

Course Syllabus

1.	Course title	Computer Networks 2
2.	Course number	1901461
3.	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	45
4.	Prerequisites/corequisites	Computer Networks (1901361)
5.	Program title	B.Sc. in Computer Science
6.	Year of study and semester (s)	4 th
7.	Final Qualification	
8.	Other department (s) involved in teaching the course	
9.	Language of Instruction	English
10.	Date of production/revision	5/2/2016
11.	Required/ Elective	Elective

12. Course Coordinator:

Office 117 Ext 22630
Office Hours : 12 – 1 pm everyday
saher@ju.edu.jo

13. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

14. Course Description:

This course describes the architecture, components, and operations of routers and switches in a small network. Participants learn how to configure a router and a switch for basic functionality

15. Course aims and outcomes:

A- Aims: By the end of this course, participants will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.
B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...
1. Understand and describe basic switching concepts and the operation of Cisco switches
2. Understand and describe the purpose, nature, and operations of a router, routing tables, and route lookup process
3. Understand and describe how VLANs create logically separate networks and how routing occurs between them
4. Understand and describe dynamic routing protocols, distance vector routing protocols, and link-state routing protocols
5. Configure and troubleshoot static routing and default routing (RIP and RIPng)
6. Configure and troubleshoot an Open Shortest Path First (OSPF) network B2)
7. Configure and troubleshoot an Open Shortest Path First (OSPF) network
8. Understand, configure, and troubleshoot Dynamic Host Configuration Protocol (DHCP) in IPv4 and IPv6 networks
9. Understand, configure, and troubleshoot Network Address Translation (NAT) operations
10. Understand, configure, and troubleshoot Access Control Lists (ACL) and their operations

16. Topic Outline and Schedule:

Topic	Week	ILOs	Program SOs ¹	TLA (teaching, learning and Assessment)
Introduction to Switched Networks	1 + 2	1 + 2		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 1 •In class questions
Basic Switching Concepts and Configuration	3+4	1+2		<ul style="list-style-type: none"> •Lecture •Reading lecture notes and Chapter 2 •In class questions
VLANs	5	3		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 3 •Chapter Quiz
Routing Concepts	6			<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 4 •Chapter Quiz
Inter-VLAN Routing	7	3 + 4 + 5		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 5 •Chapter Quiz
Static Routing	8	5		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 6 •Chapter Quiz

¹ The ABET outcomes

Routing Dynamically	9	4		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 7 •Chapter Quiz
Single-Area OSPF	10	6+7		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 8 •Chapter Quiz
Access Control Lists	11	10		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 9 •Chapter Quiz
DHCP	12+13	8		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 10 •Chapter Quiz
Network Address Translation for IPv4	14	9		<ul style="list-style-type: none"> •Lecture & Discussion •Reading lecture notes and Chapter 11 •Chapter Quiz

(Please mention instructors per topic if the course topics are being taught by more than one instructor)

17. Evaluation Methods and Course Requirements (Optional):

Online exams.
 Practical Exams
 Chapter exams
 Quizzes

18. Course Policies:

- A- Attendance policies: 15% Abs. Limit
- B- Absences from exams and handing in assignments on time: Medical reports only
- C- Grading policy: Online automated grading
- D- Available university services that support achievement in the course: Dedicated Labsand/or their academic advisor, preferably in a written format, about their needs no later than the 4th week of classes.

19. Required equipment:

Cisco routers and switches in addition to PCs

20. References:

A. All the required reading and examples are available at www.netacad.com

B. Additional information:

Date: -----

Name of Course Coordinator: -----Signature: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

Copy to:

Head of Department

Assistant Dean for Quality Assurance

Course File