DGTL11006 *Coding Fundamentals*

Term 2 - 2023

Profile information current as at 26/04/2024 02:49 am

All details in this unit profile for DGTL11006 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

Coding, also known as programming or scripting, is an essential literacy in our increasingly digital world. This unit provides a practical introduction to coding using the JavaScript language. You will learn about fundamental programming principles and how they relate to the syntax and control structures of a programming language. You will learn how to analyse computing problems, design algorithms that solve those problems, implement algorithms as computer programs, and test those programs on a computer. Many of the programs that you write in this unit will involve building interactivity into web pages with client-side JavaScript code.

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 2 - 2023

- Brisbane
- Bundaberg
- Cairns
- Mackay
- Online
- Rockhampton

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. **Practical Assessment**
Weighting: 30%
2. **Practical Assessment**
Weighting: 30%
3. **Practical Assessment**
Weighting: 40%

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 SUTE Term 2, 2022

Feedback

It has been suggested that the week seven and week eight unit content should be swapped. This change might be beneficial since week eight content provides materials for assignment 2, which is due in week nine.

Recommendation

The proposed changes will be reviewed prior to the next offering of the unit.

Unit Learning Outcomes

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

1. understand and apply fundamental programming principles
2. explain the syntax and control structures of a programming language
3. design algorithms that solve computing problems
4. implement, test and debug algorithms with a programming language
5. build interactivity into web pages with client-side code.

Not applicable

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
1 - Practical Assessment - 30%	•	•	•	•	
2 - Practical Assessment - 30%	•	•	•	•	•
3 - Practical Assessment - 40%	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication		•			
2 - Problem Solving	•	•	•	•	•

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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 - Practical Assessment - 30%		•	•	•		•				
2 - Practical Assessment - 30%		•	•	•		•		•		
3 - Practical Assessment - 40%		•	•	•		•		•		

Textbooks and Resources

Textbooks

DGTL11006

Prescribed

Coding with JavaScript for Dummies
Edition: 1st (2015)
Authors: Chris Minnick and Eva Holland
John Wiley & Sons
Hoboken , New Jersey , USA
ISBN: 978-1-119-05607-2
Binding: eBook

Additional Textbook Information
Students are not expected to buy this textbook. An electronic version of this textbook can be freely accessed through the CQUniversity Library.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Adobe Acrobat Reader (free browser plug-in)
- Google Chrome
- Microsoft Word
- Mozilla Firefox
- Plain text editor such as Notepad (Windows) or TextEdit (MacOS)
- Adobe Dreamweaver (optional)
- Notepad++ (optional)

Referencing Style

All submissions for this unit must use the referencing style: American Psychological Association 7th Edition (APA 7th edition)
For further information, see the Assessment Tasks.

Teaching Contacts

Regina John Luan Unit Coordinator
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Schedule

Week 1 - 10 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
1. Introduction to JavaScript	Study Guide chapter 1	

Week 2 - 17 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
2. HTML and CSS	Study Guide chapter 2	

Week 3 - 24 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic

3. Variables, input and output	Study Guide chapter 3	
Week 4 - 31 Jul 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
4. Selection statements	Study Guide chapter 4	
Week 5 - 07 Aug 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
5. Repetition statements	Study Guide chapter 5	
Vacation Week - 14 Aug 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Week 6 - 21 Aug 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
6. Functions	Study Guide chapter 6	**Basic coding** Due: Week 6 Friday (25 Aug 2023) 9:00 pm AEST
Week 7 - 28 Aug 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
7. Problem-solving	Study Guide chapter 7	
Week 8 - 04 Sep 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
8. Objects	Study Guide chapter 8	
Week 9 - 11 Sep 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
9. The DOM	Study Guide chapter 9	**Functions and objects** Due: Week 9 Friday (15 Sept 2023) 9:00 pm AEST
Week 10 - 18 Sep 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
10. HTML forms	Study Guide chapter 10	
Week 11 - 25 Sep 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
11. Handling forms	Study Guide chapter 11	
Week 12 - 02 Oct 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
12. Further exploration	Study Guide chapter 12	**Forms and the DOM** Due: Week 12 Friday (6 Oct 2023) 9:00 pm AEST
Review/Exam Week - 09 Oct 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Exam Week - 16 Oct 2023		
Module/Topic	**Chapter**	**Events and Submissions/Topic**

Term Specific Information

REQUIRED RESOURCES
You must have access to the following resources for this unit.
UNIT WEBSITE
The unit website provides essential resources for the unit such as a Study Guide and an online discussion forum. It can be accessed at https://moodle.cqu.edu.au
STUDY GUIDE
The online Study Guide will direct you to all of the essential readings, discussion questions and activities for each module of the unit. The Study Guide is available in Adobe Portable Document format (PDF) from the unit website.
DISCUSSION FORUM
An online discussion forum will be provided through the unit website for discussing matters that relate to the unit. The discussion forum is the primary means of support for off-campus students who want assistance with tutorial activities and assignments.
TEXT EDITOR
You will need a plain text editor such as Notepad or TextEdit for composing HTML and CSS files. Notepad is distributed with the Microsoft Windows operating system. TextEdit is distributed with the macOS operating system. If you have a copy of Adobe Dreamweaver as part of an Adobe Creative Cloud subscription (https://www.adobe.com/au), you might prefer to edit your files with it rather than Notepad or TextEdit. One of the advantages of using Dreamweaver is that it provides special features such as syntax checking, syntax highlighting and line numbering. Alternatively you might like to use a free open source editor such as Notepad++ (https://notepad-plus-plus.org), which also provides special features for JavaScript coding.
WEB BROWSERS
You will need a recent version of Google Chrome (https://www.google.com/chrome) and Mozilla Firefox (https://www.mozilla.org/firefox) to explore the Web and test the pages that you create. Off-campus students are encouraged to install the latest versions of these browsers. On-campus students may use whichever versions are installed in their local computer lab.
ADOBE ACROBAT READER
You will need Adobe Acrobat Reader, which is a free program that lets you view, navigate and print PDF documents like the DGTL11006 Study Guide. Adobe Acrobat Reader can be downloaded from the Adobe website (https://www.adobe.com).
WORD PROCESSOR
You will need a word processor such as Microsoft Word for writing parts of your assignments. Microsoft Word is part of Office 365, which is freely available to CQUniversity students at https://cqu365.cqu.edu.au. Sign in with your student email address and password to install the software on your computer.

Assessment Tasks

1 Basic coding

Assessment Type
Practical Assessment

Task Description
This assignment requires you to build two web pages that use HTML and JavaScript code to solve two supplied coding problems. Please refer to the unit website for the assignment details.

Assessment Due Date
Week 6 Friday (25 Aug 2023) 9:00 pm AEST

Return Date to Students

2 weeks after submission

Weighting
30%

Assessment Criteria
Please refer to the unit website for the detailed assessment criteria.

Referencing Style

- American Psychological Association 7th Edition (APA 7th edition)

Submission
Online

Submission Instructions
Please refer to the unit website for assignment submission instructions.

Learning Outcomes Assessed

- understand and apply fundamental programming principles
- explain the syntax and control structures of a programming language
- design algorithms that solve computing problems
- implement, test and debug algorithms with a programming language

Graduate Attributes

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

2 Functions and objects

Assessment Type
Practical Assessment

Task Description
This assignment requires you to build a web page that uses HTML and JavaScript code to solve a supplied coding problem involving functions and objects. Please refer to the unit website for the assignment details.

Assessment Due Date
Week 9 Friday (15 Sept 2023) 9:00 pm AEST

Return Date to Students

2 weeks after submission

Weighting
30%

Assessment Criteria
Please refer to the unit website for the detailed assessment criteria.

Referencing Style

- American Psychological Association 7th Edition (APA 7th edition)

Submission
Online

Submission Instructions
Please refer to the unit website for assignment submission instructions.

Learning Outcomes Assessed

- understand and apply fundamental programming principles
- explain the syntax and control structures of a programming language
- design algorithms that solve computing problems
- implement, test and debug algorithms with a programming language
- build interactivity into web pages with client-side code.

Graduate Attributes

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

3 Forms and the DOM

Assessment Type
Practical Assessment

Task Description
This assignment requires you to build a web page that uses HTML and JavaScript code to solve a supplied coding problem involving HTML forms and the Document Object Model (DOM). Please refer to the unit website for the assignment details.

Assessment Due Date
Week 12 Friday (6 Oct 2023) 9:00 pm AEST

Return Date to Students

2 weeks after submission

Weighting
40%

Assessment Criteria
Please refer to the unit website for the detailed assessment criteria.

Referencing Style

- American Psychological Association 7th Edition (APA 7th edition)

Submission
Online

Submission Instructions
Please refer to the unit website for assignment submission instructions.

Learning Outcomes Assessed

- understand and apply fundamental programming principles
- explain the syntax and control structures of a programming language
- design algorithms that solve computing problems
- implement, test and debug algorithms with a programming language
- build interactivity into web pages with client-side code.

Graduate Attributes

- 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