THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Survey of Artificial Intelligence I: Basic Techniques

CSE 5521

Credit Hours:
2.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate

Course Components:
Lecture

Course Description:
Survey of the basic concepts and techniques in artificial Intelligence, including problem solving, knowledge representation, and machine learning.

Prerequisites and Co-requisites:
Prereq: 2331 or 5331, or Grad standing.

Course Goals / Objectives:
- Master basic search techniques for problem-solving, including systematic blind search, heuristically-guided search, and optimal search
- Be competent with game tree search methods and the requirements for expert-level game play
- Be familiar with using logic and proof as a basis for knowledge representation and automated reasoning
- Be familiar with multiple knowledge-representation formalisms
- Be exposed to problems in common sense reasoning and language understanding
- Be exposed to integrated AI architectures as a platform for building AI systems
- Be exposed to machine learning techniques and the kinds of problem they solve
- Be exposed to state-of-the-art AI applications related to robotics, machine vision, speech recognition, and computer games

Course Topics:
- Basic representation and problem solving methods.
- Search techniques and game playing.
- Knowledge representation using logic, automated proof techniques.
- Machine learning, probabilistic inference.
- Planning and common sense reasoning.
- Perception and communication.
- Applications.
- AI & Games.

Designation:
Elective