



# BLAR13044 *Building Systems and Services 2*

## Term 1 - 2023

Profile information current as at 03/05/2024 06:16 pm

All details in this unit profile for BLAR13044 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

The unit provides an introduction to: energy management systems and strategies for non-residential buildings; ventilation Strategies-principles of air-conditioning and ventilation systems including an understanding of flow analysis for natural ventilation; plant and ducting requirements for air conditioning installations; fire services for commercial class buildings under the Building Code of Australia; communications and security systems in non-residential buildings; storage requirements for fuels such as gas and diesel; transportation systems including escalators and moving walkways, lifts (electric and electro-hydraulic) including safety and regulation issues; and building services maintenance and management strategies and procedures. Students will develop an understanding of energy, ventilation and fire safety strategies for commercial class buildings (as designated in the Building Code of Australia). In addition students will be introduced to communications, transportation and services maintenance requirements for buildings. N.B. Students should have completed introductory studies in building services to ensure an adequate level of entry knowledge.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Prereq: BLAR11043 or [BLAR12001 & BLAR12005]

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

- 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. **Written Assessment**

Weighting: 5%

#### 2. **Written Assessment**

Weighting: 20%

#### 3. **Written Assessment**

Weighting: 5%

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

Weighting: 30%

#### 5. **Written Assessment**

Weighting: 5%

#### 6. **Written Assessment**

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 Student feedback both formal and informal

##### Feedback

The minor assessments are only worth a small % but have a hurdle you must pass. There are too many assignments, most units only have 3.

##### Recommendation

The unit will be amended to contain only 3 written assessments with only the third having a hurdle.

## Unit Learning Outcomes

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

1. discuss the concept of Energy Management, the associated economic assessment and the importance of Building Energy Management Systems (BEMS)
2. understand the principles of air conditioning and ventilation systems, flow analysis for natural ventilation and the plant and ducting requirements for air conditioning installations
3. discuss fire detection and alarm systems and fire suppression systems with respect to the relevant codes and standards
4. discuss the basic elements of a communication system and the basic elements of a security system
5. discuss the storage and handling of flammable and combustible liquids and Liquefied Petroleum Gas (LPG)
6. discuss the types, functions and regulations concerning lifts, escalators, and moving walkways
7. discuss the importance of maintenance in terms of function, procedures and operations

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



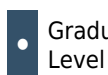
N/A  
Level



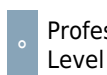
Introductory  
Level



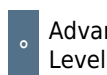
Intermediate  
Level



Graduate  
Level



Professional  
Level



Advanced  
Level

### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes						
	1	2	3	4	5	6	7
1 - Written Assessment - 5%	•	•					
2 - Written Assessment - 20%	•	•					
3 - Written Assessment - 5%		•					
4 - Written Assessment - 30%			•				
5 - Written Assessment - 5%			•		•		
6 - Written Assessment - 35%				•	•	•	•

## Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes						
	1	2	3	4	5	6	7
1 - Communication	•	•	•	•	•	•	•
2 - Problem Solving	•	•	•	•	•	•	•
3 - Critical Thinking	•	•	•	•	•	•	•
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 - Written Assessment - 5%	•	•	•	•		•		•		
2 - Written Assessment - 20%	•	•	•	•	•	•		•		
3 - Written Assessment - 5%	•	•	•	•		•	•	•		
4 - Written Assessment - 30%	•	•	•	•		•		•		
5 - Written Assessment - 5%	•	•	•	•		•		•		
6 - Written Assessment - 35%	•	•	•	•		•		•		

## 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)
- MS Teams

## Referencing Style

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

## Teaching Contacts

**Peter F Lawrence (Engineering)** Unit Coordinator  
[p.lawrence1@cqu.edu.au](mailto:p.lawrence1@cqu.edu.au)

## Schedule

### Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Forum 1</b> Due: Week 2 Friday (17 Mar 2023) 11:00 pm AEST

### Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Written Assignment 1</b> Due: Week 4 Friday (31 Mar 2023) 11:00 pm AEST

### Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Forum 2</b> Due: Week 6 Friday (21 Apr 2023) 11:00 pm AEST

Week 7 - 24 Apr 2023		
Module/Topic	Chapter	Events and Submissions/Topic
Week 8 - 01 May 2023		
Module/Topic	Chapter	Events and Submissions/Topic
		<b>Written Assignment 2</b> Due: Week 8 Friday (5 May 2023) 11:00 pm AEST
Week 9 - 08 May 2023		
Module/Topic	Chapter	Events and Submissions/Topic
Week 10 - 15 May 2023		
Module/Topic	Chapter	Events and Submissions/Topic
		<b>Forum 3</b> Due: Week 10 Friday (19 May 2023) 11:00 pm AEST
Week 11 - 22 May 2023		
Module/Topic	Chapter	Events and Submissions/Topic
Week 12 - 29 May 2023		
Module/Topic	Chapter	Events and Submissions/Topic
		<b>Written Assignment 3</b> Due: Week 12 Friday (2 June 2023) 11:00 pm AEST
Review/Exam Week - 05 Jun 2023		
Module/Topic	Chapter	Events and Submissions/Topic
Exam Week - 12 Jun 2023		
Module/Topic	Chapter	Events and Submissions/Topic

## Assessment Tasks

### 1 Forum 1

#### Assessment Type

Written Assessment

#### Task Description

No Assessment Task Description

#### Assessment Due Date

Week 2 Friday (17 Mar 2023) 11:00 pm AEST

#### Return Date to Students

Week 4 Thursday (30 Mar 2023)

#### Weighting

5%

#### Minimum mark or grade

Aggregate of marks Forum 1+Forum 2+Forum 3 to be 7.5/15 minimum (50%)

#### Assessment Criteria

No Assessment Criteria

#### Referencing Style

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

#### Submission

Online

#### Learning Outcomes Assessed

- discuss the concept of Energy Management, the associated economic assessment and the importance of Building Energy Management Systems (BEMS)
- understand the principles of air conditioning and ventilation systems, flow analysis for natural ventilation and the plant and ducting requirements for air conditioning installations

#### **Graduate Attributes**

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

## **2 Written Assignment 1**

#### **Assessment Type**

Written Assessment

#### **Task Description**

No Assessment Task Description

#### **Assessment Due Date**

Week 4 Friday (31 Mar 2023) 11:00 pm AEST

#### **Return Date to Students**

Vacation Week Thursday (13 Apr 2023)

#### **Weighting**

20%

#### **Assessment Criteria**

No Assessment Criteria

#### **Referencing Style**

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

#### **Submission**

Online

#### **Learning Outcomes Assessed**

- discuss the concept of Energy Management, the associated economic assessment and the importance of Building Energy Management Systems (BEMS)
- understand the principles of air conditioning and ventilation systems, flow analysis for natural ventilation and the plant and ducting requirements for air conditioning installations

#### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Ethical practice

## **3 Forum 2**

#### **Assessment Type**

Written Assessment

#### **Task Description**

No Assessment Task Description

#### **Assessment Due Date**

Week 6 Friday (21 Apr 2023) 11:00 pm AEST

#### **Return Date to Students**

Week 8 Thursday (4 May 2023)

#### **Weighting**

5%

**Minimum mark or grade**

Aggregate of marks Forum 1+Forum 2+Forum 3 to be 7.5/15 minimum (50%)

**Assessment Criteria**

No Assessment Criteria

**Referencing Style**

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

**Submission**

Online

**Learning Outcomes Assessed**

- discuss fire detection and alarm systems and fire suppression systems with respect to the relevant codes and standards
- discuss the storage and handling of flammable and combustible liquids and Liquefied Petroleum Gas (LPG)

**Graduate Attributes**

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

## 4 Written Assignment 2

**Assessment Type**

Written Assessment

**Task Description**

No Assessment Task Description

**Assessment Due Date**

Week 8 Friday (5 May 2023) 11:00 pm AEST

**Return Date to Students**

Week 10 Thursday (18 May 2023)

**Weighting**

30%

**Assessment Criteria**

No Assessment Criteria

**Referencing Style**

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

**Submission**

Online

**Learning Outcomes Assessed**

- discuss fire detection and alarm systems and fire suppression systems with respect to the relevant codes and standards

**Graduate Attributes**

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

## 5 Forum 3

**Assessment Type**

Written Assessment



**Task Description**

No Assessment Task Description

**Assessment Due Date**

Week 10 Friday (19 May 2023) 11:00 pm AEST

**Return Date to Students**

Week 12 Thursday (1 June 2023)

**Weighting**

5%

**Minimum mark or grade**

Aggregate of marks Forum 1+Forum 2+Forum 3 to be 7.5/15 minimum (50%)

**Assessment Criteria**

No Assessment Criteria

**Referencing Style**

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

**Submission**

Online

**Learning Outcomes Assessed**

- understand the principles of air conditioning and ventilation systems, flow analysis for natural ventilation and the plant and ducting requirements for air conditioning installations

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 6 Written Assignment 3

**Assessment Type**

Written Assessment

**Task Description**

No Assessment Task Description

**Assessment Due Date**

Week 12 Friday (2 June 2023) 11:00 pm AEST

**Return Date to Students**

Friday 30 June 2023

**Weighting**

35%

**Minimum mark or grade**

14/35 (40%)

**Assessment Criteria**

No Assessment Criteria

**Referencing Style**

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

**Submission**

Online

**Learning Outcomes Assessed**

- discuss the basic elements of a communication system and the basic elements of a security system
- discuss the storage and handling of flammable and combustible liquids and Liquefied Petroleum Gas (LPG)
- discuss the types, functions and regulations concerning lifts, escalators, and moving walkways

- discuss the importance of maintenance in terms of function, procedures and operations

### **Graduate Attributes**

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

## 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