COMP 2024 COMPUTER NETWORKING (UG CERT)

Credit Points 10

Legacy Code 500049

Coordinator Mia Hatzistergos (https://directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

Description This is an introductory subject in computer systems networking. It covers basic networking technologies, Ethernet fundamentals, ISO OSI model, routing, switching and sub-netting, the internet architecture, networking protocols, including TCP/IP, important OSI layer 2 and 3 networking device fundamentals, basic network management and security issues. This subject is also the first of three subjects which will prepare students for industry-based networking certification (CCNA).

School Computer, Data & Math Sciences

Discipline Networks and Communications

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 2 subject

Equivalent Subjects COMP 2004 Computer Networking COMP 2007 Computer Networking Fundamentals
LGYA 5739 Applied Data Communications and Networking COMP 2006 Computer Networking

Restrictions

Student need to be enrolled in: program 7174 - Undergraduate Certificate in ICT or program 7179 - Undergraduate Certificate in Cybersecurity, Cybercrime and Behaviour

Assumed Knowledge

Fundamentals of computer architecture, binary and hexadecimal numbering systems and programming principles. Students should also have a working knowledge of the World Wide Web.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Identify the basic concepts and protocols of computer networking and internetworking.
2. Describe and define the internet architecture.
3. Explain the significance of the OSI and TCP/IP models, protocol stacks and their operation in computer networks.
4. Identify and describe modern technologies in computer networking.
5. Examine and review the functions of important OSI layer 2 and OSI layer 3 networking devices.
6. Apply and utilise the basic management and security requirements of computer networks.
7. Design, construct and test a simple LAN.
8. Subnet a network given design criteria.

Subject Content

1.Basic concepts of computer networking and internetworking.
2.Internet architecture.
3.An introduction to the operation of the major protocols used in computer networking.
4.The OSI model, TCP/IP protocol stack and IP addressing.
5.Basic understanding of the TCP/IP protocol stack and its operation in data networks.
6.Modern data communication and networking technologies.
7.Basic management and security requirements of computer networks.
8.Identification and review of networking media.
9.Introduction to Ethernet technologies and switching.
10.Basic routing fundamentals and subnetting.
11.Construct and evaluate network performance in simple LANs.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Presentation	5 minutes	10	N	Individual
Case Study	500 words	15	N	Group
Case Study	60 min	35	N	Individual
Portfolio	1000 words	30	N	Individual
Portfolio	20 min	10	N	Individual

Teaching Periods

Block A Session (2022)
Online
Online
Subject Contact Mia Hatzistergos (https://directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP2024_22-BA_ON_O#subjects)

Block B Session (2022)
Online
Online
Subject Contact Mia Hatzistergos (https://directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP2024_22-BB_ON_O#subjects)

Block C Session (2022)
Online
Online
Subject Contact Mia Hatzistergos (https://directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP2024_22-BC_ON_O#subjects)

Block E Session (2022)
Online
Online
Subject Contact Jack Isherwood (https://directory.westernsydney.edu.au/search/name/Jack Isherwood/)

View timetable (https://classregistration.westernsydney.edu.au/even/
timetable/?subject_code=COMP2024_22-BE_ON_O#subjects)

Block F Session (2022)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/even/
timetable/?subject_code=COMP2024_22-BF_ON_O#subjects)

Block A Session (2023)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/odd/
timetable/?subject_code=COMP2024_23-BA_ON_2#subjects)

Block B Session (2023)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/odd/
timetable/?subject_code=COMP2024_23-BB_ON_2#subjects)

Block C Session (2023)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/odd/
timetable/?subject_code=COMP2024_23-BC_ON_2#subjects)

Block D Session (2023)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/odd/
timetable/?subject_code=COMP2024_23-BD_ON_2#subjects)

Block F Session (2023)
Online
Online
Subject Contact Mia Hatzistergos (https://
directory.westernsydney.edu.au/search/name/Mia Hatzistergos/)

View timetable (https://classregistration.westernsydney.edu.au/odd/
timetable/?subject_code=COMP2024_23-BF_ON_2#subjects)