	Ministry of Higher Education and Scientific Research - Iraq University of Technology Department of Computer Science	

MODULE DESCRIPTOR
وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	PROLOG LANGUAGE			**Module Delivery**	
Module Type	CORE			**Theory** **Lecture** **Lab** **Tutorial** **Practical** **Seminar**	
Module Code	PRLA124				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Dr. Mustafa j. Hadi		**e-mail**	mustafa.j.hadi@uobaghdad.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	None		**e-mail**	None	
Peer Reviewer Name			**e-mail**		
Review Committee Approval			**Version Number**		

Relation With Other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	**Semester**	

Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1-Understanding the fundamentals of Prolog programming: The module aims to provide students with a solid foundation in Prolog programming, including knowledge of the basic syntax, data types, and control structures of the language. 2-Learning how to implement logical rules and queries: Prolog is based on logical programming principles, and the module aims to teach students how to write logical rules and queries using Prolog. 3-Understanding the use of Prolog in artificial intelligence: Prolog is widely used in the field of artificial intelligence, and the module aims to introduce students to the various applications of Prolog in AI, such as expert systems, natural language processing, and machine learning.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1-Understand the basic syntax and semantics of Prolog programming language. 2-Implement logical rules and queries using Prolog. 3-Analyze and solve problems using Prolog programming. 4-Develop the student thinking skills and the ability to analyze problems using logical programming principles. 5- Develop skills in debugging and testing Prolog programs. 6-Demonstrate the ability to develop and implement Prolog programs to solve problems in different domains.
Indicative Contents المحتويات الإرشادية	• Introduction to programming in logic • Prolog language structure • Prolog language components • Facts and cut function(!) • Simple rules • Built in functions • Tail recursion (complex rules) • Non tail recursion (complex rules) • Repeat, Fail and Findall structures • List processing • String processing

	• Database structure and properties • Files in prolog and applications with database

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	74	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	51	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**Introduction on Prolog language**
Week 2	**Facts, rules, and variables**
Week 3	**Questions types**
Week 4	**Interdependence and retrieval**
Week 5	**Built-in Boolean and Mathematical Functions**
Week 6	**programming examples of read and write functions**
Week 7	**Cut & Fail functions**
Week 8	**Repeat & Recursion**
Week 9	**Tail & non- Tail Recursion**
Week 10	**String in Prolog**
Week 11	**List in Prolog**
Week 12	**Database in Prolog**
Week 13	**Database in Prolog**
Week 14	**Files in Prolog**
Week 15	**Preparatory Week**
Week 16	**Final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	**Facts, rules, and variables**
Week 2	**Questions types**
Week 3	**Cut & Fail functions**
Week 4	**Repeat & Recursion**
Week 5	**Tail & non- Tail Recursion**
Week 6	**String in Prolog**
Week 7	**List in Prolog**
Week 8	**List in Prolog**
Week 9	**List in Prolog**
Week 10	**Database in Prolog**

Week 11	**Database in Prolog**
Week 12	**Files in Prolog**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Max Bramer, " Logic Programming with Prolog ".	Yes
Recommended Texts	1-Elin Rich, “Artificial Intelligence”. 2-Luger E.George,”Artificial Intelligence Structures and Strategies	Yes
Websites	http://www.cse.unsw.edu.au/~billw/prologdict.html	

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.