

# COMP 7008 INTERNET OF THINGS

**Credit Points** 10

**Legacy Code** 301175

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

**Description** The Internet of Things (IoT) is drastically changing the way organisations operate and how individuals interact with the world. IoT is an infrastructure consisting of fairly constantly communicating objects, or things, that may be smart and process or act on data. The IoT facilitates detailed and meaningful interactions between humans, digital devices, and many other industrial and household equipment, appliances, and things. The IoT is also the enabler of smart environments, including smart homes, buildings, cities, transport, and healthcare, among many others. This subject discusses IoT technologies and applications in detail. It also introduces the students to trends, challenges, and key research topics in relevant areas.

**School** Computer, Data & Math Sciences

**Discipline** Computer Science, Not Elsewhere Classified.

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

**Level** Postgraduate Coursework Level 7 subject

**Restrictions**

Students must be enrolled in a postgraduate program.

**Assumed Knowledge**

Students should be familiar with the fundamentals of computer networking. In particular, they should have a good understanding of the TCP/IP protocol suite, and current networking and wireless technologies. Therefore, it is strongly advisable that the students must have either taken an appropriate subject in computer networking (e.g., 300695 Network Technologies), or have equivalent knowledge.

## Learning Outcomes

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

1. Demonstrate an in-depth knowledge of the IoT characteristics, trends, and architecture.
2. Explain communication technologies of significant importance in the IoT.
3. Describe the major IoT applications and demonstrate creative skills to plan their establishment or expansion.
4. Describe security and privacy issues in the IoT and identify their remedies.
5. Discuss the emerging trends in the IoT and smart environments.

## Subject Content

Overview of the IoT and enabling technologies

IoT Architecture

Wireless sensor networks

IoT applications

Smart environments

Privacy and security of the IoT

## 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
Quiz	5 minutes each	20	N	Individual
Report	Around 4000 words	20	N	Group
Presentation	10 minutes	10	N	Group
Intra-session Exam	2 hours	50	N	Individual

Teaching Periods

### Autumn (2022)

**Parramatta - Victoria Rd**

**Day**

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

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=COMP7008\\_22-AUT\\_PS\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7008_22-AUT_PS_D#subjects))

### Sydney City Campus - Term 3 (2022)

**Sydney City**

**Day**

**Subject Contact** Mahsa Razavi ([https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/](https://directory.westernsydney.edu.au/search/name/Mahsa%20Razavi/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=COMP7008\\_22-SC3\\_SC\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP7008_22-SC3_SC_D#subjects))

### Autumn (2023)

**Parramatta - Victoria Rd**

**On-site**

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

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=COMP7008\\_23-AUT\\_PS\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP7008_23-AUT_PS_1#subjects))

### Sydney City Campus - Term 3 (2023)

**Sydney City**

**On-site**

**Subject Contact** Mahsa Razavi ([https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/](https://directory.westernsydney.edu.au/search/name/Mahsa%20Razavi/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=COMP7008\\_23-SC3\\_SC\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP7008_23-SC3_SC_1#subjects))