



## 1. General Course Information

### 1.1 Course Details

<b>Course Code:</b>	<b>1701ICT</b>
<b>Course Name:</b>	<b>Creative Coding</b>
<b>Trimester:</b>	<b>Trimester 3, 2021</b>
<b>Program:</b>	Diploma of Information Technology
<b>Credit Points:</b>	10
<b>Course Coordinator:</b>	Dr. Seyedali Mirjalili
<b>Document modified:</b>	13/04/2021

### Course Description

Creative Coding is a 10 credit point course within the Diploma of Information Technology. The course is situated within the first trimester of the program. The Diploma of Information Technology is designed to provide students with a pathway to:

- further university study in Information Technology and related degrees, or
- employment opportunities within the IT industry.

Creative Coding is the first programming course students encounter in the Diploma of Information Technology. The course introduces modern programming concepts and techniques and provides a foundation for subsequent programming courses within the Diploma of Information Technology. You will learn how to code in a creative context, utilising a practical and hands-on approach, producing generative art, data visualisations, and interactive interfaces.

### Assumed Knowledge

There is no prerequisite for 1701ICT. However, please note that 1701ICT is a prerequisite for courses 2002ICT, 2508ICT, 3642ICT and 1802ICT. This means that you need to achieve a Pass or above to progress to any of these courses. If you don't pass the course, you will need to repeat 1701ICT before progressing to 2002ICT, 2508ICT, 3642ICT or 1802ICT.

## 1.2 Teaching Team

Your teacher can be contacted via the email system on the portal.

Name	Email
Dr. Seyedali Mirjalili	<a href="mailto:ali.mirjalili@griffithcollege.edu.au">ali.mirjalili@griffithcollege.edu.au</a>

## 1.3 Staff Consultation

Your teacher is available each week for consultation outside of normal class times. Times that your teacher will be available for consultation will be found on the Moodle Course Site.

## 1.4 Timetable

Your timetable is available on the Griffith College Portal at Class Timetable in Student and Services.

## 1.5 Technical Specifications

All students must have access to a computer or suitable mobile device.

## 2. Aims, Outcomes & Generic Skills

### 2.1 Course Aims

This course introduces practical computer programming concepts and skills through creative ideas and challenges. Students will develop programs that can generate images, animations and sound and learn how to interact with them to change their behaviour. Starting with simple processes, the course will develop students' programming skills by introducing algorithmic techniques for increasingly complex visual and sonic digital projects.



### 2.2 Learning Outcomes

After successfully completing this course you should be able to:

1. Create interactive programs and solve programming problems using simple and structures programming constructs such as variables, sequence, selection, iteration in JavaScript
2. Understand and apply arrays, event handlers, and visualisations into web pages using JavaScript libraries
3. Construct and test a modular program using functions, objects, and data in JavaScript



## 2.3 Generic Skills and Capabilities

For further details on the Generic Skills please refer to the [Graduate Generic Skills and Capabilities policy](#).

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills and Capabilities		Taught	Practised	Assessed
Acquisition of discipline knowledge and skills with critical judgement		✓	✓	✓
Communication and collaboration		✓	✓	✓
Self-directed and active learning			✓	
Creative and future thinking		✓	✓	✓
Social responsibility and ethical awareness			✓	
Cultural competence and awareness in a culturally diverse environment			✓	



## 3. Learning Resources

### 3.1 Required Learning Resources

McCarthy, L., Reas, C., & Fry, B. (2015). Getting Started with P5.js: Making Interactive Graphics in JavaScript and Processing. Maker Media, Inc..

### 3.2 Recommended Learning Resources

Please refer to the course webpage.

### 3.3 College Support Services and Learning Resources

The College provides many facilities and support services to assist students in their studies. Links to information about College support resources that are available to students are included below for easy reference.

[Digital Library](#) – Databases to which Griffith College students have access to through the Griffith Library Databases.

MyStudy – there is a dedicated website for this course via MyStudy on the Griffith College Portal.

Griffith College is committed to ensuring academic integrity is understood and maintained by all staff and students. All students learn about academic integrity through engagement with the weighted Epigeum modules within the suite of Academic and Professional Studies courses.

Services and Support provides a range of services to support students throughout their studies including academic advice and assignment help from Student Learning Advisors, and personal and welfare support from Student Counsellors.

[Jobs and Employment](#) in the Student Hub can assist students with career direction, resume and interview preparation, job search tips, and more.

[IT Support](#) provides details of accessing support, information on s numbers and internet access and computer lab rules.

### 3.4 Other Information about your Learning

#### Attendance

You are expected to actively engage in all learning experiences and learning activities which underpin the learning content in this course. You are expected to engage with the learning content and learning activities outside of timetabled class times. This requires you to be an active agent of your learning. You are expected to bring all necessary learning resources to class such as the required textbook and /or Workbook. In addition, you are encouraged to BYOD (bring your own device) to class such as a laptop or tablet. This is not a requirement as computer lab facilities are available on campus, however, the use of such devices in the classroom is encouraged with appropriate and considerate use principles being a priority.

#### Preparation and Participation in Learning

In order to enhance your learning, you need to prepare before participating in the learning experiences. Absorb the learning content and complete the learning activities that are provided online before you attend the scheduled learning experiences. Make sure you complete the learning activities set each week, they are designed to support your learning. Active participation in your learning will enhance your success. Ask questions when something is unclear or when you want to bring some issue to your teacher's attention; respond to questions to test your knowledge and engage in discussion to help yourself and others learn.

#### Consultation Sessions

Teachers offer extra time each week to assist students outside the classroom. This is known as 'consultation time.' You may seek assistance from your teacher on email or in person according to how the teacher has explained this to the class. Attendance during consultation time is optional but you are encouraged to use this extra help to improve your learning outcomes.

#### Course Learning Materials

Learning materials are made available to you in MyStudy on the Griffith College Portal. The learning materials are arranged in Modules. In each Module you will find Learning Content, Learning Experiences and Learning Activities. **Learning Content** will be engaged with prior to the scheduled **Learning Experience (your weekly class)**. This will ensure you are prepared for the scheduled Learning Experience by being aware of the content to be covered and therefore will be able to actively participate in the session. **Learning Activities** are accessed after the scheduled session for purposes of review, consolidation of learning, and preparation for the Evidence of Learning tasks (assessment) in the course.

In addition, **Anytime Anywhere** learning material is provided in the course. This learning material provides support, interactive tools and directions for students who occasionally cannot attend the weekly scheduled Learning Experience (either in person or on Zoom) perhaps due to illness or other commitments. The Anytime Anywhere learning material should also be used in conjunction with Learning Content and Learning Activities resources.

### **Self-Directed Learning**

You will be expected to learn independently. This means you must organise and engage with the course learning content even when you are not specifically asked to do so by your teacher. The weekly guide will be helpful to organise your learning. This involves revising the weekly course learning material and completing the learning activities. It also means you will need to find additional information to evidence your learning (assessment) beyond that given to you, and to construct your own response to a question or topic. All of this requires careful planning of your time. Expect to spend, on average, at least 10 hours per week including class time for each of your courses.

### **Program Progression**

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 [please see Griffith College Policy Library - [Program Progression Policy](#) - for more information].






### **Teacher and Course Evaluation**

Your feedback is respected and valued by your teacher. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your teacher or by completing course and teacher evaluations via Griffith College's evaluation tool whenever these are available.



## 4. Learning Content, Learning Activities and Learning Experiences

### 4.1 Modules for Learning and Weekly Learning Content, Learning Activities and Learning Experience

	Learning Content 	Learning experiences 	Learning activities 	Evidence of learning 	Learning outcome 
<b>Module 1 Simple and structured statements in programming</b>					
1	Introduction to programming, compilers, and IDEs <ul style="list-style-type: none"><li>Chapter 1</li><li>Chapter 2</li></ul>	In a class, we will learn about programming languages, compilers and IDEs	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		1
2	Variables and drawings <ul style="list-style-type: none"><li>Chapter 3</li><li>Chapter 4</li></ul>	In a class, we will learn about variables in programming and how to use them to draw something.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		1, 2
3	Animation and mouse interaction <ul style="list-style-type: none"><li>Chapter 5</li></ul>	In a class, we will learn how to animate drawings in p5.js using variables. We also focus on mouse interaction.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		1, 2
4	Loops, images and strings <ul style="list-style-type: none"><li>Chapter 7</li></ul>	In a class, we will learn about loops, images, and strings in p5.js.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li><li>Knowledge-check quiz</li></ul>		1,2
<b>Module 2 Interactive and visual programs</b>					
5	Keyboard interaction and collision detection <ul style="list-style-type: none"><li>Chapter 5</li></ul>	In a class, we will learn and practice how to use get user's input via keyboard. We also learn about collision detection between different shapes.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		1,2
6	Arrays and GUI components <ul style="list-style-type: none"><li>Chapter 11</li></ul>	In a class, we will learn how to improve the visual of our interactive applications using GUIs in P5.js	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>	<ul style="list-style-type: none"><li>Assignment - Problem Solving Assignment</li><li>Assignment 1</li></ul>	1,2
7	Software design and user-defined functions <ul style="list-style-type: none"><li>Chapter 9</li></ul>	In a class, we will learn and discuss a broader perspective of software design and modular programming.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		3
8	Video and Sound – Debugging and Testing <ul style="list-style-type: none"><li>Chapter 13</li></ul>	In a class, we will learn and practice how to include audios and videos in our programs. We also learn about software testing.	<ul style="list-style-type: none"><li>Weekly activity</li><li>Online programming game/tutorial</li></ul>		1, 3


9	3D, physics, and particle systems <ul style="list-style-type: none"> <li>Refer to the course webpage</li> </ul>	In a class, we will learn how to create 3D applications	<ul style="list-style-type: none"> <li>Weekly activity</li> <li>Online programming game/tutorial</li> <li>Knowledge-check quiz</li> </ul>		1
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<b>Module 3 Construct a modular program using functions, objects, and data</b>					
10	Access and visualise data <ul style="list-style-type: none"> <li>Chapter 12</li> </ul>	In a class, we will learn how to work with data in programming	<ul style="list-style-type: none"> <li>Weekly activity</li> <li>Online programming game/tutorial</li> </ul>		1, 3
11	Object oriented programming 1 <ul style="list-style-type: none"> <li>Chapter 1</li> </ul>	In a class, we will learn about and practice objective oriented programming.	<ul style="list-style-type: none"> <li>Weekly activity</li> <li>Online programming game/tutorial</li> </ul>		3
12	Object oriented programming 2 Revision <ul style="list-style-type: none"> <li>Refer to the course webpage</li> </ul>	In a class, we will learn about and practice advanced objective oriented programming.	<ul style="list-style-type: none"> <li>Weekly activity</li> <li>Online programming game/tutorial</li> <li>Knowledge-check quiz</li> </ul>	<ul style="list-style-type: none"> <li>Assignment - Problem Solving Assignment 2</li> </ul>	3



## 5. Evidence of Learning (Assessment Plan)

### 5.1 Evidence of Learning Summary

	 Evidence of learning	 Weighting	 Learning outcome	 Due Date
1	Assignment 1	40%	1,2	Week 6
2	Assignment 2	60%	1, 2,3	Week 12

### 5.2 Evidence of Learning Task Detail

**Title:** Assignment 1

**Type:** Assignment - Problem Solving Assignment

**Learning Outcomes Assessed:** 1, 2

**Due Date:** Week 6

**Weight:** 40%

**Marked out of:** 40

**Task Description:**

Produce a data visualisation, sourcing data from an online data source and presenting it in a meaningful way based on the concepts learned in the first 6 weeks of the course.

There will be 2 assignment milestones due in weeks 3 and 6.

**Criteria & Marking:**

Assignment details and marking rubric will be made available through the portal.

**Submission:** Project must be submitted through portal and demonstrated in class.

**This assessment item:**

- is an individual activity
- does not include a self assessment activity
- does not have a resubmission provision

**Title:** Assignment 2

**Type:** Assignment - Problem Solving Assignment

**Learning Outcomes Assessed:** 1, 2, 3

**Due Date:** Week 12

**Weight:** 60%

**Marked out of:** 60

**Task Description:**

Produce a game (arcade or mobile type) using a combination of images, videos, sounds, 3D graphics, animation, and interaction

**Criteria & Marking:**

Details for the assignment and marking rubrics will be made available on the portal.

**Submission:** Submitted through the portal and demonstrated in class.

There will be 2 assignment milestones due in weeks 9 and 12.

**This assessment item:**

- is an individual activity
- does not include a self assessment activity
- does not have a resubmission provision

*Submission and Return of Assessment Items*



Normally you will be able to collect your assignments in class within fourteen [14] days of the due date for submission of the assignment.

### 5.3 Late Submission

An evidence of learning (assessment) item submitted after the due date, without an approved extension from the Course Coordinator, will be penalised. The standard penalty is the reduction of the mark allocated to the assessment item by 5% of the maximum mark applicable for the assessment item, for each working day or part working day that the item is late. Evidence of learning items submitted more than five working days after the due date are awarded zero marks.

Please refer to the Griffith College website - Policy Library > [Assessment Policy](#) for guidelines and penalties for late submission.

### 5.4 Other Information about Evidence of Learning

#### Retention of Originals

You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

#### Requests for extension

To apply for an extension of time for an evidence of learning item, you must submit an [Application for Extension of Assignment](#) form to your teacher at least 24 hours before the date the assignment is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. [Griffith College Student Medical Certificate](#)]. Please refer to the Griffith College website - [Policy Library](#) - for guidelines regarding extensions and deferred assessment.

#### Return of Evidence of Learning Items

1. Marks awarded for in-trimester evidence of learning items, except those being moderated externally with Griffith University, will be available on the Student Portal within fourteen [14] days of the due date. This does not apply to the final evidence of learning item in this course (marks for this item will be provided with the final course result).
2. Students will be advised of their final grade through the Student Portal. Students can review their final exam papers after student grades have been published. Review of final exam papers will not be permitted after the final date to enrol.
3. Marks for **all** evidence of learning items including the final exam (if applicable) will be recorded in the Moodle Course Site and made available to students through the Moodle Course Site.

*The sum of your marks of evidence of learning items in this course does not necessarily imply your final grade for the course. Standard grade cut off scores can be varied for particular courses, so you need to wait for the official release of grades to be sure of your grade for this course.*

## 6. Policies & Guidelines

Griffith College assessment-related policies can be found in the [Griffith College Policy Library](#) which include the following policies:

[Assessment Policy](#), [Special Consideration](#), [Deferred Assessment](#), [Alternate Exam Sitings](#), [Medical Certificates](#), [Academic Integrity](#), [Finalisation of Results](#), [Review of Marks](#), [Moderation of Assessment](#), [Turn-it-in Software Use](#). These policies can be accessed within the [Policy Library](#)

**Academic Integrity** Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of an allegation of a breach of academic integrity being made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the Griffith College Academic Integrity Policy; this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Griffith College website - Policy Library > [Academic Integrity Policy](#)

### **Reasonable Adjustments for Assessment – The Disability Services policy**

The [Disability Services policy](#) (accessed within the [Policy Library](#)) outlines the principles and processes that guide the College in making reasonable adjustments to assessment for students with disabilities while maintaining academic robustness of its programs.

### **Risk Assessment Statement**

There are no out of the ordinary risks associated with this course.

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