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	**UOMU0209015**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	AIET		**College**	Almustaqbal University	
Module Leader	Lect. Asmaa Dhiaa & Lect. Samah		**e-mail**	asmaa.dheyaa@uomus.edu.iq samah.ali@uomus.edu.iq	
Module Leader's Acad. Title	Lect. Asmaa Dhiaa & Lect. Samah		**Module Leader's Qualification**		
Module Tutor			**e-mail**		
Peer Reviewer Name	M.S.C Zahraa Hussein Jasim		**e-mail**		
Scientific Committee Approval Date	23/12/2024		**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 provide students with a foundational understanding of hardware, software, computing, data, and information. 2- To familiarize students with the various components of a computer, including hardware parts, memory types, and input/output units. 3- To develop proficiency in using common operating systems and graphical user interfaces, enabling students to navigate and manage files effectively. 4- To equip students with the skills necessary for creating, formatting, and managing documents using word processing software. 5- To introduce students to basic spreadsheet concepts, including data manipulation, formulas, and functions for data analysis. 6- To foster skills in creating and delivering presentations using presentation software, focusing on effective communication and visual design. 7- To build an understanding of internet concepts, including networking basics, web browsing, and effective use of search engines. 8- To teach students the principles of electronic communication, including email management and document collaboration. 9- To provide students with the knowledge and skills to identify and troubleshoot common computer hardware and software problems. 10- To encourage the practical application of learned concepts in real-world scenarios, enhancing problem-solving and critical thinking skills.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**By the end of the module, students should be able to:** 1. Identify and Describe Key Concepts: Students will be able to explain fundamental concepts of hardware, software, computing, data, and information. 2. Recognize Computer Components: Students will demonstrate an understanding of the main components of a computer system, including hardware parts, memory types, and I/O units. 3. Navigate Operating Systems: Students will proficiently navigate and utilize common operating systems and graphical user interfaces for file management and application usage. 4. Create and Format Documents: Students will be able to create, edit, and format text documents using word processing software, employing various tools and features effectively. 5. Utilize Spreadsheets for Data Management: Students will demonstrate the ability to manipulate cells, use formulas and functions, and perform basic data analysis using spreadsheet software. 6. Develop Effective Presentations: Students will create engaging presentations using presentation software, including designing slides and delivering content clearly. 7. Navigate the Internet Effectively: Students will understand and apply concepts related to internet use, including web browsing, search engine utilization, and understanding URLs. 8. Manage Electronic Communications: Students will demonstrate proficiency in using email for communication, including sending, receiving, and organizing messages and collaborating on documents. 9. Apply Troubleshooting Techniques: Students will identify common hardware and software problems and apply basic troubleshooting techniques to resolve issues.

	10. Integrate Knowledge into Practical Scenarios: Students will apply their acquired knowledge and skills to real-world scenarios, demonstrating problem-solving and critical thinking abilities.
Indicative Contents المحتويات الإرشادية	1. Introduction to Computers: [4 hrs.] • Definition of Computers • History and Evolution of Computers • Types of Computers: Desktops, laptops, tablets, servers. 2. Hardware and Software Concepts: [4 hrs.] • Hardware Components: o Central Processing Unit (CPU) o Memory (RAM, ROM, Cache) o Storage Devices (HDD, SSD, USB drives) o Input Devices (keyboard, mouse, scanner) o Output Devices (monitor, printer, speakers) • Software Components: o System Software (Operating Systems) o Application Software (Word processors, spreadsheets, etc.) 3. Data and Information: [4 hrs.] • Definitions of Data and Information • Data Processing Cycle • Types of Data: Structured vs. unstructured data. 4. Information Electronics and Communication Technology (IECT) : [4 hrs.] • Applications of IECT • Impact on Society and Business 5. Connecting Devices: [4 hrs.] • Input/ Output Devices: Installation and configuration. • Peripherals: Printers, scanners, external drives. • Computer Ports: USB, HDMI, Ethernet, etc. 6. Operating Systems and GUI: [8 hrs.] • Operating System Functions: Resource management, user interface. • Common Operating Systems: Windows, macOS, Linux. • Graphical User Interface (GUI): o Using the mouse and keyboard. o Common icons and their functions. o Menus and menu-navigation. o Managing windows and applications. 7. Word Processing: [8 hrs.] • Creating and Managing Documents • Text Manipulation: Inputting and editing text. • Formatting Techniques: Fonts, sizes, colors, and styles. • Table Creation and Management • Spell Check and Language Tools • Printing Documents 8. Spreadsheet Basics: [8 hrs.] • Introduction to Spreadsheet Software • Cell Manipulation: Entering and editing data. • Formulas and Functions: Basic arithmetic, statistical functions. • Data Analysis Techniques • Printing Spreadsheets 9. Presentation Software: [8 hrs.]

	• Creating Presentations: Slide design and content organization. • Using Visuals: Images, charts, and graphs. • Presenting Slides: Techniques for effective delivery. • Printing Handouts and Slides 10. Internet and Web Browsers: [8 hrs.] • Introduction to Computer Networks: LAN, WAN. • Understanding the Internet and its Applications • Web Browsing: Using browsers effectively. • Search Engines: Techniques for efficient searching. • Understanding URLs, Domain Names, and IP Addresses 11. Communications and Emails: [4 hrs.] • Basics of Electronic Mail: Features and protocols. • Setting Up an Email Account • Sending and Receiving Emails • Managing Email Correspondence • Document Collaboration Tools 12. Computer Troubleshooting: [4 hrs.] • Common Hardware Problems: Identification and solutions. • Common Software Issues: Errors, crashes, and performance issues. • Basic Troubleshooting Techniques: Steps and tools for diagnostics. 13. Review and Assessment: [8 hrs.] • Mid-Term Examination: Assessing knowledge and skills acquired. Practical Assignments: Hands-on tasks to reinforce learning.
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. 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 الدرا س المنتظم للطالب خلال الفصل	49	**Structured SWL (h/w)** الحمل الدرا س المنتظم للطالب أسبوعيا	3.27
Unstructured SWL (h/sem) الحمل الدرا س الغ ت المنتظم للطالب خلال الفصل	26	**Unstructured SWL (h/w)** الحمل الدرا س المنتظم للطالب أسبوعيا	1.73
Total SWL (h/sem) الحمل الدرا س الك لى 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:** Concepts of Hardware and Software with their components; Concept of Computing, Data and Information; Applications of Information Electronics and Communication Technology (IECT); Connecting input/output devices, and peripherals to CPU.
Week 2-3	**Computer Components**: Computer Portions, Hardware Parts, I/O Units, Memory Types, Basic CPU Components, Computer Ports, Personal Computer (Features and Types).
Week 4-5	**Operating System and Graphical User Interface (GUI)**: Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques; Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Short cuts.
Week 6-7	**Word Processing**: Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.
Week 8	**Review and Mid Exam**
Week 9-10	**Spread Sheet**: Basics of Spreadsheet; Manipulation of cells, Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.
Week 11-12	**Presentation Software**: Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; taking printouts of presentation / handouts.
Week 13	**Introduction to Internet and Web Browsers**: Computer networks Basic: LAN, WAN; Concept of Internet and its Applications; connecting to internet, World Wide Web; Web Browsing software's, Search Engines; Understanding URL ; Domain name, IP Address.
Week 14	**Communications and Emails**: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails, Document collaboration.
Week 15	**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 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	**Introduction to Computer:** • Concepts of hardware and software components. • Fundamentals of computing, data, and information. • Applications of information electronics and communication technology (IECT). • Connecting input/output devices and peripherals to CPU.
Week 2-3	**Computer Components:** • Exploration of computer portions and hardware parts. • Identifying I/O units, memory types, and basic CPU components. • Familiarizing with computer ports and personal computer features.
Week 4-5	**Operating System and GUI:** • Basics of common operating systems. • Navigating the user interface using mouse techniques. • Utilizing common icons, status bar, menus, and directories. • Opening, closing, and creating shortcuts for different windows.
Week 6-7	**Word Processing:** • Exploring word processing basics. • Opening and closing documents. • Text creation, manipulation, and formatting. • Handling tables, spell check, language settings, and thesaurus. • Printing word documents.
Week 8	**Review and Mid-Exam**
Week 9-10	**Spreadsheet:** • Spreadsheet software basics. • Manipulation of cells, formulas, and functions. • Editing and printing spreadsheets.
Week 11-12	**Presentation Software:** • Fundamentals of presentation software. • Creating presentations. • Preparing and delivering slide shows. • Taking printouts of presentations and handouts.
Week 13	**Introduction to Internet and Web Browsers** • Computer networking concepts: LAN, WAN. • Concept of the internet and its applications. • Connecting to the internet and exploring the World Wide Web. • Using web browsing software and search engines. • Understanding URLs, domain names, and IP addresses.
Week 14	**Communications and Emails** • Basics of electronic mail. • Setting up email accounts. • Sending, receiving, and accessing emails. • Utilizing email for document collaboration.

Week 15	**Computer Troubleshooting:** • Identifying and solving common hardware issues. • Identifying and solving common software problems. • Applying basic troubleshooting techniques and tools.
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	[1] G. Brown and D. Watson, "Cambridge IGCSE Information and Communication Technology," 3rd ed. Cambridge, U.K.: Cambridge Univ. Press, 2020. [2] A. Evans, K. Martin, and M. A. Poatsy, "Technology in Action Complete," 16th ed. Boston, MA, USA: Pearson, 2020.	Yes
Recommended Texts	[3] 2016 ,"أساسيات الحاسوب", الخضر علي الخضر بحات.	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.