

Introduction of Artificial Intelligence (AI)

Course Title	Introduction of Artificial Intelligence (AI)
Credit	2
Teaching per Week	3 hrs.
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Purpose of Course	This course aims at introducing the students into the world of AI. Understand the basic concepts, Techniques of AI and its application.
Course Objective	Provide fundamental knowledge about AI in real world.
Pre-requisite	Basic Knowledge of Mathematics.
Course Out come	After successful completion of the course a student will be able to identify basic AI related problem and solved via apply AI techniques. They also gain the fundamental knowledge of Expert System and Natural Language Processing.

Unit – 1: Introduction

What is artificial intelligence?, History and applications of AI, AI Problems, AI Techniques, Defining the Problem as a State Space Search, Problem Characteristics, Production Systems

Unit – 2 : Search Techniques

Un-Informed Search, Best-First Search, DFS; Heuristic Search Techniques: Generate-And-Test, Hill Climbing, Best-First Search, A*Algorithm.

Unit-3 : Knowledge Representation

Types of Knowledge, Approach and techniques of knowledge representation, Forward Chaining, Backward chaining

Unit – 4 Expert System

Introduction, Block diagram of Expert System, Characteristics of Expert System, Types of Expert Systems, Design of Expert System, Advantages and limitation of Expert System, Application of Expert System

Unit – 5 Natural Language Processing

Introduction, Advantages of NLP, Components of NLP, Application of NLP, Phases of NLP

Reference Books :

- 1) Introduction to Artificial Intelligence and Expert System by Dan W. Patterson, PHI
- 2) "Artificial Intelligence" -By Elaine Rich And Kevin Knight (2nd Edition) Tata Mcgraw-Hill

3) Introduction to Artificial Intelligence by Rajendra Akerkar, PHI

4) Artificial Intelligence: A Modern Approach by S. Russell and P. Norvig, Prentice Hall.