# BLDG 1016 BUILDING SCIENCE (WSTC)

**Credit Points** 10

**Legacy Code** 700308

**Coordinator** Ramin Ebadi (https://directory.westernsydney.edu.au/search/name/Ramin Ebadi/)

**Description** This subject provides students with an introductory overview of the way in which scientific principles impact on the structure, fabric and performance of the built environment. Areas covered will include the concepts of force, energy and work in building structures; properties of common building materials; and significant aspects of heat, light and sound in buildings. All the theoretical content will be contextualised within examples drawn from the construction industry. Students will be able to recognise the critical data required for practical decision-making in the area of building technology.

**School** Eng, Design & Built Env

**Discipline** Building Science and Technology

**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 1 subject

**Equivalent Subjects** BLDG 1013 - Building Science

**Restrictions**

Students must be enrolled at The College. Students in Extended Diploma programs must pass 30 CPs of preparatory subjects in order to enrol in this subject. Students in Integrated Diploma programs must pass or be enrolled in the preparatory subjects in order to enrol in this subject.

## Learning Outcomes

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

1. Describe the ways that forces act on building structures
2. Compare and contrast the properties of common building materials
3. Explain the causes of deterioration in building materials over time and suggest remedies for this deterioration
4. Distinguish the concepts of embodied energy and embodied carbon as they relate to buildings
5. Correlate the concepts of heat, light and sound transmission through building elements with decision making on materials for buildings

## Subject Content

Introduction to scientific concepts as they impact on buildings
Energy, mass, force, velocity and acceleration in building structures
Properties of timber, steel, concrete and other common building materials
Durability and deterioration in building materials
Embodied energy and embodied carbon in building materials and systems
Management and control of heat, light and sound in buildings
Introduction to scientific concepts as they impact on buildings
Energy, mass, force, velocity and acceleration in building structures
Properties of timber, steel, concrete and other common building materials
Durability and deterioration in building materials
Embodied energy and embodied carbon in building materials and systems
Management and control of heat, light and sound in buildings

## 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 | 30 minutes | 10 | N | Individual | N |
| Case Study | 2,500 words | 20 | N | Group | N |
| Quiz | 60 minutes | 30 | N | Individual | N |
| Reflection | 1,500 words | 40 | N | Individual | N |

Teaching Periods

## Term 2 (2025)

### Penrith (Kingswood)

#### On-site

**Subject Contact** Ramin Ebadi (https://directory.westernsydney.edu.au/search/name/Ramin Ebadi/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=BLDG1016_25-T2_KW_1#subjects)