

MONASH UNIVERSITY **FOUNDATION YEAR**

MONASH

UNIVERSITY

**FOUNDATION**

**YEAR**

**MUF0051**

**INFORMATION AND COMMUNICATION TECHNOLOGY UNIT 1**

**Introduction to Computing and Programming**

16P-1757. January 2017.

Produced by Strategic Marketing and Communications, Monash University

CRICOS provider:

Monash University 00008C,

Monash College Pty Ltd 01857J

**Please refer to the following sections for specific information on the review phases**

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TION MEETINGS



# Unit Overview

In this unit students will focus on processing data into information using digital systems to create information products.

In Study Area 1 students will collect primary data, use spreadsheet software to interrogate the data, then present their findings to an audience. In Study Area 2 students will be introduced to programming by creating applications using the Scratch programming environment. In Study Area 3 students will examine how digital system components are used to convert data into information.

The Unit assumes not prior knowledge of the study areas.

|  |  |
| --- | --- |
| **STUDY AREA** | **NUMBER OF WEEKS** |
| Data to information | 5 weeks |
| Programming | 3 weeks |
| Digital systems | 5 weeks |

**FOR 2016 IMPLEMENTATION   
UNIT 1: SEMESTER 1**

|  |  |  |  |
| --- | --- | --- | --- |
| Assessment Type | Weighting | Date | Study Area |
|  | | | |
| **Task 1**  Task 1: Data analysis project | **20%**  20% | Week 6 - 6 March 18 | **Data to information** |
| **Task 2**  Task 2: Programming project | **20%**  20% | Week 9 - 3 April 18 | **Programming** |
| **Task 3**  Task 3a: Written test  Task 3b: Group film project | **20%**  10%  10% | Week 13 - 2 May 18  Week 14 – 9 May 18 | **Digital systems** |
|  | | | |
| **Final Examination** | **30%** |  | **All Study Areas** |
| **Participation** | **10%** | Week 15 | **Ongoing** |

Accounting Panel

(Sunway Kuala Lumpur)

Implementation

Semester 1, 2017: MUF0021 Unit 1

Semester 2, 2017: MUF0022 Unit 2

Unit Assessment

# UNIT 1: ICT



# Unit Knowledge Outcomes

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| --- |
| 1. Survey questions types (and input controls) used to collect different types of data. |
| 2. Design tools used to plan the appearance and/or functional of information products. |
| 3. Software functions and techniques used to process data into information. |
| 4. Conventions appropriate to particular information products. |
| 5. Techniques used to evaluate the effectiveness of an information product. |
| 6. Purpose and components of a visual programming environment. |
| 7. Capabilities and functions of digital system components. |
| 8. Advantages and disadvantages of using cloud computing and networks. |

# Unit Skills and Behaviours Outcomes

|  |
| --- |
| 1. Construct relevant survey questions to collect a range of primary data. |
| 2. Select appropriate design tools to plan particular information products. |
| 3. Use correct software functions and techniques to produce the information required. |
| 4. Incorporate suitable conventions to enhance the appearance of the information. |
| 5. Apply techniques to evaluate the effectiveness of information products. |
| 6. Apply computational thinking to develop an application using a programming language. |
| 7. Work collaboratively and effectively to explain the function of digital system components. |
| 8. Use feedback to reflect on their own learning and to develop strategies for improvement. |

**ANY QUESTIONS**

**regarding the reviewed curriculum should be directed to a panel representative and/or Provider head. Queries regarding implemented curriculum should be directed to**

**the appropriate Subject Link.**

IMPLEMENTATION MEETINGS

SAMPLE TASKS

VETTING OF INTERNAL ASSESSMENTS



# Language Outcomes and Skills

##### 

##### Listening

|  |  |
| --- | --- |
| Listen carefully to verbal instructions, class discussion and multimedia resources | Participate in discussions related to the concepts covered in class |
| Recognise links between verbal resources and the course content | Communicate in English when working in group situations |
|  | Provide constructive feedback to fellow students |
|  | Present findings of research projects to the class |
|  | Ask questions to clarify understanding |
|  | Speak clearly, using English fluently, focusing on correct pronunciation |
|  | Use a range of general and technical vocabulary accurately |
|  | Use online learning tools to develop accurate pronunciation |

##### Speaking

|  |  |
| --- | --- |
| Communicate effectively in English in various contexts and situations | Participate in discussions related to the concepts covered in class |
| Use vocabulary accurately and focusing on correct pronunciation | Communicate in English when working in group situations |
|  | Provide constructive feedback to fellow   Present findings of research projects to the class |
|  | Ask questions to clarify understanding |
|  | Speak clearly, using English fluently, focusing on correct pronunciation |
|  | Use a range of general and technical vocabulary accurately |
|  | Use online learning tools to develop accurate pronunciation |

# Language Outcomes and Skills

##### Reading

|  |  |
| --- | --- |
| Interpret and understand written instructions and resources | Interpret and follow written instructions |
| Use a range of resources to assist with the comprehension of written resources | Follow sequential instructions within written tutorials |
|  | Comprehend the context of written text |
|  | Recognise technical vocabulary used in written resources |
|  | Create notes that summarises written resources |
|  | Respond to questions based upon written resources |
|  | Use online learning tools to interpret the meaning of written text |

##### Writing

|  |  |
| --- | --- |
| Produce written responses that show evidence of an understanding of the content covered | Compose formulas and programming instructions in English using the correct syntax |
| Complete evaluations that allow for reflection of completed tasks | Create summary notes from spoken and written resources |
|  | Give reasons to justify formats and conventions selected |
|  | Construct appropriate survey questions to collect primary data |
|  | Complete evaluations and/or reflections of completed tasks |
|  | Develop sample exam and test questions |
|  | Participate in online conversations and discussions |
|  | Compose written responses to structured questions |

LEMENTA

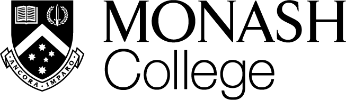
**Unit Prerequisites**



There are no specific prerequisites for entry to this course. However, it is recommended that students possess basic computing skills.

|  |  |
| --- | --- |
| Data to information | No prerequisites required |
| Programming | No prerequisites required |
| Digital systems | No prerequisites required |

Semester 2, 2017: MU



Program Development and Innovation

Monash University Foundation Year

Monash College

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