



Course Weekly Outline

Course Instructor	Isra'a Abdul-Ameer Abdul-Jabbar				
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Title	Principles of Artificial Intelligence				
Course Coordinator					
Course Objective	Learning prolog language that depends on the logical representation and study of the state space for the problems that requires to artificial intelligence algorithms to solve it.				
Course Description	<p>An Introduction to prolog Language, prolog Language Main Menu, prolog Language components, Facts, Simple Rules, Complex rules, built in functions in prolog Language, loop in Prolog, recursive technique, Tail Recursive in prolog, Repeat function, Fail Function, Findall function, Non Tail Recursive, List processing in prolog Language, String Processing in prolog Language.</p> <p>An Introduction to A.I., A.I. Tools and Requirements, Knowledge Representation, K.R. Methods, Graphical Representation, Semantic Network, Conceptual Graph, Logical Representation, Propositional Logic, Predicate Logic, Frames K.R. Problem State Space, Problem Characteristics, Monkey & Banana Problem, 2-jug Problem, 3-rings Problem</p>				
Textbook	1. Elin Rich, "Artificial Intelligence", 1991.				
References	<p>1. Luger E. George, "Artificial Intelligence Structures and Strategies", 2005.</p> <p>2. Matt Carter, "Mind and Computers, An Introduction to the Philosophy of Artificial Intelligence", Edinbwhg University press, 2007.</p> <p>3. Max Bramer, "Logic Programming with Prolog", Spring, 2005.</p> <p>4. زينب الزرقاء وايمى عودة، الذكاء الصناعي في لغة prolog شعاع للنشر والعلوم، سورية، حلب 2005.</p> <p>5. الدكتور ف. بكر الذكاء الاصطناعي من خلال لغة prolog شعاع للنشر والعلوم، سورية، حلب 1991.</p>				
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	16/11/2014	Introduction to prolog language	Prolog main menu	
2	23/11/2014	Propositional calculus (facts , rules and variables)	Prolog structure	
3	30/11/2014	Calling types	Using of facts and rules in prolog	
4	7/12/2014	Conjunction & backtracking	Conjunction & backtracking	
5	14/12/2014	<i>Arithmetic and logical operation</i>	Applying the Arithmetic and logical operation	
6	21/12/2014	<i>Read and write functions</i>	Applying Read and write functions	
7	28/12/2014	<i>Cut and fail function Negation</i>	Applying cut, fail and negation	
8	4/1/2015	<i>repetition and recursion</i>	examples	
9	11/1/2015	Tail and non-tail recursion	examples	
10				
11				
12				
13				
14				
15				
16				
Half-year Break				
17	2/2015	<i>String standard predicates</i>	String examples	
18	2/2015	<i>list in prolog</i>	List examples	
19	3/2015	Backward & forward chaining	More examples	
20	3/2015	Knowledge representation (semantic net, conceptual graph & frames)	More examples	
21		exam		
22	4/2015	Introduction to A.I	Exam	
23	4/2015	State space search (monkey problem)	Monkey program	
24	4/2015	2-jug problem	2-jug program	
25	4/2014	Tower of Hanoi (ring problem)	Tower of Hanoi program	
26	5/2014	exam	exam	
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28				
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Instructor Signature: dr. Isra'a Abdul-Ameer

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