



Ministry of Higher Education and
Scientific Research - Iraq
Al-Mansour University College
Department of Communication Engineering



الملحق 4: وصف المادة الدراسية

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Computer Network		Module Delivery
Module Type	CORE		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	COM 35104		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UGIII	Semester of Delivery	
Administering Department	BSc - COMM	College	Al-Mansour University College
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	13-9-2025	Version Number	1.0

Relation with other Modules



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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 Objectives أهداف المادة الدراسية	The Computer Networks curriculum aims to introduce the student to computer networking skills and their basics, and to focus on the models used in them, their components, and protocols.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A- Knowledge and Understanding A 1 - to understand the definition of computer networks in theory and practical A 2 - understand and grasp the requirements of computer networks A 3 - to understand and grasp the types of computer networks and application A 4 - the study of the devices used in computer networks A 5 - to build computer networks A 6 - to understand the problems and obstacles for the application of computer networks B. Subject-specific skills B 1 - Understanding Computer Networks B 2 - application of computer networks B3 -Preparing Design to any computer network requires B4 - solve any problem facing the user in Computer Networking
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. • Course introduction (4 hrs.) • Working with Cisco Packet Tracer (48 hrs.)
Description	Network-Centric World, Introduction, Communicating in a Network-Centric World, The Network as a Platform, The Architecture of the Internet, Trends in Networking.



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	Communicating over the Network. Application Layer Functionality and Protocols. OSI Transport Layer. OSI Network Layer. Addressing the Network. OSI Data Link Layer. OSI Physical Layer. Ethernet. Planning and Cabling Networks. Configuring Cisco Devices, IOS Basics, applying a Basic Configuration Using Cisco IOS, Verifying Connectivity, Monitoring and Documenting Networks. Practical part: Network hardware, Type of Communication Channels and Media, LAN, WAN, DSN, Subnet, TCP/IP Protocol, OSI Protocol, PDU, Servers, Wireless Router, Switch, Cloud.
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	In this course, students are guided by: • Using different examples. • Using different styles of discussion that aim to connect the theoretical and practical sides. • Asking questions and giving exercises that require analysis and conclusions related to lectures. • Encourage students to participate in discussions and do the practical work. • Encourage students to work in groups.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	12	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	0.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		



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Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (5)	6 and 12	LO #1 to #3 and #4 to #6
	Assignments	2	10% (5)	2 and 13	LO #3 to #6
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #3, #4 and #6
Summative assessment	Midterm Exam	2hr	10% (10)	9	LO #1 - #5
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Overview of data communication, Networking, their basic components and applications
Week 2	Type of Networking Devices
Week 3	Computer Networks and the Internet
Week 4	Data Communication and Network Hardware
Week 5	Network Topology
Week 6	Reference Models (OSI)
Week 7	The TCP/IP Reference Model and Addressing
Week 8	Data and signal
Week 9	PERFORMANCE ,Bandwidth ,Throughput ,Latency (Delay) ,Bandwidth-Delay Product And Jitter
Week 10	Transmission Media (GUIDED & UNGUIDED)
Week 11	The Network Layer in the Internet



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Week 12	IP Addresses, IP Version 6
Week 13	Wired LANs: Ethernet
Week 14	Encoding and Decoding
Week 15	Communication Security
Week 16	Preparatory week before the final exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction to the lab and get started with use packet tracer simulator
Weeks 2-3	General view of packet tracer simulator tools (cisco), Identify all the icons used, Learn about the different types of connections copper, console, fiber and cross
Weeks 3-4	Recognition End devices, Choose the connection type fast internet, choose ICMP ONLY, Auto capture/ play, inter to router, connect devices to fast Ethernet, distribute IP
Weeks 4-5-6	Subnet mask, Gate away
Weeks 7-8-9-10-11-12-13-14	Experiments
Week 15	Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	- Behrouz A Forouzan, Data communications and networking, 4th ed. 2007. A. S Tanenbaum, Computer Network, 2001. - F, Halsall, Multimedia Communications, 2005. - Computer Networks, a System approach, 4th Edition, by Larry Peterson, MK 2007	Yes



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	TCP/IP Protocol Suite, 4rd edition, by B. A. Forouzan, McGraw Hill 2010	
Recommended Texts	- Andrew S. Tanenbaum, David J. Wetherall, Computer Networks, 5th ed, 2011 - Larry L. Peterson & Bruce S. Davie, Computer Networks A Systems Approach, First edition, 2003	No
Websites	https://csc-knu.github.io/sys-prog/books/Andrew%20S.%20Tanenbaum%20-%20Computer%20Networks.pdf	

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.				