Dept Number	CS 536	Course Title	Artificial Intelligence II
Semester Hours	3	Course Coordinator	Henry Hexmoor
Catalog Description	Theorem proving, the Resolution Principle, strategies, and achievements. Program verification. Natural language processing. Other selected topics.		

Textbooks

References

Course Learning Outcomes

- To describe in depth current work in a wide variety of application areas and theoretical approaches.
- To present advanced Lisp and Prolog programming techniques.

Assessment of the Contribution to Program Outcomes

Outcome →	1	2	3	4	5	6	7	8	9	10
Assessed →	X	X				X	X			

Prerequisites by Topic

CS436 with a grade of *C* or better.

Major Topics Covered in the Course

1. Languages and architectures for problem solving
   blackboards, production systems, connection networks, constraint propagation
2. Default reasoning, uncertainty
   nonmonotonic logic, belief revision, certainty factors
3. Natural langage understanding
   parsers, anaphora, plan recognition, schema application, focus, speech acts
4. Expert systems
   MYCIN, XCON, shells, knowledge engineering
5. Advanced knowledge representation
   intensional objects, naive physics, analogical representations
6. Programming techniques
   agendas, streams, controling backtracking in Prolog
7. AI research at SIU
8. Learning
   version spaces, concept learning, Automated Mathmetition
9. Planning
   STRIPS, NOAH, metaplanning

Major Lab Assignments and Projects

Assessment Plan for the Course

Tool 1. Home work Assignment: Outcomes 1, 6

Tool 2. Individual Semester project: Outcomes 6, 7
Research and Technical communication
Professional Development:

Tool3. Two exams: Outcomes 2, 7