BLCN29003 *Construction Measurement*
Term 1 - 2023

Profile information current as at 12/10/2024 02:35 pm

All details in this unit profile for BLCN29003 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student).The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

Construction Measurement is the measurement and quantification for cost planning and documentation of building works and associated civil engineering works. In this unit, you will learn how to measure, quantify and cost construction work including civil engineering works associated with buildings. You will be referring to Australian Standard Method of Measurement (ASMM) of Building Works as a uniform basis for the measurement of building works. With the comprehensive knowledge of measurement, you will then gain in-depth knowledge of unit rate estimating and project pricing associated with the acquisition of materials and labour on building and construction sites. Having fundamental knowledge, you will then be directed to software to perform 2D and 3D electronic measurement and estimating associated with Computer Aided Design (CAD). You will be introduced to architectural and project coordination software to signify the integral part of cost planning in a construction project.

Details

Career Level: *Postgraduate*
Unit Level: *Level 9*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

Prerequisite: Construction Technology
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 1 - 2023

- Brisbane
- Perth

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Postgraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Written Assessment**
Weighting: 25%
2. **Laboratory/Practical**
Weighting: 40%
3. **Case Study**
Weighting: 35%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from N/A

Feedback

No previous feedback provided as this was the first time this unit was conducted.

Recommendation

The tutorials will be conducted using a tablet, notebook of similar. This student comment was provided through the "SUTE UNIT COMMENTS"

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Critically analyse and describe the standard method of measurement for various building components
2. Evaluate construction measurement and estimate software to select the most appropriate package for a given construction type
3. Reflect, critically evaluate and integrate technology and measurement to cost construction projects.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level | • Introductory Level | • Intermediate Level | • Graduate Level | ∘ Professional Level | ∘ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Written Assessment - 25%	•		
2 - Laboratory/Practical - 40%		•	•
3 - Case Study - 35%		•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
1 - Knowledge	∘		
2 - Communication			
3 - Cognitive, technical and creative skills		∘	
4 - Research			∘

Graduate Attributes	Learning Outcomes		
	1	2	3
5 - Self-management			◦
6 - Ethical and Professional Responsibility			
7 - Leadership			
8 - Aboriginal and Torres Strait Islander Cultures			

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes							
	1	2	3	4	5	6	7	8
1 - Written Assessment - 25%	◦							
2 - Laboratory/Practical - 40%	◦		◦					
3 - Case Study - 35%			◦	◦				

Textbooks and Resources

Textbooks

BLCN29003

Prescribed

Australian and New Zealand Standard Method of Measurement of Building Works (ANZSMM)
(2018)
Authors: Australian Institute of Quantity Surveyors
Australian Institute of Quantity Surveyors
AIQS - Phone +61 2 8234 4000 Address Suite 303, Level 3, 70 Pitt Street, Sydney , Sydney , Australia
Binding: Hardcover

Additional Textbook Information

Purchase copies from AIQS

Phone

+61 2 8234 4000

Address

Suite 303, Level 3, 70 Pitt Street, Sydney, New South Wales, Australia 2000

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Microsoft Office or equivalent software
- Microphone and headset (and preferably a camera) to participate in Zoom sessions

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Ronald Webber Unit Coordinator
r.webber@cqu.edu.au

Schedule

Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 1: Introduction to measurement, estimating and taking-off basics		

Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 2: Apply the principles and logic of the AUSTRALIAN STANDARD METHOD of MEASUREMENT (ASMM) to inform measurement and estimation (Measurement of Groundwork will be covered here)		

Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 3: Measurement of Concrete and Formwork		

Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 4: Measurement of Reinforcement, Brick Work and Block Work		

Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 5: Measurement of Finishes, Painting, Suspended Ceiling, and Roofing		**Assessment 1** Due: Week 5 Monday (3 Apr 2023) 11:45 pm AEST

Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
No classes. Enjoy the break!		

Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 6: Measurement of Doors, Windows, Glazing and Hardware		

Week 7 - 24 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 7: Types of Estimates, General Pricing and Pricing of Construction Equipment		Assignment hand in date

Week 8 - 01 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 8: Pricing of 'Excavation and Backfill' and 'Concrete Work'		

Week 9 - 08 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 9: Pricing Masonry, Carpentry and Finishes Work		**Assessment 2** Due: Week 9 Friday (12 May 2023) 11:45 pm AEST

Week 10 - 15 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 10: Pricing of Formwork, Reinforcement Steel, Subcontractors' Work and General Expenses		Assignment hand in date

Week 11 - 22 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 11: Closing the Bid and Lifecycle Costing		

Week 12 - 29 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Topic 12: Budget Estimate and Value Analysis		**Assessment 3** Due: Week 12 Friday (2 June 2023) 11:45 pm AEST

Review/Exam Week - 05 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
		Assignment hand in date

Exam Week - 12 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Assessment 1

Assessment Type
Written Assessment

Task Description
In this assignment, you will be referred to a proposed building construction project. Based on the given set of architectural and engineering drawings, you will asked to write a report covering all construction areas/ break down of trades, required for quantity take-off. When preparing your submission, it is important to follow the marking sheet and marking rubrics given. As with all assessments, formatting and presentation is really important, technical accuracy and referencing where required is paramount with an overarching requirement for demonstrating your answer / submission / design with clarity. Your submission must be done, via the assessment link in Moodle, by uploading your file, following the on-screen instructions. Your work will be processed through the similarity detection software, Turnitin. You may amend your work based on the detection report, prior to finalising the upload.

Assessment Due Date
Week 5 Monday (3 Apr 2023) 11:45 pm AEST

Before or on the nominated due date, upload your work following the on-screen instructions via the assessment portal on the Moodle home page.

Return Date to Students
Week 6 Monday (17 Apr 2023)

Review of the assessment will be returned within two weeks of the submission due date.

Weighting
25%

Assessment Criteria
The assessment will be assessed on the following basis:

- Clarity of expression and comprehensive coverage of issues;
- Use of quality supporting documentation as appropriate;
- Use of original thought and content;
- Overall presentation and ability to communicate using correct spelling, grammar and punctuation and the use of appropriate diagrams and other visual communication; and
- Demonstration of core knowledge and demonstration of appropriate application of knowledge.

Marks will be allocated as specified in the assignment brief in the 'Assessment' block in the unit Moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submission via Moodle portal

assessmentOutcome

- Critically analyse and describe the standard method of measurement for various building components

assessmentGradAttribute

- Knowledge

2 Assessment 2

Assessment Type
Laboratory/Practical

Task Description
In this assignment task, you will be given a number of practical questions of quantity surveying and estimating. You need to come across with the solutions providing calculations, using an appropriate software (including Microsoft Excel). it is important to follow the marking sheet and marking rubrics given when designing the responses.

Assessment Due Date
Week 9 Friday (12 May 2023) 11:45 pm AEST

Before or on the nominated due date, upload your work following the on-screen instructions via the assessment portal on the Moodle home page.

Return Date to Students
Week 11 Friday (26 May 2023)

Review of the assessment will be returned within two weeks of the submission due date.

Weighting
40%

Assessment Criteria
The assessment will be assessed on the following basis:

- Clarity of expression and comprehensive coverage of issues;
- Use of quality supporting documentation as appropriate;
- Use of original thought and content;
- Overall presentation and ability to communicate using correct spelling, grammar and punctuation and the use of appropriate diagrams and other visual communication; and
- Demonstration of core knowledge and demonstration of appropriate application of knowledge.

Marks will be allocated as specified in the assignment brief in the 'Assessment' block in the unit Moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submission via Moodle portal

assessmentOutcome

- Evaluate construction measurement and estimate software to select the most appropriate package for a given construction type
- Reflect, critically evaluate and integrate technology and measurement to cost construction projects.

assessmentGradAttribute

- Knowledge
- Cognitive, technical and creative skills

3 Assessment 3

Assessment Type
Case Study

Task Description
Based on your report in Assessment task 1 (A1) previously, you will be directed by this assessment task (A3) to take-off quantities up to a particular level of the building construction. The next step of this task is to develop an estimation report utilizing the quantities previously obtained and other required details such as labour rates, material prices. Your estimation should be planned separately for trades and their sum to produce the total cost of the project. When preparing your submission, it is important to follow the marking sheet and marking rubrics given. As with all assessments, formatting and presentation is really important, technical accuracy and referencing where required is paramount with an overarching requirement for demonstrating your answer / submission / design with clarity. Your submission must be done, via the assessment link in Moodle, by uploading your file, following the on-screen instructions. Your work will be processed through the similarity detection software, Turnitin. You may amend your work based on the detection report, prior to finalising the upload.

Assessment Due Date
Week 12 Friday (2 June 2023) 11:45 pm AEST

Before or on the nominated due date, upload your work following the on-screen instructions via the assessment portal on the Moodle home page.

Return Date to Students
Exam Week Monday (12 June 2023)

Within two weeks of submission due date but before the certification of grades.

Weighting
35%

Assessment Criteria
The assessment will be assessed on the following basis:

- Clarity of expression and comprehensive coverage of issues;
- Use of quality supporting documentation as appropriate;
- Use of original thought and content;
- Overall presentation and ability to communicate using correct spelling, grammar and punctuation and the use of appropriate diagrams and other visual communication; and
- Demonstration of core knowledge and demonstration of appropriate application of knowledge.

Marks will be allocated as specified in the assignment brief in the 'Assessment' block in the unit Moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submission via Moodle portal

assessmentOutcome

- Evaluate construction measurement and estimate software to select the most appropriate package for a given construction type
- Reflect, critically evaluate and integrate technology and measurement to cost construction projects.

assessmentGradAttribute

- Cognitive, technical and creative skills
- Research

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem