



Course Weekly Outline

Course Instructor	Assistant Prof. Dr. Hasanen S. Abdullah				
E_mail	ghasanen@yahoo.com				
Title	Expert Systems				
Course Coordinator	Artificial Intelligence				
Course Objective	1- Recognizing Expert Systems from other Intelligent Systems. 2- Design and build practical Expert Systems.				
Course Description	1- Expert Systems Architecture. 2- Expert Systems Life Cycle and Implementation. 3- Systems work under Uncertainty factor. 4- Systems that explain their actions.				
Textbook	1. Daniel H. Marcellus, "Expert Systems Programming in Turbo Prolog", prentice Hall (New Jersey).				
References	2. George F. Luger, "Artificial Intelligence Structures and Strategies for Complex Problem Solving", Pearson Education Asia (Singapore), Sixth edition 2009. 3. Amit Konar, "Artificial Intelligence and Soft Computing", Behavior and cognitive Modeling of the Human Brain, CRC Press, 2000.				
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	(25%)	(20%)	(5%)	----	(50%)
General Notes					



Course weekly Outline

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	22/9/2014	Introduction to Expert Systems	Recognizing E.S. from other Intelligent Systems	
2	29/9/2014	Structures of Expert Systems	Application Programs in Prolog	
3	6/10/2014	General architecture of Expert Systems	Application Programs in Prolog	
4	13/10/2014	The Pattern Matching system	Text Recognition System (Eliza Program)	
5	20/10/2014	Systems Based on Simple Search and Pattern Recognition	The Chemical Synthesis Program	
6	27/10/2014	Search with Heuristic Embedded in Rules 1	Program of Student Advisor System	
7	3/11/2014	Using Heuristics in Games	The 8-Puzzle Program	
8	10/11/2014	Controlling the Reasoning strategy	Path Planning Program in Forward	
9	17/11/2014	Classification vs. Recognition	Path Planning Program in Backward	
10	24/11/2014	Classification System using backward Chaining	Program of Animals Classification System	
11	1/12/2014	Classification System using Forward Chaining	Program of Animals Classification System	
12	8/12/2014	Diagnosis System using Forward Chaining	Program of Digital Doctor in Forward Chaining	
13	15/12/2014	Diagnosis System using Backward Chaining	Program of Digital Doctor in Backward Chaining	
14	22/12/2014	Exam	Exam	
15	29/12/2014	Final Course Exam	First Course Practical Exam	
Half-year Break				
16	16/2/2015	Production Rules and Production Systems	Application Program	
17	23/2/2015	Systems that Work under Uncertainty Factor 1	Approximation Reasoning Implementation	
18	2/3/2015	Systems that Work under Uncertainty Factor 2	Bipolar States Implementation	
19	9/3/2015	Systems that Explain their Actions	Simple Practical Program	
20	16/3/2015	Explanation Mechanism	Practical program	
21	23/3/2015	HOW Facility	Program of HOW Part	

22	30/3/2015	WHY Facility	Program of WHY Part	
23	6/4/2015	Shell Facility	Program of Shell Facility	
24	13/4/2015	Search with Heuristic Embedded in Rules 2	Simple Rules of Traffic Light System	
25	20/4/2015	Search with Heuristic Embedded in Rules 3	Simple Rules of Elevator System	
26	27/4/2015	Prediction System Architecture	Application Program	
27	4/5/2015	Prediction System Example	Simple Rules of Weather forecasting System	
28	11/5/2015	General Intelligent System Architecture	Second Course Practical Exam	
29	18/5/2015	Final Course Exam	-----	
30	25/5/2015	Practices	Practices	

Instructor Signature:

Dean Signature: