	Ministry of Higher Education and Scientific Research - Iraq Al-Mustaqbal University College of Engineering Department of Prosthetics and Orthotics Engineering	

MODULE DESCRIPTOR FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	علم الحاسوبII			**Module Delivery**	
Module Type	SUPPORTIVE			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code					
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level	2		**Semester of Delivery**	4	
Administering Department			**College**		
Module Leader	Hussain Maad Abdalkhadim		**e-mail**	Hussain.Maad.Abdalkhadim@uomus.edu.iq	
Module Leader's Acad. Title	Asst. Lect.		**Module Leader's Qualification**	MSc.	
Module Tutor					
Peer Reviewer Name			**e-mail**		
Review Committee Approval	2023/1/13		**Version Number**	1.0	

Relation With Other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Computer Science I	**Semester**	1
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. To gain the necessary understanding of the basics of computing and information technology required in personal and professional life 2. To develop the necessary skills to troubleshoot computer problems 3. To understand the computer networks devices and the network types 4. To understand network security basics An Introduction to Artificial Intelligence		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. To recognize the basic computer components and how they work together. 2. To recognize how network devices work together to send and receive data 3. To understand the types of networks 4. To recognize how to be secure on a network and Internet. 5. To understand the role internet in E-commerce. 6. To be able to troubleshoot basic hardware and software problems. To be able to use various basic AI tools in everyday life.		
Indicative Contents المحتويات الإرشادية	Security and Networking: What is a network? Types of networks. Basic network components, Network Security Basics. Understanding network threats. [1 hour] Security and Networking (Cont.): E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking. [2 hours] Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter, Basic troubleshooting techniques and tools for diagnosing and resolving issues. [2 hours] Introduction to Al: Definition of Al, History of Al, Al Techniques and Approaches, Key Characteristics of Al, Benefits of Al, Challenges and Ethical considerations. [2 hours] The Role of Al in Modern Smartphones: Al-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa), Adaptive Learning, Real-Time Translation Services. [2 hours]		

	Applications and Tools of Al: Overview of Al Applications in Various Industries, Education and Healthcare, Transportation, Marketing and Advertising, Finance, Robotics and Automation Technologies. [3 hours] Al and Society: How Al affects social, Al and international relations, Al and the future of humanity. [1 hour] Ethical Challenges in Al: Al ethics, privacy and surveillance, the impact of Al on the job market. [1 hour] The Future of Al: Future trends in Al, recent research and emerging technologies. Preparatory week before the final Exam [1 hour]

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	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. The labs are essential to teach the students how to use the Windows operating system, applications such as word and excel, and web based applications such as Google Sheets and Docs.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3, 10	All
	Assignments	1	10% (10)	Continuous	All
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	Continuous	All
Summative assessment	Midterm Exam	2hrs	10% (10)	12	All
	Final Exam	3hrs	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Security and Networking: What is a network? Types of networks. Basic network components.
Week 2	Security and Networking (Cont.): Network Security Basics. Understanding network threats.
Week 3	E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking
Week 4	Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter.
Week 5	Computer Troubleshooting (Cont.): Basic troubleshooting techniques and tools for diagnosing and resolving issues.
Week 6	Introduction to Al: Definition of Al, History of Al, Al Techniques and Approaches.
Week 7	Introduction to Al(Cont.): Key Characteristics of Al, Benefits of Al, Challenges and Ethical considerations.
Week 8	The Role of Al in Modern Smartphones: Al-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa).
Week 9	The Role of Al in Modern Smartphones (Cont.): Adaptive Learning, Real-Time Translation Services.
Week 10	Applications and Tools of Al: Overview of Al Applications in Various Industries, Education and Healthcare.
Week 11	Applications and Tools of Al (Cont.): Transportation, Marketing and Advertising.
Week 12	Applications and Tools of Al(Cont.): Finance, Robotics and Automation Technologies.
Week 13	Al and Society: How Al affects social, Al and international relations, Al and the future of humanity.

Week 14	**Ethical Challenges in Al: Al ethics, privacy and surveillance, the impact of Al on the job market.**
Week 15	**The Future of Al: Future trends in Al, recent research and emerging technologies.**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Network Devices, MAC Address and IP, IP lookup, Tracing
Week 2	Network Security, Windows Security, Browser security
Week 3-5	Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter, Basic troubleshooting techniques and tools for diagnosing and resolving issues.
Week 6-7	Assistants (Siri, Google Assistant, Alexa), Adaptive Learning, Real-Time Translation Services
Week 8-10	AI Applications in Education, Using ChatGPT
Week 11-12	Microsoft Word and Excel, and PowerPoint tutorial
Week 13-14	How to write an academic report using Microsoft Word
Week 15	Summary and Exercises

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	➢ Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020) Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024).	No
Recommended Texts	➢ Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", 16th Edition (2020). الدكتور عادل عبدالنور , "مدخل إلى عالم الذكاء الاصطناعي " 2005	No
Websites		

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:				

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.

ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي