COMP 2006 COMPUTER NETWORKING (WSTC)

Credit Points 10

Legacy Code 700012

Coordinator Buddhima De Silva (https://directory.westernsydney.edu.au/search/name/Buddhima De Silva/)

Description This is an introductory unit 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 unit is also the first of three units 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

Pre-requisite(s) Students enrolled in 7067 Diploma in Information and Communications Technology Extended and 7134 Diploma in Information and Communications Technology Extended – ICT must pass LANG 0002 Academic Communication 2 (WSTC Prep) or LANG 0032 English for Tertiary Study 2 (WSTC Prep) or LANG 0039 Introduction to Academic Communication 2 (WSTC Prep) and must pass INFO 0008 Computer Studies (WSTC Prep) before enrolling in this unit

Students enrolled in 7138 Diploma in Information and Communications Technology Extended-ICT 7139 Diploma in Information and Communications Technology Extended 7140 Diploma in Information and Communications Technology Extended–IS and 7141 Diploma in Information and Communications Technology Extended-HIM must pass LANG 0012 Academic Professional Communication (WSTC Prep) and must pass INFO 0001 Academic Skills for ICT (WSTC Prep) before enrolling in this unit

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

Restrictions Students must be enrolled at Western Sydney University, The College. Students enrolled in Extended Diploma programs must have passed 40 credit points of preparatory subjects in order to enrol in this subject. Students enrolled in the combined Diploma/Bachelor programs listed below must pass all College Preparatory subjects listed in the program structure before progressing to the Year 2 subjects.

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.

Item	Length	Percent	Threshold	Individual/ Group Task
Participation		10	N	
Quiz		15	N	
Practical Exam		20	N	
Quiz		5	N	
End-of-session Exam		50	N	

Teaching Periods

Block A Session

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=COMP2006_22-BA_ON_O#subjects)

Term 1

Nirimba Education Precinct
Day
Subject Contact Buddhima De Silva (https://directory.westernsydney.edu.au/search/name/Buddhima De Silva/)

View timetable (https://classregistration.westernsydney.edu.au/even/
timetable/?subject_code=COMP2006_22-T1_BL_D#subjects)

Term 3
Nirimba Education Precinct
Day
Subject Contact Buddhima De Silva (https://
directory.westernsydney.edu.au/search/name/Buddhima De Silva/)

View timetable (https://classregistration.westernsydney.edu.au/even/
timetable/?subject_code=COMP2006_22-T3_BL_D#subjects)