rd edition. Pearson Education</li> <li>• Patterson, D.W. (2015). Introduction to Artificial Intelligence and Expert Systems. 1st edition. Pearson Education.</li> <li>• Bratko, I. (2011). Prolog Programming for Artificial Intelligence. 4th edition. Pearson Education</li> </ul>
February	Chapter -5 and 6 TMS, Default Reasoning and Probabilistic Reasoning Chapter-7 Semantic Nets, Conceptual Dependencies, Frames, and Scripts, Production Rules, Conceptual Graphs. Chapter 5: 5.1, 5.2, 5.3 Chapter 6: 6.7.2 Practical: 7-13 Assignment	<ul style="list-style-type: none"> <li>• Patterson, D.W. (2015). Introduction to Artificial Intelligence and Expert Systems. 1st edition. Pearson Education.</li> <li>• Bratko, I. (2011). Prolog Programming for Artificial Intelligence. 4th edition. Pearson Education</li> </ul>
March	Chapter-2,3 Problem Solving and Searching Techniques Chapter 12 Introduction to Game Playing, Min-Max and Alpha-Beta pruning algorithms Practical: 14-18 Test	<ul style="list-style-type: none"> <li>• Rich, E. &amp; Knight, K. (2012). Artificial Intelligence. 3rd edition. Tata McGraw Hill.</li> <li>• Patterson, D.W. (2015). Introduction to Artificial Intelligence and Expert Systems. 1st edition. Pearson Education.</li> </ul>
April	Chapter-12 Understanding Natural Languages <ol style="list-style-type: none"> <li>1. <a href="https://interestingengineering.com/ethics-of-ai-benefits-and-risks-ofartificial-intelligence-systems">https://interestingengineering.com/ethics-of-ai-benefits-and-risks-ofartificial-intelligence-systems</a></li> <li>2. <a href="https://royalsocietypublishing.org/doi/full/10.1098/rsta.2018.0080">https://royalsocietypublishing.org/doi/full/10.1098/rsta.2018.0080</a></li> </ol>	<ul style="list-style-type: none"> <li>• Patterson, D.W. (2015). Introduction to Artificial Intelligence and Expert Systems. 1st edition. Pearson Education.</li> <li>• Online Resources (mentioned links)</li> </ul>

3. [https://law-campbell.libguides.com/ld.php?content\\_id=58542260](https://law-campbell.libguides.com/ld.php?content_id=58542260)

Assignment

Revision and Discussion of Previous Year Question Papers