



COIT11240 *Dashboard Design and Visualisation*

Term 1 - 2020

Profile information current as at 20/05/2024 09:37 pm

All details in this unit profile for COIT11240 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

While organisations can collect a large amount of data about their operations, a continual challenge they face is extracting useful information from that data. Dashboards summarise key information using visualisations and interactive reports. Dashboards are therefore an important tool in supporting decision making in an organisation. In this unit, you will learn how to design dashboards. You will develop skills to condense and encapsulate the characteristics of data, making it easier to analyse trends to drive effective decision-making. You will also learn creative ways to present the insights and findings of data using data visualisation tools and techniques.

Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

There are no requisites for 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 1 - 2020

- Brisbane
- Melbourne
- Online
- Rockhampton
- Sydney

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: 20%

2. **Practical Assessment**

Weighting: 30%

3. **Project (applied)**

Weighting: 30%

4. **Presentation**

Weighting: 20%

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](#).

Unit Learning Outcomes

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

1. Explain the fundamentals of dashboard design and data visualisation
2. Compare different dashboard design and data visualisation tools
3. Explain the application of dashboard design and visualisation in summarising key information
4. Identify the best practices in implementing dashboard design
5. Design and implement a dashboard for a business case.

The Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is adopted by organisations, governments and individuals in many countries and provides a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles. ACS members can use the tool MySFIA (<https://www.acs.org.au/professionalrecognition/mysfia-b2c.html>) to build a skills profile.

This unit contributes to the following workplace skills as defined by SFIA 7 (<https://www.sfia-online.org/en>). The SFIA code is included:

Data Visualisation VISL

Analytics INAN

Business Analysis BUAN

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Online Quiz(zes) - 20%		•		•	
2 - Practical Assessment - 30%	•	•	•		
3 - Project (applied) - 30%	•		•	•	•
4 - Presentation - 20%					•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•		•	•
2 - Problem Solving	•	•		•	•
3 - Critical Thinking	•		•		
4 - Information Literacy	•	•		•	•
5 - Team Work					

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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) - 20%	•	•	•			•				
2 - Practical Assessment - 30%	•	•	•	•		•			•	
3 - Project (applied) - 30%	•	•	•	•		•			•	
4 - Presentation - 20%	•	•		•		•				

Textbooks and Resources

Textbooks

COIT11240

Prescribed

Microsoft Power BI Dashboards Step by Step

Edition: 1 (2018)

Authors: Errin O'Connor

Microsoft Pres

ISBN: 9781509308033

Binding: eBook

COIT11240

Prescribed

The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios

Edition: 1 (2017)

Authors: Steve Wexler; Jeffery Shaffer; Andy Cotgreav

Wiley

ISBN: 1119282713

Binding: Hardcover

Additional Textbook Information

Copies can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[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 Power BI Desktop (Version: 2.53.4954.621 - 64 Bit)
- Tableau-Desktop-64bit-2019-4-1

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Ahsan Morshed Unit Coordinator

a.morshed@cqu.edu.au

Schedule

Week 1 - 10 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Data Visualisation: Introduction to Power BI, architecture and administration

Books 1: Microsoft Power BI Dashboards Errin O'Connor
 Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave.
 Chapter 1 and 2 Book 1

Week 2 - 17 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Dashboard use: Visuals in Power BI and report development	Books 1: Microsoft Power BI Dashboards Errin O'Connor Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave. Chapter 3 and 4 Book 1	

Week 3 - 24 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Designs of Executives Sales Dashboards and Report generation using Power BI	Books 1: Microsoft Power BI Dashboards Errin O'Connor Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave Chapter 5 and URO Book 1 and 2	

Week 4 - 31 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Reports using MS EXCEL	Books 1: Microsoft Power BI Dashboards Errin O'Connor Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave. Chapter 6 Book 1	

Week 5 - 07 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Reports using MS EXCEL	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 6 Book 1	

Vacation Week - 14 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revise all previous lecture slides and tutorial work	Revise all previous lecture slides and tutorial work	

Week 6 - 21 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Power BI reports from SharePoint on-Premises	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 8 Book 1	Practical Assessment Due: Week 6 Tuesday (21 Apr 2020) 12:00 am AEST
Week 7 - 28 Apr 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Power BI reports from SQL	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 9 Book 1	
Week 8 - 05 May 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Power BI reports from SSAS Cube	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 10 Book 1	
Week 9 - 12 May 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Power BI Reports from Azure SQL	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 11 Book 1	
Week 10 - 19 May 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Power BI Reports from Oracle	Books 1: Microsoft Power BI Dashboards Errin O'Connor Chapter 12 Book 1	
Week 11 - 26 May 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Web Analytics Dashboard	Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave Chapter 13 Book 2	Written Assessment Due: Week 11 Tuesday (26 May 2020) 11:45 pm AEST
Week 12 - 02 Jun 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Case Study: Hospitality Dashboard for Hotel Management	Book 2: The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios Steve Wexler; Jeffery Shaffer; Andy Cotgreave Chapter 15 Book 2	
Review/Exam Week - 09 Jun 2020		
Module/Topic	Chapter	Events and Submissions/Topic
No Final Exam for this Unit		
Exam Week - 16 Jun 2020		
Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Contact information for Dr. Ahsan Morshed: Email: a.morshed@cqu.edu.au Office: 120 Spencer Street, Melbourne VIC 3000, Melbourne Campus; P +61 3 96160418 | X 50418. Please submit questions about the unit through the 'Q&A' discussion forum in Moodle - that way, everyone can benefit from the questions and answers. If you have any individual queries, please email me and I'll try to get back to you within a day or so or you can meet with me by an appointment.

Assessment Tasks

1 Online Quizzes

Assessment Type

Online Quiz(zes)

Task Description

This assessment is designed to reinforce the content taught in weekly. This assessment relates to learning outcomes 2 and 4. This assessment is an individual assessment and should be submitted in every week.

You will submit each week quizzes based on your weekly lecture. This will provide you with an opportunity to acquire knowledge on topics. This assessment contributes to 20% of total marks

Number of Quizzes

12

Frequency of Quizzes

Weekly

Assessment Due Date

End of each week's tutorial session

Return Date to Students**Weighting**

20%

Assessment Criteria

Assessment Criteria

Assessment 1 will be marked based on the following criteria.

Weekly online 3 quizzes 1.66 marks

Total twelve quizzes 20 marks

Referencing Style

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

Submission

Online

Submission Instructions

All three quizzes must be submitted during the tutorial time

Learning Outcomes Assessed

- Compare different dashboard design and data visualisation tools
- Identify the best practices in implementing dashboard design

Graduate Attributes

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

2 Practical Assessment

Assessment Type

Practical Assessment

Task Description

This assessment is designed to reinforce the content taught in Week 1 to Week 5. This assessment relates to learning outcomes 1, 2 and 3. This assessment is an individual assessment and should be submitted in week 6.

You will submit a work on Power BI on data manipulation exercises. This will provide you with an opportunity to learn data manipulation, processing using Power BI tool. Each week you will be presented with a data-related challenge, and will use computer tools to manipulate data to solve that challenge. This task will help to build your knowledge of data formats, and retrieval and analysis techniques. Power BI questions detail will be provided to you through Moodle in Week 2. This assessment contributes to 30% of the total marks.

Assessment Due Date

Week 6 Tuesday (21 Apr 2020) 12:00 am AEST

Return Date to Students

Week 8 Tuesday (5 May 2020)

Within two weeks of submission

Weighting

30%

Assessment Criteria

Assessment 2 will be marked based on the following criteria.

Submitted screen shot of all questions 10 marks

Analysis presented on the generated output 15 marks

Report nicely written 5 marks

Total 30 marks

Referencing Style

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

Submission

Online

Submission Instructions

All files must be submitted to Moodle for marking by due date.

Learning Outcomes Assessed

- Explain the fundamentals of dashboard design and data visualisation
- Compare different dashboard design and data visualisation tools
- Explain the application of dashboard design and visualisation in summarising key information

Graduate Attributes

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

3 Written Assessment

Assessment Type

Project (applied)

Task Description

This assessment is based on a case study provided to you in teaching week 5. You are required to write a report of 2000 words. This is an individual assessment and contributes to Learning Outcome 1, 3, 4 and 5. This report will follow a standard business report format. You will be investigating how you might advise an organisation whose details are given in a case study on data storage, retrieval, analysis and visualise mechanisms. You will also be developing an analytic dashboard using Power BI for the organisation. You will submit your assignment to Moodle. The assignment will be marked out of a total of 100 marks and forms 30% of the total marks for the unit.

Assessment Due Date

Week 11 Tuesday (26 May 2020) 11:45 pm AEST

Return Date to Students

This assessment feedback will be released after certification date as this unit does not have an exam

Weighting

30%

Assessment Criteria

Assessment 3 will be marked based on the following criteria:

Report formatting (font, header and footer, table of content, numbering, referencing) 5 marks

Professional communication (correct spelling, grammar, formal business language used) 5 marks

Executive summary 5 marks

Report introduction 5 marks

Data Collection and Storage 5 marks

Data Action and Visualisation in 10 marks

Dashboard Design 70 marks

Conclusion and Recommendations 5 marks

Total 100 marks

Referencing Style

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

Submission

Online

Submission Instructions

The assignment must be submitted to Moodle for marking by the due date.

Learning Outcomes Assessed

- Explain the fundamentals of dashboard design and data visualisation
- Explain the application of dashboard design and visualisation in summarising key information
- Identify the best practices in implementing dashboard design
- Design and implement a dashboard for a business case.

Graduate Attributes

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

4 Presentation

Assessment Type

Presentation

Task Description

This assessment contributes to the Learning Outcome 5. This is an individual presentation based on the assessment 3. All students are required to deliver the presentation. You are required to present the developed dashboard based on your business case study. The presentation will be held in Week 12.

For DISTANCE Students Only: Distance students will have a ZOOM presentation. The details of ZOOM session will be provided to all distance students in week 10. The unit coordinator will conduct this presentation.

Assessment Due Date

Exam Week Monday (15 June 2020) 11:45 pm AEST

Return Date to Students

The feedback will be released after certification date as this unit does not have an exam

Weighting

20%

Assessment Criteria

Assessment 4 will be marked based on the following criteria:

Stay on topic 3 marks

Fulfill requirements of topic 3 marks

Slide style 2 marks

Presentation style 6 marks

Valid information presented 6 marks

Total 20 marks

Referencing Style

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

Submission

Online

Submission Instructions

The presentation file must be submitted to Moodle by the due date.

Learning Outcomes Assessed

- Design and implement a dashboard for a business case.

Graduate Attributes

- Communication
- Problem Solving
- 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