COMP 3025 WIRELESS AND MOBILE NETWORKS

Credit Points 10

Legacy Code 300952

Coordinator Nabil Giweli (https://directory.westernsydney.edu.au/search/name/Nabil Giweli/)

Description This subject helps the students gain in depth knowledge in the core concepts and principles in the areas of wireless and cellular networks. It provides them with the technical skills needed to do requirement analysis and evaluate a range of wireless networked systems to plan their institution or expansion. The subject covers the communication characteristics and architecture of wireless systems along with various types of wireless networks, including wireless LANs, personal area networks, sensor networks, mesh networks, and broadband wireless networks. Given the widespread use of mobile phones and devices, a substantial part of the subject is devoted to the study of cellular networks. The subject also covers mobility management and wireless security issues and solutions. Upon completion of this subject, the students will have the capabilities needed for long term and independent learning in the rapidly evolving area of wireless and mobile networking.

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 Undergraduate Level 3 subject

Pre-requisite(s) COMP 2004 OR COMP 2005

Equivalent Subjects LGYA 5741 - Broadband Networking

Learning Outcomes

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

1. Demonstrate an in-depth knowledge of characteristics and architecture of wireless and mobile networks
2. Describe, analyse, and manage the principle applications of wireless and mobile networks
3. Demonstrate a broad understanding of concepts and technologies relevant to wireless and mobile networks
4. Explain relevant industry standards
5. Demonstrate technical skills needed for managing mobility
6. Demonstrate creative skills to plan institution or expansion of wireless and mobile networks
7. Describe security issues in wireless and mobile networks and identify their remedies
8. Demonstrate capabilities for independent learning of evolving concepts in wireless and mobile networking and for communicating those concepts clearly

Subject Content

Overview of Enabling Technologies
Wireless and Mobile Communications and Networking Characteristics and Architecture
IEEE 802.11: Wireless LANs
Cellular Networks and Their Evolutions
IEEE 802.16: Wireless Broadband Access (WiMAX)
Mobility Management
Wireless Mesh Networks
Personal Area Networks
Wireless Sensor Networks
Security of Wireless and Mobile Networks

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	Mandatory
Quiz	8 short quizzes (less than 10 minutes each) or practical exercises during the lab sessions	25	N	Individual	Y
Intra-session Exam	30 minutes	25	N	Individual	Y
Final Exam	One hour	50	N	Individual	Y

Teaching Periods

Autumn (2025)

Penrith (Kingswood)
On-site
Subject Contact Nabil Giweli (https://directory.westernsydney.edu.au/search/name/Nabil Giweli/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3025_25-AUT_KW_1#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Nabil Giweli (https://directory.westernsydney.edu.au/search/name/Nabil Giweli/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3025_25-AUT_PS_1#subjects)

Sydney City Campus - Term 2 (2025)

Sydney City
On-site
Subject Contact Antoinette Cevenini (https://directory.westernsydney.edu.au/search/name/Antoinette Cevenini/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3025_25-SC2_SC_1#subjects)