



## UNSW Course Outline

# BLDG1015 Building Measurement 2 - 2024

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## General Course Information

Course Code : BLDG1015

Year : 2024

Term : Term 3

Teaching Period : T3

Is a multi-term course? : No

Faculty : Faculty of Arts, Design and Architecture

Academic Unit : School of Built Environment

Delivery Mode : Multimodal

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

In this course you will extend and enhance your knowledge of building measurement by preparing Bills of Quantities (BOQ). You will also learn about embodied carbon emission calculations as relevant to Construction Management discipline. You will read and interpret

mechanical, electrical and hydraulics drawings and take off quantities to prepare BOQs using industry-based software. The course will provide you with hands-on learning experiences using real world projects to give you the exposure to industry practices.

## Course Aims

- This course aims to;
  - Explain carbon accounting principles
  - Demonstrate the ability to read, understand and interpret construction drawings for commercial scale building projects
  - Apply the knowledge on quantification and measurement and prepare BOQs for building projects
  - Apply the knowledge on carbon accounting and measurement to calculate embodied carbon emissions

## Course Learning Outcomes

Course Learning Outcomes
CLO1 : Identify carbon emissions through a building's lifecycle
CLO2 : Interpret architectural, structural, mechanical, electrical, and hydraulic drawings to measure quantities for major trades in commercial scale building projects
CLO3 : Apply technical skills in takeoff software to complete in measuring trade in commercial scale building projects
CLO4 : Apply carbon accounting knowledge together with measurement data to calculate embodied carbon emissions
CLO5 : Develop Bills of Quantities (BOQ) for major trades in commercial scale building projects

Course Learning Outcomes	Assessment Item
CLO1 : Identify carbon emissions through a building's lifecycle	• Online Quizz
CLO2 : Interpret architectural, structural, mechanical, electrical, and hydraulic drawings to measure quantities for major trades in commercial scale building projects	• Group Assignment • Final Exam • Online Quizz
CLO3 : Apply technical skills in takeoff software to complete in measuring trade in commercial scale building projects	• Group Assignment
CLO4 : Apply carbon accounting knowledge together with measurement data to calculate embodied carbon emissions	• Final Exam • Group Assignment
CLO5 : Develop Bills of Quantities (BOQ) for major trades in commercial scale building projects	• Final Exam • Group Assignment

# Learning and Teaching Technologies

Moodle - Learning Management System

## Learning and Teaching in this course

This course uses Lectures and Tutorials to support your learning. Lectures will be delivered online followed by Tutorials. Tutorials will mainly focus on using the CostX software. Students are encouraged to attend both lectures and tutorials.

## Assessments

### Assessment Structure

Assessment Item	Weight	Relevant Dates
Online Quizz Assessment Format: Individual Short Extension: Yes (3 days)	30%	Start Date: Week 4 Due Date: End of Week 5
Group Assignment Assessment Format: Group	30%	Start Date: Not Applicable Due Date: Week 9
Final Exam Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Not Applicable

## Assessment Details

### Online Quizz

#### Assessment Overview

You will do multiple choices quizzes across the term. Marking will be automatic with results and feedback provided online.

#### Course Learning Outcomes

- CL01 : Identify carbon emissions through a building's lifecycle
- CL02 : Interpret architectural, structural, mechanical, electrical, and hydraulic drawings to measure quantities for major trades in commercial scale building projects

#### Assignment submission Turnitin type

Not Applicable

#### Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are

not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

## Group Assignment

### Assessment Overview

In a small group, you produce a report and Bill of Quantities for a commercial scale building project. You will receive a detailed marking guide with the course outline and feedback will be provided as a group.

### Course Learning Outcomes

- CL02 : Interpret architectural, structural, mechanical, electrical, and hydraulic drawings to measure quantities for major trades in commercial scale building projects
- CL03 : Apply technical skills in takeoff software to complete in measuring trade in commercial scale building projects
- CL04 : Apply carbon accounting knowledge together with measurement data to calculate embodied carbon emissions
- CL05 : Develop Bills of Quantities (BOQ) for major trades in commercial scale building projects

### Assignment submission Turnitin type

Not Applicable

### Generative AI Permission Level

**No Assistance**

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## Final Exam

### Assessment Overview

You will sit for an exam, involving calculations and interpretation of drawings.

### Course Learning Outcomes

- CL02 : Interpret architectural, structural, mechanical, electrical, and hydraulic drawings to measure quantities for major trades in commercial scale building projects
- CL04 : Apply carbon accounting knowledge together with measurement data to calculate embodied carbon emissions

- CLO5 : Develop Bills of Quantities (BOQ) for major trades in commercial scale building projects

**Assignment submission Turnitin type**

Not Applicable

**Generative AI Permission Level**

**No Assistance**

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## **General Assessment Information**

**Grading Basis**

Standard

**Requirements to pass course**

Students are required to obtain minimum of 50 marks to pass this course.

# Course Schedule

Teaching Week/Module	Activity Type	Content
Week 0 : 2 September - 8 September	Other	Go through the Course Outline
Week 1 : 9 September - 15 September	Lecture	Introduction to Course
	Tutorial	You are required to self study and update knowledge on CostX and Measurement rules discussed in BLDG 1014. There will be no scheduled Tutorials on Week 1.
Week 2 : 16 September - 22 September	Lecture	Introduction to BOQ preparation BOQ preparation using CostX
	Tutorial	BOQ preparation using CostX
Week 3 : 23 September - 29 September	Lecture	BOQ preparation : Concrete
	Tutorial	BOQ for Concrete
Week 4 : 30 September - 6 October	Lecture	BOQ preparation : Electrical Installation
	Tutorial	BOQ for Concrete (Contd.) Introduction to Electrical Drawings
Week 5 : 7 October - 13 October	Lecture	BOQ preparation : External Works
	Tutorial	BOQ for Electrical installation
Week 6 : 14 October - 20 October	Other	Break
Week 7 : 21 October - 27 October	Lecture	Measurement and Quantity Surveying - Guest lectures
	Tutorial	BOQ for Electrical installation (Contd.)
Week 8 : 28 October - 3 November	Lecture	Introduction to Embodied Carbon
	Tutorial	BOQ for External Works
Week 9 : 4 November - 10 November	Lecture	Embodied Carbon Calculations and Mitigation strategies
	Tutorial	Assessment Support
Week 10 : 11 November - 17 November	Lecture	Revision and Final Exam Tips
	Tutorial	Revision

## Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

## Course Resources

### Recommended Resources

Australian and New Zealand standard method of measurement of building works (2nd edition.). (2022). The Australian Institute of Quantity Surveyors Ltd. and New Zealand Institute of Quantity Surveyors (INC)

## Additional Costs

Students have the option to purchase and install CostX education version on their personal computers. CostX software is installed in Anita B. Lawrence Centre computer labs. Purchasing the software is optional. For further details, please refer to Week 1 Lecture slides.

# Course Evaluation and Development

We encourage and support students to maintain regular contact with the course convenor to provide informal feedback throughout the course. For specific issues or detailed feedback, please arrange a meeting with the course convenor via email.

In this course there is an option for students to provide anonymous feedback via the course's Moodle page, which is directly sent to the convenor. As a final step, students are invited to share their insights and experiences by completing the MyExperience survey. The feedback gathered each year is integral to the continuous enhancement and development of the course.

## Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Ivy Blackman		ABL H13		By appointment – organise via email, online meeting via Microsoft Teams	Yes	Yes

## Other Useful Information

### Academic Information

For essential student information relating to:

- UNSW and Faculty policies and procedures;
- Student Support Services;
- Student equity and disability;
- Special Consideration in the event of illness or misadventure;
- Examination information;
- Review of results;

Please see: <https://www.unsw.edu.au/arts-design-architecture/student-life/resources-support/protocols-guidelines>

### Academic Honesty and Plagiarism

Plagiarism is using the words or ideas of others and presenting them as your own. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement.

UNSW groups plagiarism into the following categories:

- Copying: Using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This includes copying materials, ideas or concepts from a book, article, report or other written document, presentation, composition, artwork, design, drawing, circuitry, computer program or software, website, internet, other electronic resource, or another person's assignment without appropriate acknowledgement.
- Inappropriate paraphrasing: Changing a few words and phrases while mostly retaining the original information, structure and/or progression of ideas of the original without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit and to piecing together quotes and paraphrases into a new whole, without appropriate referencing.
- Collusion: Working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student for the purpose of them plagiarising, paying another person to perform an academic task, stealing or acquiring another person's academic work and copying it, offering to complete another person's work or seeking payment for completing academic work.
- Inappropriate citation: Citing sources which have not been read, without acknowledging the "secondary" source from which knowledge of them has been obtained.
- Duplication ("self-plagiarism"): Submitting your own work, in whole or in part, where it has previously been prepared or submitted for another assessment or course at UNSW or another university.

The UNSW Academic Skills support offers resources and individual consultations. Students are also reminded that careful time management is an important part of study. One of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and proper referencing of sources in preparing all assessment items. UNSW Library has the ELISE tool available to assist you with your study at UNSW. ELISE is designed to introduce new students to studying at UNSW, but it can also be a great refresher during your study.

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW
- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

## Use of AI for assessments

As AI applications continue to develop, and technology rapidly progresses around us, we remain committed to our values around academic integrity at UNSW. Where the use of AI tools, such as ChatGPT, has been permitted by your course convener, they must be properly credited and your submissions must be substantially your own work.

In cases where the use of AI has been prohibited, please respect this and be aware that where unauthorised use is detected, penalties will apply.

[Use of AI for assessments | UNSW Current Students](#)

## Submission of Assessment Tasks

Assessment tasks must be submitted electronically via either Turnitin or a Moodle assignment. In instances where this is not possible, alternative submission details will be stated on your course's Moodle site. For information on how to submit assignments online via Moodle: <https://student.unsw.edu.au/how-submit-assignment-moodle>

## Late Submission Penalty

UNSW has a standard late submission penalty of:

- 5% per calendar day,
- for all assessments where a penalty applies,
- capped at five calendar days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request [Special Consideration](#) as early as possible before the deadline. Support with [Time Management is available here](#).

**Important note:** UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

## School Contact Information

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