



GANAPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY(POLYTECHNIC)  
Mathasahi , Jagatpur , Cuttack - 754200

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
LESSON PLAN

**Session (2025-2026)(S)**

|   |   |  |
|---|---|--|
| Discipline: Computer Science&Engineering                          | Semester:6 <sup>th</sup> ,<br>Summer/2025 | NameoftheTeaching Faculty:<br>Miss. Smaranika Moharana |
| Subject: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING<br>Theory-04A | No.Of<br>Days/Week:04                     | StartDate:22.12.2025<br>EndDate:18.04.2026             |

| Week | ClassDay | TheoryTopics  |
|------|----------|---|
| 1st  | 1st      | Unit-1:Introduction to AI<br>Defination of AI, History of AI                                  |
|      | 2nd      | Goals of AI, Applications of AI   |
|      | 3rd      | Intelligent AI, Computer Vision   |
|      | 4th      | Natural Language Processing   |
| 2nd  | 1st      | Turning test, Problem solving in Games  |
|      | 2nd      | Unit-2: Introduction to Search Algorithm<br>Introduction, Search, search space, search tree   |
|      | 3rd      | Catagories and type of search   |
|      | 4th      | Heuristic Algorithm vrs Solution Guaranteed Algorithm   |
| 3rd  | 1st      | Heuristic Algorithm vrs Solution Guaranteed Algorithm   |
|      | 2nd      | Local and Optimal Problem ,Hill climbing  |
|      | 3rd      | BSF Algorithm   |
|      | 4th      | A* Algorithm  |
| 4th  | 1st      | AO* Algorithm   |
|      | 2nd      | Adversarial Search  |
|      | 3rd      | AI & Game Playing   |
|      | 4th      | Unit-3:<br>Knowledge<br>Representation<br>And Reasoning<br>What to represent<br>and knowledge |
| 5th  | 1st      | Properties of knowledge   |

|      |     |  |
|------|-----|--|
|      | 2nd | Knowledge Representation   |
|      | 3rd | Reasoning and Types of Reasoning   |
|      | 4th | <b>Unit-4: Machine Learning</b><br>Introduction to Machine Learning with Explanation with Examples |
|      | 1st | Statistical or Unsupervised Learning   |
| 6th  | 2nd | Statistical or Unsupervised Learning   |
|      | 3rd | ML Properties  |
|      | 4th | Reinforcement Learning   |
|      | 1st | Reinforcement Learning   |
| 7th  | 2nd | Decision Tree  |
|      | 3rd | Decision Tree  |
|      | 4th | <b>Unit-5: Pattern Recognition</b><br>Introduction to Pattern Recognition                          |
|      | 1st | Design Principles  |
| 8th  | 2nd | Design Principle of Pattern Recognition System   |
|      | 3rd | Design Principle of Pattern Recognition System   |
|      | 4th | Statistical Pattern Recognition System   |
|      | 1st | Statistical Pattern Recognition System   |
| 9th  | 2nd | Machine Perception   |
|      | 3rd | Machine Perception   |
|      | 4th | Machine Perception   |
|      | 1st | Line finding and Interception  |
| 10th | 2nd | Line finding and Interception  |
|      | 3rd | Line finding and Interception  |
|      | 4th | Object Identification  |
|      | 1st | Object Identification  |
| 11th | 2nd | <b>Unit-6: Expert System</b><br>Introduction to Expert System                                      |
|      | 3rd | Basic Architecture   |
|      | 4th | Types of Problem Solve by Expert System  |
|      | 1st | Types of Problem Solve by Expert System  |
| 12th | 2nd | Features of Types of an Expert System  |
|      | 3rd | Expert System Architecture   |



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|------|-----|---|
| 13th | 4th |   |
|      | 1st | Expert System Architecture              |
|      | 2nd | Expert System Tool                      |
|      | 3rd | Existing Expert System                  |
| 14th | 4th | Application of Expert System Technology |
|      | 1st | Assignment Check                        |
|      | 2nd | Assignment Check                        |
|      | 3rd | Assignment Check                        |
| 15th | 4th | Revision                                |
|      | 1st | Revision                                |
|      | 2nd | Discussion of Question Answer           |
|      | 3rd | Discussion of Question Answer           |
|      | 4th | Discussion of Previous Question Answer  |
|      |     | Discussion of Previous Question Answer  |

Sign. of faculty

*S. R. Pathan*  
19.12.2025

Sign of Sr. Lect.

*S. R. Pathan*  
19.12.25  
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Sign of Principal

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