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|  | Hashemite University |  |
| | Prince Al-Hussein bin Abdullah II Faculty for Information Technology | |
| | Department of Computer Science and Applications | |

Course Syllabus

Year: 2018-2019

Semester: (2)

| Course No. | Course Title | Designation | Prerequisite | Co-requisite | Credit Hours Lectures /Lab. |
|------------|--------------------|-------------|--------------|--------------|--------------------------------|
| 151001321 | Internet Protocols | Elective | 151001320 | - | 3 / 0 |

| Instructor Name | E-mail | Office No. | Office ext. | Office Hours |
|--------------------|--|------------|-------------|--|
| Dr. Mohammad Bsoul | mbsoul@hu.edu.jo | 234 | 4573 | Sun, Tue, Thur (11-12) Mon, Wed (12:15-12:45) |

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| Coordinator's Name: | Dr. Mohammad Bsoul |
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| Course Description | Continuation of Computer Networks. Introduces elements of the protocols in TCP/IP protocol suite, including IP, ARP, RARP, ICMP, UDP, TCP, SCTP, RIP, OSPF, BGP, BOOTP, and DHCP. |
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Learning References:

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| 1- Textbook (s): |
| 1. TCP/IP Protocol Suite, Behrouz A. Forouzan, 4th ed., McGraw-Hill, 2010. |
| 2- References: |
| 1. Internetworking With TCP/IP Volume 1: Principles Protocols, and Architecture, Douglas E Comer, 6th edition, 2013. |
| 2. Data Communications and Networking, Behrouz Forouzan, 5th ed., McGraw-Hill, 2013. |
| 3. Computer Networks and Internets, Douglas E. Comer, 6 th ed., Prentice-Hall, 2015. |

Course Intended Learning Outcomes (ILOs)

Upon successful completion of this course, students are expected to achieve the following learning outcomes:

| Course ILOs | Program ILOs | Teaching and Learning Method | Assessment Method |
|--|--------------|------------------------------|-------------------|
| 1- Explain Classful and Classless addressing, and Subnetting and Supernetting. | CIS-2 | Lectures | Exam |
| 2- Explain routing in IP protocol. | CIS-2 | Lectures | Exam |
| 3- Describe different protocols in the TCP/IP protocol suite. | CIS-1 | Lectures | Exam |
| 4- Write a program that represents the behavior of a well-known protocol. | CIS-1 | Assignment | Assignment |

Course Schedule:

| Topic Details | Course ILO number | Reference | No. of Weeks | Contact hours* |
|--|-------------------|-----------|--------------|----------------|
| IP Addresses: Classful Addressing | 1 | Ch4 | 1 | 3 |
| IP Addresses: Classless Addressing | 1 | Ch5 | 1 | 3 |
| Delivery, Forwarding and Routing of IP Packets | 2 | Ch6 | 2 | 6 |
| ARP and RARP | 3 | Ch7 | 1 | 3 |
| Internet Protocol (IP) | 3 | Ch8 | 2 | 6 |
| Internet Control Message Protocol (ICMP) | 3 | Ch9 | 2 | 6 |
| User Datagram Protocol (UDP) | 3 | Ch11 | 1 | 3 |
| Transmission Control Protocol (TCP) | 3 | Ch12 | 2 | 6 |
| Stream Control Transmission Protocol (SCTP) | 3 | Ch13 | 2 | 6 |
| Unicast Routing Protocols (RIP, OSPF and BGP) | 3 | Ch14 | 1 | 3 |
| Total | | | 15 | 45 |

Assessment Methods and Grading System:

| Assessment method | Grade | Comments |
|-------------------|-------|---|
| First Exam | 25% | Covers Chapters 4, 5, 6, and 7 |
| Second Exam | 25% | Covers Chapters 8, 9, 11, and 12 |
| Assignment | 10% | TBA |
| Final Exam | 40% | Covers all topics that were discussed during the semester |
| Total | 100% | |