Dept Number	CS 537	Course Title	Advanced Topics in Expert Systems
Semester Hours	3	Course Coordinator	Shahram Rahimi
Catalog Description	This course is designed to provide students with advanced topics in expert systems theory. Topics covered include: knowledge representation, methods of inference, reasoning under uncertainty, and inexact reasoning (fuzzy logic). A practical introduction to expert systems programming serves to reinforce and clarify the theoretical concepts.		

Textbooks

References

Course Learning Outcomes

Assessment of the Contribution to Program Outcomes

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

Prerequisites by Topic

CS 330 or instructor consent

Major Topics Covered in the Course

1. The Representation of Knowledge
2. Methods of Inference
3. Reasoning under Uncertainty
4. Inexact Reasoning (Fuzzy Logic)
5. The Design of Expert Systems
6. Introduction to Expert Systems Programming
7. Modular Design and Execution Control
8. Efficiency in Rule-Based Languages
9. Expert System Design Examples
10. Class Project

Major Lab Assignments and Projects

Assessment Plan for the Course

Tool 1. Assignments:

WFF development using CLIPS: PO3

Tool 2. Readings and Presentations

Reading 1 & 2: PO5

Tool 3. Final Exam:

PO1, PO4

Tool 4. Final Project:

PO5, PO7