

COMP 3007 COMPUTER NETWORKS AND INTERNETS

Credit Points 10

Legacy Code 300095

Coordinator Nabil Giweli ([https://directory.westernsydney.edu.au/search/name/Nabil Giweli/](https://directory.westernsydney.edu.au/search/name/Nabil%20Giweli/))

Description This subject extends on the work undertaken in the prerequisite unit, Computer Networking, and provides students with an in-depth understanding of the role of switching technologies and router operations that support small to medium business networks. It includes wireless local area networks (WLANs) and security concepts. Students will also learn key switching and routing concepts allowing them to perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. This is the second of three subjects that prepares the student 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 3 subject

Pre-requisite(s) COMP 2004 OR COMP 2005

Assumed Knowledge

Fundamentals of data communications and computer networking, such as that covered in the prerequisite subject.

Learning Outcomes

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

1. Configure and manage switches, routers and wireless access points with various connectivity and security requirements
2. Use the network configuration skills to build networks from routers and switches to meet specified features and services.
3. Identify the requirements of implementing LAN and WLAN networks with various protocols for supporting security, availability, and redundancy.
4. Design and troubleshoot IPv4/IPv6 dynamic addressing and static routing on routers for small to medium networks.
5. Describe the operations of routers, switches and WLC.

Subject Content

- Switching, Routing and Wireless Essentials
- Switching Concepts & VLANs & Inter-VLAN Routing
- Redundant Networks
- Available and Reliable Networks
- Layer 2 Security and WLANs
- Routing Concepts & Configuration

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
Practical	2 hours (per week)	20	N	Both (Individual & Group)
Practical Exam	45 minutes	20	N	Both (Individual & Group)
Intra-session Exam	1 hour	10	N	Individual
Final Exam	2 hours	50	N	Individual

Prescribed Texts

- None.

Teaching Periods

Autumn (2022)

Campbelltown

Day

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View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3007_22-AUT_CA_D#subjects)

Penrith (Kingswood)

Day

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Parramatta - Victoria Rd

Day

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Sydney City Campus - Term 2 (2022)

Sydney City

Day

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Sydney City Campus - Term 3 (2022)

Sydney City

Day

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Autumn (2023)

Campbelltown

On-site

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Penrith (Kingswood)

On-site

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Sydney City Campus - Term 2 (2023)

Sydney City

On-site

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