



## MODULE DESCRIPTION FORM

### نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	<b>Networks and Data Communication</b>		Module Delivery
Module Type	<b>Core</b>		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	<b>CNDC203</b>		
ECTS Credits	<b>6</b>		
SWL (hr/sem)	<b>١٢٥</b>		
Module Level	<b>1</b>	Semester of Delivery	
Administering Department	NSD	College	CSIT
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

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

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<p>The aims of this module are to provide students with a foundational understanding of computer networks and data communication. Through theoretical study and practical application, students will explore key concepts, protocols, and technologies essential for designing, implementing, and managing modern network infrastructures. The module aims to develop students' technical skills in configuring network devices, addressing security concerns, and optimizing network performance. Additionally, it aims to foster critical thinking and problem-solving abilities in analyzing network issues and anticipating future trends in the field. Overall, the module aims to prepare students for professional practice in network engineering, administration, or related areas by equipping them with the knowledge and skills necessary to navigate and succeed in diverse networking environments.</p>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<p>By the end of this module, students will understand core concepts and technologies in computer networks, this syllabus provides a comprehensive overview of the Networks and Data Communication course, outlining its objectives, grading structure, schedule, and learning outcomes. By actively participating and completing assignments, students will gain a strong foundation in networking fundamentals, protocols, technologies, and their practical application in various scenarios.</p>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<p>This syllabus offers a roadmap for the Networks and Data Communication course, encompassing essential networking concepts like models, devices, and protocols. Students will delve into addressing, security, troubleshooting, and emerging technologies like wireless and cloud computing, ultimately aiming to build a solid understanding of network principles, communication, and optimization.</p>

### Learning and Teaching Strategies

#### استراتيجيات التعلم والتعليم

<p><b>Strategies</b></p>	<p>Active Learning Scaffolding Real-World Applications Technology Integration</p>
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### Student Workload (SWL)

الحمل الدراسي للطالب

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	48	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعياً	3.2
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعياً	5.1
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	125		

### Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5,10	LO #1,2, 3 and 5
	<b>Assignments</b>	2	10% (10)	2,12	LO # 3, 4 and 5
	<b>Projects / Lab.</b>				
	<b>Report</b>	1	10% (10)	13	LO # 5,8 and 10
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr	10% (10)	7	LO # 1-6
	<b>Final Exam</b>	3 hr	60% (60)	16	All
<b>Total assessment</b>					

### Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

	Material Covered
<b>Week 1</b>	Introduction to Networking Concepts
<b>Week 2</b>	Network Types and Topologies
<b>Week 3</b>	OSI and TCP/IP models 2   Network Devices - Physical Layer
<b>Week 4</b>	Network Interface Cards (NICs)
<b>Week 5</b>	Hubs, Switches, Routers
<b>Week 6</b>	Media and Transmission Characteristics
<b>Week 7</b>	Ethernet
<b>Week 8</b>	IP Addressing and Subnetting



<b>Week 9</b>	Routing Protocols (Static and Dynamic)
<b>Week 10</b>	Routing and Routing Protocols
<b>Week 11</b>	Wired and Wireless Communication
<b>Week 12</b>	Wireless and Mobile Networks
<b>Week 13</b>	Network Devices and Technologies
<b>Week 14</b>	Components of a Data Communication System
<b>Week 15</b>	LAN Design and Implementation
<b>Week 16</b>	<b>Final Exam</b>

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
<b>Week 1</b>	
<b>Week 2</b>	
<b>Week 3</b>	
<b>Week 4</b>	
<b>Week 5</b>	
<b>Week 6</b>	
<b>Week 7</b>	

### Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
<b>Required Texts</b>		
<b>Recommended Texts</b>		



Websites	
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Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
<b>Success Group (50 - 100)</b>	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
<b>Fail Group (0 - 49)</b>	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
<p><b>Note:</b> 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.</p>				