LECTURE PLAN

**Subject: Principles of Artificial Intelligence Subject Code: AIML 207**

**Branch: AIML Semester:03**

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| **S.No.** | **TOPICS TO BE COVERED** | **No. of****Lectures** |
| 1 | Introduction to AI, History of Artificial Intelligence, Applications of AI in the real world | 1 |
| 2 | AI techniques | 1 |
| 3 | Production Systems, State Space Search | 2 |
| 4 | Depth First Search, Breadth First Search, Heuristic Search, Hill Climbing, Best First Search, best-first search | 3 |
| 5 | A\*, Problem Reduction, AO\*, Constraint Satisfaction, Means-End Analysis | 3 |
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|  6 | Knowledge representation, Knowledge representation using Predicate logic | 2 |
| 7 | Propositional logic, Inferences, First-Order Logic, Inferences | 2 |
| 8 | Unification, Resolution, Natural Deduction, Procedural versus declarative knowledge, | 2 |
| 9 |  logic programming, forward versus backward reasoning. | 2 |
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| 10 | Reasoning, Introduction to Uncertainty | 2 |
| 11 | Bayesian Theory, Bayesian Network, Dempster-Shafer Theory | 2 |
| 12 | Overview of Planning and its Components. Overview of Learning and basic Techniques | 2 |
| 13 | Introduction of Fuzzy  | 2 |
| 14 | Reasoning and Neural Networks | 2 |
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| 15 | Game Playing and Current Trends in AI | 3 |
| 16 | MinMax search procedure, Alpha-Beta Cutoffs |  3 |
| 17 | Game Developrnent using AI  | 3 |
| 18 | Applications of AI, Emerging Trends in AI Research in various domains | 3 |

Text Books:

1. Rich and Knight. Artificial Intelligence, Tata McGraw H1ll, 1992.

 2. S. Russel and P. Norvig. Artifrcial Intelligence - A Modern Approach, Second Edition, Pearson Edu.

Reference Books:

1. Kheemani, Deepak, A First Course in Artificial Intelligence, McGraw Hill Education, I Edition, 20t7.
2. Artificial Intelligence: foundations of computational agents, Cambridge University Press, 2017.
3. Luger, G.F. Artificial Intelligence -Structures and Strategies for Compl edition, Pearson, 2008.
4. Poole, David L, and Alan K. Macworth Artificial Intelligence: Foundation of computational agents. . Carnbridge University Press, 2010.