



**UNSW**  
SYDNEY

Australia's  
Global  
University

# Built Environment

BLDG1022  
Building Structures



Course Outline – Term 3, 2020

## Disclaimer

Information within this document is subject to change. The full and most accurate course outline will be available in Moodle closer to the start of the term in which the course is offered.

## 1. COURSE STAFF

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## 2. COURSE DETAILS

<b>Credit Points</b>	6 units of credit (uoc)
<b>Workload</b>	Approx. 150 hours including class contact hours, weekly individual and group online learning activities, readings, class preparation, and assessment activities.
<b>Teaching Times and Location</b>	Find details in timetable <a href="http://www.timetable.unsw.edu.au">http://www.timetable.unsw.edu.au</a>

## Description

The aim of this course is to introduce students to the concepts of structural systems and basic analysis instructions. This course is based on the principals of Structural Mechanics and Statics. It intends to help students understand relevant structural fundamentals and their applications for structural analysis as it applies to beams, columns, and frames. Examples are used to illustrate how structures of various types support vertical and lateral loads, with emphasis on studies of structural failures. This course will help students increase their capacity for analytical and independent critical thinking. This course enables students to develop communication skills using sketching and understanding of technical diagrams, which will enhance their understanding of structural failures. It reflects the view that professional practice within the field requires advanced levels of communication skills.

## Aims

The aims of the course are to:

- a) Provide students with a better understanding of the theory and practice of the structural analysis of buildings;
- b) Introduce students to thinking processes for practical structural failures and problems;
- c) Instruct students how to solve the equilibrium equations and draw free-body diagrams;
- d) Give students opportunities to develop and reflect on graduate attributes such as collaborative and communication skills using sketching and technical diagrams.

## Course Learning Outcomes (CLOs)

At the successful completion of this course, you will be able to:

1. Convert measurement units used in structural mechanics.
2. Describe different structural elements and fundamental concepts of structural analysis.
3. Solve the equilibrium equations and draw free-body diagrams.
4. Develop communication skills using sketching and understanding of technical diagrams.

## 3. ASSESSMENT

Assessment task	Weight	CLOs Assessed
1. Test - Quiz	20%	1, 2, 3
2. Project – Structural analysis project (Individual)	20%	1, 2, 3, 4
3. Examination - Final exam	60%	1, 2, 3, 4

## 4. COURSE IMPROVEMENT AND FEEDBACK

Feedback from students is an integral part of improving courses and teaching approaches. One of the primary mechanisms of feedback is myExperience, which we strongly urge all students to complete at the end of term. Course convenors use the feedback to make ongoing improvements to the course. This is communicated in Moodle in the myFeedback Matters page.