CS 531 Artificial Intelligence


Credits: 4   Terms Offered: Fall

Prerequisites: Graduate Standing in Computer Science

Courses that require this as a prerequisite: None

Structure: Three 50-minute lectures per week plus 1 hour of lab time/week.

Instructors: Prasad Tadepalli

Course Content:

1) Introduction to Artificial Intelligence
2) Intelligent Agents
3) Problem Solving by Search
4) Heuristic Search
5) Constraint Satisfaction
6) Adversarial Search
7) Propositional Logic
8) First Order Logic
9) Inference in First Order Logic
10) Advanced Knowledge Representation

Measurable Student Learning Outcomes:

At the completion of the course, students will be able to…

1. Classify different problem solving environments
2. Choose appropriate search algorithms for a given problem
3. Implement algorithms for search and inference
4. Analyze the properties and complexity of different search algorithms
5. Represent statements in propositional and first order logic
6. Explain the notions of validity, satisfiability, soundness, and completeness
7. Prove theorems in first order logic
8. Solve problems based on logic and search

Learning Resources:
• Artificial Intelligence: A Modern Approach by Stuart Russell and Peter Norvig, Prentice Hall, 2010
• Class Notes.

Evaluation of Student Learning:

• Weekly Homeworks and Quizzes (30%)
• Programming assignments (20%)
• Midterm (20%)
• Final Exam (30%)

Students with Disabilities:
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Link to Statement of Expectations for Student Conduct:
http://oregonstate.edu/admin/stucon/achon.htm

3/2/2010