Jordan University of Science and Technology
Faculty of Computer & Information Technology
Network Engineering And Security Department

NES415 Networking Protocols
First Semester 2020-2021

Course Catalog
3 Credit Hours. This course provides a detailed understanding of essential Internet protocols. It includes ARP, IP, ICMP, IGMP, UDP, TCP, routing protocols such as RIP, OSPF and BGP, multicasting and multicast routing protocols such as DVMRP, MOSPF and PIM, and application protocols such as DNS, DHCP, FTP and HTTP.

Text Book	
Title	TCP/IP Protocol Suite
Author(s)	Behrouz A. Forouzan
Edition	4th Edition
Short Name	Ref#1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#2	Internetworking with TCP/IP, Volume 1: Principles, Protocols, and Architecture	Douglas E. Comer	6th Edition	

Instructor	
Name	**Dr. Omar Al Jarrah**
Office Location	-
Office Hours	Sun : 09:00 - 10:00 Mon : 10:00 - 12:00 Tue : 09:00 - 10:00 Wed : 10:00 - 12:00
Email	oyaljarrah1@just.edu.jo

Instructor	
Name	**Dr. Moad Mowafi**
Office Location	E1L3
Office Hours	Sun : 11:30 - 13:30 Mon : 13:00 - 14:00 Tue : 11:30 - 13:30 Wed : 13:00 - 14:00
Email	mowafi@just.edu.jo

Class Schedule & Room

Section 1:
  Lecture Time: Sun, Tue : 10:00 - 11:30
  Room: منصة الكترونية
 	
Section 2:
  Lecture Time: Sun, Tue : 11:30 - 13:00
  Room: منصة الكترونية
 	
Section 4:
  Lecture Time: Sun, Tue : 10:00 - 11:30
  Room: منصة الكترونية

Teaching Assistant
Hebah Aldahoud(Sections 1, 2, 4)

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
1753120	NES312 Fundamentals Of Computer Networks	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Introduction	**ch1,2** From **Ref#1**
Week 2	IP Addresses	**ch5** From **Ref#1**
Week 3	Delivery and Forwarding of IP Packets	**ch6** From **Ref#1**
Week 4	Internet Protocol (IP)	**ch7** From **Ref#1**
Week 5	Address Resolution Protocol (ARP)	**ch8** From **Ref#1**
Week 6	Internet Control Message Protocol (ICMP)	**ch9** From **Ref#1**
Weeks 7, 8	Unicast Routing Protocols (RIP, OSPF, and BGP)	**ch11** From **Ref#1**
Weeks 9, 10	Multicasting and Multicast Routing Protocols	**ch12** From **Ref#1**

Week 11	User Datagram Protocol (UDP)	**ch14** From **Ref#1**
Weeks 12, 13	Transmission Control Protocol (TCP)	**ch15** From **Ref#1**
Week 14	Domain Name System (DNS)	**ch19** From **Ref#1**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Explain the purpose, function and use of IP Protocol. [1SO1, 1SO2]	25%	Mid Exam, Quiz 1, Final Exam
Explain the purpose, function and use of ICMP protocol [1SO1]	10%	Mid Exam, Assignment 2
Explain the purpose, function and use of TCP protocol [1SO1]	15%	Final Exam, Quiz 2
Explain the purpose, function and use of UDP protocol [1SO1]	5%	Final Exam, Quiz 2
Describe the operation of network addressing protocols (ARP and DNS) [1SO1]	15%	Mid Exam, Final Exam, Assignment 1
Describe the operation of RIP routing protocol [1SO2]	5%	Final Exam
Describe the operation of OSPF routing protocol [1SO2]	7%	Final Exam
Describe the operation of BGP routing protocol [1SO2]	3%	Final Exam
Describe the operation of multicasting protocols (IGMP, MOSPF, DVMRP, CBT, and PIM) [1SO2]	15%	Final Exam

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
57.50	42.50					

Evaluation	
Assessment Tool	**Weight**
Mid Exam	30%
Quiz 1	5%
Final Exam	50%
Quiz 2	5%
Assignment 1	5%
Assignment 2	5%

Policy	
Exams	1. May include: Definitions, True/False, Multiple-Choice, Analysis and Descriptive formats. 2. Use only your own tools: calculator, pens and ruler 3. Instructions on the first page of the exam are quite important. 4. Not abiding by the rules is a reason for dismissal from the exam.

Makeups	Makeup exam should not be given unless there is a valid excuse. NO Makeup for quizzes
Drop Date	Last day to drop the course is before the 12th week of the current semester.
Cheating	Standard JUST policy will be applied.
Attendance	1. Excellent attendance is expected. 2. 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. 3. Attendance will be taken by calling the names or passing a sign-up sheet. 4. 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 6 hours/week.
Graded Exams	Graded exam papers will be returned within a week.
Participation	1. Participation in the class will positively affect your performance. 2. Disruption and side talks will possibly result in dismissal from class. 3. No eating or chewing gums are allowed in class.

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