

# COMP 7017 WIRELESS NETWORKING

**Credit Points** 10

**Legacy Code** 300389

**Coordinator** Seyed Shahrestani ([https://directory.westernsydney.edu.au/search/name/Seyed Shahrestani/](https://directory.westernsydney.edu.au/search/name/Seyed%20Shahrestani/))

**Description** Wireless technologies are amongst the most exciting and rapidly growing areas in computing and information technology. They implement applications that profoundly impact our personal way of communication, as well as how business in a variety of industries and organisations are conducted. This unit goes into details of such issues. It discusses wireless networking technologies and their related applications. The main features of wireless and mobile communication systems and the networked services that are based on these systems are also presented. The unit provides students with an in-depth understanding of relevant protocols, the emerging standards and standard organisations. The students are also introduced to some of the relevant current key research issues of the field.

**School** Computer, Data & Math Sciences

**Discipline** Networks and Communications

**Student Contribution Band** HECS Band 2 10cp

**Level** Postgraduate Coursework Level 7 subject

## Restrictions

Students must be enrolled in a postgraduate program offered by the School of Computer, Data and mathematical Sciences.

## Assumed Knowledge

Students should be familiar with the fundamentals of computer networking and data communications. In particular, they should have a good understanding of the OSI model, the Internet protocol suite and current internet and networking technologies equivalent to satisfactory completion of an introductory networking subject at the undergraduate level such as 300086 offered at Western Sydney University or one year professional experience in networking.

The subject is at an advanced level and students would not be able to complete the subject successfully unless they have a good understanding of fundamental issues in computer networking, Internet protocol suite and Internet technologies.

## Learning Outcomes

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

1. Explain advantages, the current use, and applications of major wireless technologies
2. Compare and contrast wireless and wired networks
3. Discuss the current wireless and mobile networking technologies
4. Explain various relevant industry standards and discuss their distinctions
5. Explain security features of wireless and mobile networks
6. Discuss the challenges in wireless networking
7. Discuss the emerging wireless networking technologies
8. Evaluate the performance of modern wireless networks
9. Explain key research issues in wireless networking and mobile computing

## Subject Content

Overview of Networking and Enabling Technologies  
 Wireless Communication Technology  
 Cellular Wireless Networks  
 Cordless Systems  
 Narrowband and Broadband Fixed Wireless Access  
 Wireless LAN Technology  
 IEEE 802.11 Networks  
 Universal Short-range Wireless Standards  
 Mobile Networking  
 Wireless Application Protocol (WAP)  
 Research in Wireless Networking

## 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
Quiz	10 minutes each	20	N	Individual
Report	Report 10 pages long, presentations 15 - 20 minutes	30	N	Group
Intra-session Exam	two hours	50	N	Individual

Teaching Periods

## Spring

### Parramatta - Victoria Rd

#### Day

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