



# BLAR14018 *Building Modelling Systems*

## Term 3 - 2023

Profile information current as at 07/05/2024 02:10 am

All details in this unit profile for BLAR14018 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

In this unit, you will learn about processes and systems of data and information management and the rise of tools and techniques such as Building Information Modelling (BIM) as a lifecycle strategy for project procurement and operations. Current issues surrounding the use of BIM are discussed. Students who have successfully completed BLCN12020 or BLSV14014 should not enrol in this unit.

#### Details

Career Level: *Undergraduate*

Unit Level: *Level 4*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

Pre-requisite Condition: Successfully completed 108 credit points in the Building Surveying (Honours) or Construction Management (Honours) unit. Students who have successfully completed BLCN12020 or BLSV14014 should not enrol in this unit.

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 3 - 2023

- Online

#### 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 Undergraduate 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. **Online Quiz(zes)**

Weighting: 10%

#### 2. **Presentation and Written Assessment**

Weighting: 30%

#### 3. **Presentation and Written Assessment**

Weighting: 30%

#### 4. **Written Assessment**

Weighting: 30%

### 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 Unit evaluation

##### Feedback

Really appreciate the way the unit was set up as well as the use of Archistar, it made learning Revit much better and useful

##### Recommendation

The unit delivery will not be changed and the Archistar platform will still be used.

## Unit Learning Outcomes

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

1. Propose processes and systems of data and information management
2. Evaluate Building Information Modelling (BIM) as a lifecycle strategy for project procurement
3. Discuss current issues surrounding the use of BIM.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Online Quiz(zes) - 10%	•	•	•
2 - Presentation and Written Assessment - 30%		•	
3 - Presentation and Written Assessment - 30%			•
4 - Written Assessment - 30%	•		

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
1 - Communication	•	•	•
2 - Problem Solving	•	•	•
3 - Critical Thinking	•	•	•

Graduate Attributes	Learning Outcomes		
	1	2	3
4 - Information Literacy	•	•	•
5 - Team Work			
6 - Information Technology Competence	•	•	•
7 - Cross Cultural Competence			
8 - Ethical practice			
9 - Social Innovation			
10 - 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	9	10
1 - Online Quiz(zes) - 10%	•	•		•		•				
2 - Presentation and Written Assessment - 30%	•	•	•	•		•				
3 - Presentation and Written Assessment - 30%	•	•	•	•		•				
4 - Written Assessment - 30%	•	•	•	•		•				

## Textbooks and Resources

### Textbooks

There are no required textbooks.

### IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Revit with educational license
- ArchiStar is recommended (free access provided by CQU - contact the Unit Coordinator if you don't have access yet)

## Referencing Style

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

## Teaching Contacts

**Bill Zhao** Unit Coordinator  
[b.zhao@cqu.edu.au](mailto:b.zhao@cqu.edu.au)

## Schedule

### Week 1 - 06 Nov 2023

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Building Information Modelling		

### Week 2 - 13 Nov 2023

Module/Topic	Chapter	Events and Submissions/Topic
Creating simple BIM models - Part I		

### Week 3 - 20 Nov 2023

Module/Topic	Chapter	Events and Submissions/Topic
Creating simple BIM models - Part II		

### Week 4 - 27 Nov 2023

Module/Topic	Chapter	Events and Submissions/Topic
Phasing		<b>Online Quiz(zes)</b> Due: Week 4 Friday (1 Dec 2023) 11:45 pm AEST

### Vacation Week - 04 Dec 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 5 - 11 Dec 2023

Module/Topic	Chapter	Events and Submissions/Topic
Environmental analysis in BIM		<b>Design Assessment</b> Due: Week 5 Friday (15 Dec 2023) 11:45 pm AEST

### Week 6 - 18 Dec 2023

Module/Topic	Chapter	Events and Submissions/Topic
BIM Standards and IFC		

### Vacation Week - 25 Dec 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 7 - 01 Jan 2024

Module/Topic	Chapter	Events and Submissions/Topic
Revision		

### Week 8 - 08 Jan 2024

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Navisworks		

### Week 9 - 15 Jan 2024

Module/Topic	Chapter	Events and Submissions/Topic
4D BIM		<b>Written Assessment</b> Due: Week 9 Friday (19 Jan 2024) 11:45 pm AEST

### Week 10 - 22 Jan 2024

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to iConstruct		

## Week 11 - 29 Jan 2024

Module/Topic	Chapter	Events and Submissions/Topic
Data auditing and clash management		

## Week 12 - 05 Feb 2024

Module/Topic	Chapter	Events and Submissions/Topic
Revision		

## Exam Week - 12 Feb 2024

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Written Assessment</b> Due: Exam Week Tuesday (13 Feb 2024) 11:45 pm AEST

## Assessment Tasks

### 1 Online Quiz(zes)

#### Assessment Type

Online Quiz(zes)

#### Task Description

This is an online quiz which includes 20 questions. The questions are based on the information from lectures of Week 1 to Week 3. The quiz is an open-book quiz. There is 40 min time limit on this quiz.

#### Number of Quizzes

1

#### Frequency of Quizzes

Other

#### Assessment Due Date

Week 4 Friday (1 Dec 2023) 11:45 pm AEST

#### Return Date to Students

Week 5 Monday (11 Dec 2023)

#### Weighting

10%

#### Assessment Criteria

It is automatically marked by the system.

#### Referencing Style

- [Harvard \(author-date\)](#)

#### Submission

Online

#### Learning Outcomes Assessed

- Propose processes and systems of data and information management
- Evaluate Building Information Modelling (BIM) as a lifecycle strategy for project procurement
- Discuss current issues surrounding the use of BIM.

#### Graduate Attributes

- Communication
- Problem Solving
- Information Literacy
- Information Technology Competence

### 2 Design Assessment

#### Assessment Type

Presentation and Written Assessment

**Task Description**

Assignment 2's focus is to give the student a general knowledge of Autodesk's Revit software. Using the knowledge obtained in the lectures and tutorials in Week 2 and Week 3, the student is required to construct a sample building using what he/she has learned. This is an individual coursework assignment. You are required to submit a BIM model using Revit.

**Assessment Due Date**

Week 5 Friday (15 Dec 2023) 11:45 pm AEST

**Return Date to Students**

Week 6 Friday (22 Dec 2023)

**Weighting**

30%

**Assessment Criteria**

The assignment will be assessed based on the following value: Revit model (25) and Description of design specifics (5).

The assessment will be assessed on the following criteria:

I Clarity and succinctness of expression.

I Adequate coverage of topics discussed.

I Use of supporting information where appropriate and associated references.

I Original thought.

I Overall presentation and the ability to communicate using correct spelling, grammar and punctuation.

I Where appropriate the use of graphs, illustrations and other diagrams that visually support the context of your submission.

I Demonstration of the core knowledge associated with this course and appropriate application of this knowledge.

**Referencing Style**

- [Harvard \(author-date\)](#)

**Submission**

Online

**Learning Outcomes Assessed**

- Evaluate Building Information Modelling (BIM) as a lifecycle strategy for project procurement

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

### 3 Written Assessment

**Assessment Type**

Presentation and Written Assessment

**Task Description**

Assignment 3's focus is to give the student a general knowledge of Autodesk's Revit Tally. Using the knowledge obtained in the lectures and tutorials in Week 5: Environmental analysis in BIM, the student is required to conduct an environmental analysis based on the model he/she has constructed in Assignment 2.

**Assessment Due Date**

Week 9 Friday (19 Jan 2024) 11:45 pm AEST

**Return Date to Students**

Week 10 Friday (26 Jan 2024)

**Weighting**

30%

**Assessment Criteria**

The assignment will be assessed based on the following value: Tally report (20) and Description of material specifics and summary of the environmental analysis (10). The assessment will be assessed on the following criteria:

- | Clarity and succinctness of expression.
- | Adequate coverage of topics discussed.
- | Use of supporting information where appropriate and associated references.
- | Original thought.
- | Overall presentation and the ability to communicate using correct spelling, grammar and punctuation.
- | Where appropriate the use of graphs, illustrations and other diagrams that visually support the context of your submission.
- | Demonstration of the core knowledge associated with this course and appropriate application of this knowledge.

**Referencing Style**

- [Harvard \(author-date\)](#)

**Submission**

Online

**Learning Outcomes Assessed**

- Discuss current issues surrounding the use of BIM.

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

## 4 Written Assessment

**Assessment Type**

Written Assessment

**Task Description**

Assignment 4's focus is to give the student a general knowledge of the current implementation of BIM in Australia. The students are required to conduct their own research on: The benefits of using BIM in the Australian construction industry□The current implementation status of BIM in the Australian construction industry and its comparison with UK and the US□The barriers hindering the implementation of BIM in the Australian construction industry.

You are also required to complete the relevant modules in ArchiStar platform.

**Assessment Due Date**

Exam Week Tuesday (13 Feb 2024) 11:45 pm AEST

**Return Date to Students**

Exam Week Friday (16 Feb 2024)

**Weighting**

30%

**Assessment Criteria**

The assessment will be assessed on the following criteria:

- | Clarity and succinctness of expression.
- | Adequate coverage of topics discussed.



I Use of supporting information where appropriate and associated references.

I Original thought.

I Overall presentation and the ability to communicate using correct spelling, grammar and punctuation.

I Where appropriate the use of graphs, illustrations and other diagrams that visually support the context of your submission.

I Demonstration of the core knowledge associated with this course and appropriate application of this knowledge.

### **Referencing Style**

- [Harvard \(author-date\)](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- Propose processes and systems of data and information management

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

## 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