MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Computer fundamentals			**Module Delivery**	
Module Type	Basic			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOMU0000031**				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level		1	**Semester of Delivery**		2
Administering Department		CET	**College**	ETC	
Module Leader	Sema mohammed		**e-mail**	sema.mohammad@uomus.edu.iq	
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	1/10/2025		**Version Number**	1.0	

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	The module aims to: 1. To introduce students to the fundamental concepts of computers, including their evolution, advantages, and classification based on purpose, size, and data type. 2. To familiarize students with the physical components of a computer and software entities, highlighting their roles in computer operations. 3. To promote awareness of computer security, ethics, and intellectual property rights, emphasizing the types of violations and measures for protection. 4. To provide an overview of operating systems, their functions, classifications, and examples, with a focus on the Windows 11 operating system and its desktop components. 5. To equip students with practical knowledge of computer usage and maintenance, covering file organization, software installation, common computer settings, and promoting responsible practices. 6. These aims and indicative contents aim to achieve a comprehensive understanding of computer fundamentals, security, operating systems, and proper computer usage and maintenance.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of the module, students should be able to: 1. Demonstrate a comprehensive understanding of computer fundamentals, including the concept of a computer, stages of the computer life cycle, and advantages of computers. 2. Classify computers based on their purpose, size, and data type, and identify the physical components and software entities of a computer system. 3. Apply ethical principles in the digital world and understand the importance of computer security, software licenses, and protecting against hacking and cyber intrusions. 4. Recognize the health effects of computer usage and implement ergonomic practices for a safe and healthy computing environment. 5. Understand the role and objectives of operating systems, classify different types of operating systems, and demonstrate proficiency in using the Windows 11 operating system. 6. Utilize common desktop components, navigate file systems, manage programs and settings, and perform basic file organization and maintenance tasks.
Indicative Contents المحتويات الإرشادية	1. Introduction to Computer Fundamentals and Classification [14 hrs.] • Concept of a computer • Stages of the computer life cycle • Evolution of computer generations • Advantages of computers and their applications • Classification of computers based on purpose, size, and data type. 2. Computer Components and Software Entities[14 hrs.] • Physical components of a computer • Introduction to software entities 3. Computer Security, Ethics, and Intellectual Property[14 hrs.] • Concept of computer security • Software licenses and intellectual property • Ethics in the digital world • Types of violations and cyber intrusions • Protecting against hacking 4. Health Effects of Computers and Ergonomics [14 hrs.]

	• Understanding and mitigating health risks associated with computer use. • Importance of ergonomics and safe computing practices 5. Operating Systems and Desktop Operations[14 hrs.] • Introduction to operating systems • Functions and objectives of operating systems • Classification of operating systems • Overview of the Windows 11 operating system • Desktop components and operations • Control Panel categories and functions • File organization and maintenance
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The learning and teaching strategies for the module on Computer Principles and operating systems can include: 1. Lectures and Presentations: The instructor can deliver lectures and presentations to introduce and explain key concepts, theories, and principles related to computer fundamentals and operating systems. This can help students develop a foundational understanding of the subject matter. 2. Practical Demonstrations: Hands-on practical demonstrations can be conducted to illustrate the usage of different computer components, software applications, and operating system functionalities. This can enhance students' understanding of the practical aspects of computer systems. 3. Group Discussions and Collaborative Learning: Engaging students in group discussions and collaborative learning activities can promote active participation and deeper understanding. Students can discuss and analyze case studies, real-life examples, and scenarios related to computer fundamentals and operating systems. 4. Laboratory Exercises: Practical laboratory exercises can provide students with opportunities to apply their knowledge and skills in a controlled environment. They can work on computer hardware, software installations, operating system configurations, and troubleshooting tasks, allowing them to gain practical experience. 5. Assignments and Projects: Assignments and projects can be assigned to students to encourage independent learning and critical thinking. They can involve research, analysis, problem-solving, and the application of concepts learned in the module. This can help students develop their skills and deepen their understanding.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	34	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2.26
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	41	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.73
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)	5, 10	LO #1, 2, 8 and 9
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	14	LO # 1-14
Summative assessment	Midterm Exam	2 hours	10% (10)	7	LO # 1-7
	Final Exam	3 hours	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	• Introduction to Computer Fundamentals. • Concept of a Computer.
Week 2	• Stages of the Computer Life Cycle. • Evolution of Computer Generations.
Week 3	• Advantages of Computers and their Applications. • Classification of Computers based on Purpose, Size, and Data Type.
Week 4	• Computer Components: Physical Components of a Computer. • Computer Components: Software Entities.
Week 5	• Personal Computers. • Concept of Computer Security and Software Licenses.
Week 6	• Software Licenses: Types and Importance. • Intellectual Property.
Week 7	**Mid Exam+** • Software Licenses: Types and Importance. • Intellectual Property.
Week 8	• Cyber Intrusions and Malicious Software. • Steps for Protecting Against Hacking.
Week 9	• Health Effects of Computers. • Introduction to Operating Systems.
Week 10	• Functions and Objectives of Operating Systems. • Classification of Operating Systems.
Week 11	• Examples of Different Operating Systems. • Windows 11 Operating System.
Week 12	• Desktop Components. • Start Menu and Taskbar.
Week 13	• Folders and Files. • Icons and Operations on Windows.

Week 14	• Desktop Wallpapers. • Control Panel: Categories and Functions. • File Organization and Maintenance.
Week 15	• Installing and Uninstalling Programs. • Common Computer Settings: Printer Management, Time and Date Settings, Primary Disk Maintenance.
Week 16	• Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	• Practical examples of browsing, opening, and closing windows and dialog boxes, and the proper way to interact with the keyboard, cursor, and other devices. Computer Fundamentals: Concept of a Computer, Stages of the Computer Life Cycle, Evolution of Computer Generations.
Week 2	• Practical examples of customization, working with icons, and changing screen resolution. Computer Advantages and Applications, Classification of Computers based on Purpose, Size, and Data Type.
Week 3	• Training the student on creating a new user, maximizing windows, displaying the keyboard, and familiarizing with the physical components of the computer. Computer Components: Physical Components of a Computer, Software Entities.
Week 4	• Training the student on dealing with computer software licenses, their types, and handling original software sources. Your Personal Computer: Concept of Computer Security and Software Licenses.
Week 5	• Training the students in computer security. Computer Safety & Software Licenses, Computer Safety, and Security.
Week 6	• Training the student in computer privacy. Ethics in the Digital World, Types of Violations, Computer Security, Computer Privacy.
Week 7	• Training the student on electronic hacking and its types, types and characteristics of viruses, how to create a computer backup for protection. Software Licenses: Types and Importance, Intellectual Property, Cyber Intrusions and Malicious Software, Steps for Protecting Against Hacking, Harmful Effects of Computers on Health.
Week 8	• Training the student on operating systems, configuring, and partitioning the internal and external hard disk. Operating Systems: Definition, Functions, Objectives, Classification, Examples of Different Operating Systems.
Week 9	• Training the student in installing Windows 7. Operating Systems: Windows 11.
Week 10	• Training the student on Start Menu commands, the taskbar, creating a file, and saving it with the student's name on the desktop. Interacting with windows, scrollbars, and using the function keys (F1, F2, ..., F12) on the keyboard. Desktop Components: Start Menu, Taskbar.
Week 11	• Creating a folder with a specific name and training on renaming, hiding, recovering, deleting, and viewing its path. Folders and Files, Icons.
Week 12	• Training the student in performing operations on windows, desktop wallpaper. Performing Operations on Windows, Desktop Wallpapers.

Week 13	• Training the student on using the Control Panel. Control Panel: Windows Control Panel, Categories.
Week 14	• Training the student on uninstalling and reinstalling a specific program. From Control Panel: Defragmenting Files Inside the Computer, Installing and Uninstalling Programs.
Week 15	• Training the student on common computer settings, installing the printer, managing time and date, and maintaining primary disks (Partitions C, D, E, F). Common Computer Settings: Printer Management, Time and Date Settings, Primary Disk Maintenance.
Week 16	• Preparatory week before the final Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	R. E. Bryant and D. R. O'Hallaron, "Computer Systems: A Programmer's Perspective," 2019.	Yes
Recommended Texts	G. Brookshear and D. Brylow, "Computer Science: An Overview," 2020.	No
Websites	The Collage E-Library	

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.