



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Cybersecurity Department

CY342 Computer Networks Laboratory - JNQF Level: 6

First Semester 2023-2024

Course Catalog

1 Credit Hours. This course covers the design, application, analysis, and evaluation of computer network protocols. Students will explore static and dynamic routing protocols (RIP and OSPF), as well as network services like DHCP, NAT, PAT, and VLANs. Security is integrated throughout, with the emphasis on network security principles.

Text Book

Title	Data Communications and Networking Behrouz A. Forouzan
Author(s)	McGraw-Hill
Edition	4th Edition
Short Name	ref1
Other Information	2007

Course References

Short name	Book name	Author(s)	Edition	Other Information
ref2	Computer Networks: A Top-Down Approach	James F. Kurose and Keith W. Ross	5th Edition	Pearson/Addison Wesley

Instructor

Name	Dr. Heba Alawneh
Office Location	-
Office Hours	Sun : 12:30 - 14:00 Mon : 09:45 - 11:15 Tue : 11:00 - 12:30 Thu : 12:30 - 14:00
Email	hzalawneh@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Thu : 09:30 - 12:30 Room: LAB Section 2: Lecture Time: Sun : 09:30 - 12:30 Room: LAB

Prerequisites		
Line Number	Course Name	Prerequisite Type
1773410	CY341 Computer Networks	Pre./Con.

Tentative List of Topics Covered		
Weeks	Topic	References
Week 2	Introduction to Cisco Packet Tracer (Building, Configuring and Simulating Network Topologies)	From ref1
Week 3	Basic Router Configuration and Network Simulation using Cisco Packet Tracer	From ref1
Week 4	Static Routing using Cisco Packet Tracer	From ref1
Week 5	Dynamic Routing using Cisco Packet Tracer	From ref1
Week 6	Basic DHCP, FTP and standard ACL Configuration using Cisco Packet Tracer	From ref1
Week 7	Basic IPv6 Configuration using Cisco Packet Tracer	From ref1
Week 9	Introduction to VLANs Configuration in Switched Networks and Router-on-a-Stick Inter-VLAN Routing Configuration using Cisco Packet Tracer	From ref1
Week 10	NAT and PAT Configuration using Cisco Packet Tracer	From ref1
Week 11	Network Troubleshooting using Cisco Packet Tracer	From ref1
Week 12	Building and Configuring Network Topologies using Real Devices	From ref1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Demonstrate the ability to build and simulate network topologies. [1SO5] [1L6C4]	25%	

Configure static and dynamic routing protocols. [1SO2] [1L6K1]	15%	
Conduct appropriate configuration experiments, including basic IPv6 configuration on network devices, for NAT, PAT, DHCP, and FTP services. [1SO2] [1L6S1]	30%	
Demonstrate the ability to configure VLANs, Router-on-a-Stick Inter-VLAN routing, troubleshoot network issues, interpret collected data, and draw conclusions about the network status. [1SO1] [1L6S2]	30%	

Relationship to Program Student Outcomes (Out of 100%)									
oldS1	oldS2	OldS3	OldS4	SO1	SO2	SO3	SO4	SO5	SO6
				30	45			25	

Relationship to NQF Outcomes (Out of 100%)			
L6K1	L6S1	L6S2	L6C4
15	30	30	25

Policy	
Makeups	Makeup exam should not be given unless there is a valid excuse.
Drop Date	Last day to drop the course is before the 12th week of the current semester.
Attendance	<ul style="list-style-type: none"> * Excellent attendance is expected. * According to the JUST policy, a student will receive the grade of ZERO (35%) ?Failed for absence? if he misses more than 20% of the classes. * Attendance will be taken by calling the names. * If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed.
Workload	Average work-load student should expect to spend is 8 hours/week.
Graded Exams	Graded exam papers will be returned within a week.
Participation	<ul style="list-style-type: none"> * Participation in the class will positively affect your performance. * Disruption and side talks will possibly result in dismissal from class. * No eating or chewing gums are allowed in class.

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