MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer / الحاسوب**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**NTU102**				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level			**Semester of Delivery**		2
Administering Department		Cybersecurity Technical Engineering / قسم الأمن تقنيات هندسة السيبراني	**College**		Technical Engineering College of Computer and AI - Kirkuk / التقنية الكلية كركوك - الاصطناعي والذكاء للحاسوب الهندسية
Module Leader	Dr. Academic Leader		**e-mail**	leader@ntu.edu.iq	
Module Leader's Acad. Title		Assistant Professor	**Module Leader's Qualification**		Ph.D. in Computer Science / Information Technology
Module Tutor	Tutor Name		**e-mail**	tutor@ntu.edu.iq	
Peer Reviewer Name		Reviewer Name	**e-mail**	reviewer@ntu.edu.iq	
Scientific Committee Approval Date		01/09/2024	**Version Number**		1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	High School Computer Fundamentals / الحاسوب أساسيات	**Semester**	Prep

Co-requisites module	Introduction to Python Programming (CYBT105) & Advanced IT	**Semester**	2 & 3

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	This module aims to provide first-year engineering students with essential digital literacy, computer system architecture concepts, operating system navigation, spreadsheet data analysis, word processing, presentation tools, cloud services, and fundamental IT concepts essential for cybersecurity engineering studies.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Comprehend computer hardware architecture, software taxonomy, and operating system mechanisms. Master operating system management, file structures, and administrative customization in Windows OS. Create professional technical reports, formatted documents, and structured tables using word processing software (MS Word). Perform data manipulation, statistical calculations, mathematical formulas, and charting using spreadsheets (MS Excel). Design and deliver effective academic slide presentations using MS PowerPoint. Utilize cloud storage, web protocols, search strategies, and online collaborative platforms efficiently. Apply basic cybersecurity hygiene, data protection principles, and computational thinking concepts.
Indicative Contents المحتويات الإرشادية	The module will cover the following key areas: Computer Hardware Architecture: CPU, RAM/ROM, Storage Devices, and I/O Peripherals Software & Operating Systems: System vs Application Software, OS Architecture, Windows Management, and File Systems Word Processing (MS Word): Professional Layouts, Formatting, Table Creation, Citations, and Document Structuring Spreadsheets (MS Excel): Data Entry, Formulas, Built-in Functions (SUM, AVERAGE, IF, VLOOKUP), and Charting Data Analysis in Excel: Sorting, Filtering, Conditional Formatting, and Basic Data Visualization Presentation Software (MS PowerPoint): Slide Design, Master Slides, Animations, and Multimedia Integration Internet & Web Technologies: Protocols (HTTP/HTTPS, TCP/IP), Web Browsing, and Advanced Search Engines Cloud Computing & Online Productivity: Cloud Storage Services, Google Workspace / Microsoft 365, and Collaboration Cyber Security Basics: Antivirus, Firewalls, Malware Types, Password Security, and Digital Privacy Fundamentals of Computational Thinking: Pseudocode, Flowcharting, and Logical Problem Solving

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module will employ a combination of strategies including: Lectures: To provide theoretical foundations on computer architecture, operating system concepts, and digital literacy. Interactive Workshops & Group Discussions: To evaluate digital productivity tools, cyber safety, and cloud collaboration. Practical Lab Sessions: Hands-on computer lab training on MS Office applications, Windows administration, and internet tools. Assignments & Classwork: Individual and group projects for creating technical reports, Excel data models, and PowerPoint slides. Tutorials: To assist students with formula writing, advanced document layout formatting, and troubleshooting. Mid-term and final exams: To evaluate theoretical understanding and hands-on office application proficiency. Preparatory Week: To give students time to revise and clarify any difficulties before the final exam.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	5% (5)	5, 10	LO #1, 3 and 5
	Assignments	2	5% (5)	2, 12	LO #2, 4 and 6
	Projects / Lab.	1	10% (10)	Continuous	LO #7

	Report	1	10% (10)	13	LO #3, 5 and 7
Summative assessment	**Midterm Exam**	2 hr	20% (20)	8	LO #1 - 4
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Computer Systems: Architecture, Hardware vs. Software, and Digital Literacy.
Week 2	Computer Hardware Components: CPU Architecture, Memory Types (RAM/ROM), Storage Devices (SSD/HDD), I/O.
Week 3	Software Concepts & System Architecture: Operating System Functions, File Systems (NTFS/FAT32), GUI Navigation.
Week 4	Operating System Administration: File Explorer, Management Utilities, System Settings, and Security Configuration.
Week 5	Word Processing Fundamentals (MS Word): Interface, Styles, Paragraph Formatting, and Page Layouts.
Week 6	Advanced MS Word: Multi-column Tables, Image Editing, Headers/Footers, References, and Table of Contents.
Week 7	Spreadsheet Essentials (MS Excel): Worksheet Structure, Cell Addressing, Data Types, Formatting, and Formulas.
Week 8	Mid-term Exam (الفصل منتصف اختبار) & MS Excel Formulas: Relative and Absolute Referencing, Arithmetic Operations.
Week 9	MS Excel Built-in Functions: Mathematical, Statistical, and Logical Functions (SUM, AVERAGE, IF, VLOOKUP).
Week 10	Data Analysis & Visualization: Creating Charts, Sorting, Filtering, and Conditional Formatting in Excel.
Week 11	Presentation Software (MS PowerPoint): Master Slides, Slide Layouts, Text Formatting, and Templates.
Week 12	Advanced MS PowerPoint: Transitions, Custom Animations, Embedding Media, and Presentation Skills.
Week 13	Computer Networks & Web Basics: LAN/WAN Topologies, IP Addresses, Browsers, Protocols (HTTP/HTTPS, FTP).

Week 14	Cloud Computing & Online Tools: Cloud Storage (Drive/OneDrive), Collaborative Editing, Digital Workflows.
Week 15	Cyber Security Hygiene & Protection: Malware Types (Viruses, Trojans, Ransomware), Firewalls, Safe Browsing.
Week 16	Computational Thinking Principles: Pseudocode, Flowcharting, Course Review & Final Examination (النهائي الاختبار).

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Windows OS Administration: File Management, Directory Hierarchy, Shortcuts, and Control Panel.
Week 2	Lab 2: MS Word Workshop I: Creating Technical Reports, Paragraph Styling, Layouts, and Formatting.
Week 3	Lab 3: MS Word Workshop II: Constructing Complex Tables, Inserting Graphics, Captions, and Citations.
Week 4	Lab 4: MS Excel Workshop I: Worksheet Creation, Cell Referencing, Formula Implementation, and Data Formatting.
Week 5	Lab 5: MS Excel Workshop II: Implementing Functions (SUM, AVERAGE, IF), Sorting/Filtering, and Generating Charts.
Week 6	Lab 6: MS PowerPoint Workshop: Designing Slide Decks, Applying Slide Masters, Transitions, and Animations.
Week 7	Lab 7: Revision, Practical Skills Assessment, Computer Lab Examination, and Course Evaluation.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Vermaat, M. E., Sebok, S. L., & Freund, S. M. (2018). "Discovering Computers 2018: Digital Technology, Data, and Devices". Cengage Learning.	Yes
Recommended Texts	Lambert, J. (2019). "Microsoft Office Step by Step (Office 2019 / Microsoft 365)". Microsoft Press.	Yes
Websites	Yes	

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.