Course Number	CS 536	Course Title	Artificial Intelligence II
Semester Hours	3	Course Coordinator FA20	Banafsheh Rekabdar
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 Student Outcomes

Outcome →	1	2	3	4	5	6	7
Assessed →	X	X				X	X

Prerequisites by Topic

CS 436

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 language understanding
   parsers, anaphora, plan recognition, schema application, focus, speech acts
4. Expert systems
   MYCIN, XCON, shells, knowledge engineering
5. Advanced knowledge representation
   intentional objects, naive physics, analogical representations
6. Programming techniques
   agendas, streams, controlling backtracking in Prolog
7. AI research at SIU
8. Learning
   version spaces, concept learning, Automated Mathematician
9. Planning
   STRIPS, NOAH, metaplanning

Major Lab Assignments and Projects

Assessment Plan for the Course

Tool 1.	Homework Assignment: Outcomes 1, 6
Tool 2.	Individual Semester project: Outcomes 6, 7
	Research and Technical communication
	Professional Development:
Tool 3.	Two exams: Outcomes 2, 7