COMP 7013 NETWORK TECHNOLOGIES

Credit Points 10

Legacy Code 300695

Coordinator Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

Description Computer networking is one of the fastest growing technologies of our time. The Internet interconnects billions of computers providing many new exciting opportunities and challenges. The Internet and the World Wide Web have provided the communication and infrastructure needed for global collaboration and information exchange. As a result of the rapid growth of networked systems and the diverse applications that run on them, success in many professions depends on a sound understanding of the technologies underlying these systems and applications. This subject explores these issues and provides the students with such an understanding. It covers the principles and current practices pertinent to computer networking and communications. It describes some of the important technologies and devices used in modern networks for information distribution and data sharing. The subject helps the students to understand important models, protocols and standards in networking and internetworking.

School Computer, Data & Math Sciences

Discipline Networks and Communications

Student Contribution Band HECS Band 2 10cp

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

Level Postgraduate Coursework Level 7 subject

Equivalent Subjects LGYA 5883 - Network Technology and Data Communications

Restrictions

Students must be enrolled in a Postgraduate program.

Assumed Knowledge

The students should be familiar with the fundamentals of computer architecture and programming principles. They 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. Evaluate and analyse the primary concepts of networking and internetworking.
2. Evaluate the significance of the OSI and TCP/IP models and analyse the operation of their relevant protocol stacks for communications and networking.
3. Evaluate the functions of important communication devices such as, repeaters, bridges, routers, switches and gateways, create various types of network configurations and analyse their performance.
4. Analyse the operation of the major protocols used in local area and wide area networks including network security associated algorithms, applications and devices.
5. Analyse the Internet architecture and internetworking technologies, and create research reports on data communications, computer networking and internetworking technologies.

Subject Content

Overview of Networking Technologies
The Internet and TCP/IP Protocol Suite
Network Applications and Application Level Protocols
Local Area Networks
Internetworking and Routing Protocols
Fundamentals of Network Management
Fundamentals of Network Security
Emerging Network Technologies
Fundamentals of Wireless Networking and Mobile Computing
Fundamentals of Multimedia Networking
Practical aspects of basic LAN and WAN devices

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	15 minutes per practical	20	N	Individual
Professional Task	60 minutes	30	N	Both (Individual & Group)
Case Study	Approximately 3,000 words for two students	25	N	Group
Intra-session Exam	60 minutes	25	N	Individual

Teaching Periods

Autumn (2024)

Melbourne

On-site

Subject Contact Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-AUT_MB_1#subjects)

Parramatta - Victoria Rd

On-site

Subject Contact Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-AUT_PS_1#subjects)

Sydney City Campus - Term 1 (2024)

Sydney City

On-site

Subject Contact Mahsa Razavi (https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-SC1_SC_1#subjects)

Spring (2024)

Melbourne

On-site

Subject Contact Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-SPR_MB_1#subjects)

Parramatta - Victoria Rd

On-site

Subject Contact Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-SPR_PS_1#subjects)

Sydney City Campus - Term 3 (2024)

Sydney City

On-site

Subject Contact Mahsa Razavi (https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7013_24-SC3_SC_1#subjects)