



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية



Module Information			
معلومات المادة الدراسية			
Module Title	AI Applications		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	AI2106		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	2	Semester of Delivery	1
Administering Department	AI	College	Computer Science and Information Technology
Module Leader	Ali Khudhair	e-mail	ali.khudhair.a@uowa.edu.iq
Module Leader's Acad. Title	Assist lecturer	Module Leader's Qualification	M.Sc.
Module Tutor	Ali Khudhair	e-mail	ali.khudhair.a@uowa.edu.iq
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Scientific Committee Approval Date	01/09/2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	---	Semester	--
Co-requisites module		Semester	


٢٠٢٧-٢٠٢٦




٢٠٢٦-٢٠٢٧

Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	<ul style="list-style-type: none"> • Understand Core AI Concepts and Applications • Explore AI's Role Across Various Industries • Hands-on Application of AI Techniques • Address Ethical Considerations and Challenges in AI • Investigate AI's Future and Impact on Society • Understand AI Scalability and Deployment
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. Students will be able to explain core concepts in artificial intelligence, including the differences between Narrow AI and General AI. 2. Students will understand the historical development of AI and current trends shaping its future. 3. Students will be able to identify and describe AI applications in various fields, including healthcare, finance, marketing, robotics, smart cities, gaming, and entertainment. 4. Students will demonstrate an understanding of the specific AI tools, algorithms, and techniques used in these applications. 5. Students will be able to build basic AI models using techniques such as deep learning, reinforcement learning, natural language processing, and time-series analysis. 6. Students will understand key ethical concerns related to AI, including bias, fairness, and privacy issues. 7. Students will be able to deploy AI models using cloud platforms and understand the challenges involved in scaling AI solutions.
Indicative Contents المحتويات الإرشادية	<ul style="list-style-type: none"> • Overview of AI concepts and terminology (Artificial Intelligence, Machine Learning, Deep Learning) • Types of AI: Narrow AI vs. General AI • Key trends in AI (automation, AI ethics, autonomous systems) • Case studies: Google Search, Amazon recommendation engine, Tesla's autonomous driving • In healthcare, AI applications in medical imaging (e.g., tumor detection, MRI analysis). Predictive models for disease prevention and diagnosis. • AI in Finance: Fraud detection, algorithmic trading, credit scoring. Techniques: Machine learning for anomaly detection, time-series forecasting, reinforcement learning for trading algorithms. • AI in Marketing and Customer Experience: AI in recommendation systems (e.g., Netflix, Amazon). Customer sentiment analysis using NLP. • AI in Marketing and Customer Experience: Recommendation systems in e-commerce (e.g., Amazon, Netflix) using collaborative filtering. • Natural Language Processing (NLP) and AI: AI-driven language models (e.g., GPT, BERT) for text generation, translation, and summarization. • AI in Gaming and Entertainment: Game development and AI-driven interactive storytelling (e.g., NPC behavior, dynamic environments).

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Students will engage with foundational AI concepts through lectures and case studies that highlight real-world applications across various industries. Interactive discussions will encourage critical thinking, particularly around ethical considerations and challenges in. The capstone project will provide independent learning, teamwork, and problem-solving by having students develop an AI solution to a real-world problem, presenting their findings at the end of the course. This comprehensive approach ensures both knowledge acquisition and skill development in AI.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	15% (10)	2,3,5,8,12	LO #1, #2 and #7
	Assignments	5	15% (10)	3,4,6,9,11	LO #3, #4 and #6, #7
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	13	LO #5, and #7
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المناهج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to AI Applications
Week 2	AI in Healthcare
Week 3	AI in Finance
Week 4	AI in Marketing and Customer Experience
Week 5	AI in Robotics
Week 6	AI in Natural Language Processing (NLP) 1
Week 7	AI in Natural Language Processing (NLP) 2
Week 8	Mid-term Exam
Week 9	AI in Smart Cities and IoT
Week 10	AI in Gaming and Entertainment
Week 11	AI for Social Good
Week 12	AI Ethics, Bias, and Privacy
Week 13	AI Deployment and Scalability
Week 14	Capstone Project Presentation
Week 15	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Applied Artificial Intelligence: A Handbook for Business Leaders" by Mariya Yao, Adelyn Zhou, and Marlene Jia	NO
Recommended Texts	<i>(Artificial Intelligence: A Modern Approach by Stuart Russell and Peter Norvig)</i>	NO
Websites	https://www.deeplearning.ai/	

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	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks 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.				