

Sarawak Campus
Faculty of Language and Communication
Foundation Studies

Unit of Study Outline

FST10014

Programming

(Semester 2, 2017)

Version date (14 August, 2017)



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UNIVERSITY OF
TECHNOLOGY
SARAWAK CAMPUS

Section A

General information you need to know for successful completion of the unit.

NOTE: Any changes to this unit outline will be notified by the Unit Convenor.

Unit Code	FST 10014				
Unit Name	Programming				
Teaching period	2	Year	2017	No. of Groups	4
No. of Weeks	15	Contact Hours per week	6	Total Hours	240

1. Contact Details			
	Name	Telephone	Email
Unit Convenor	Choo Ai Ling	Ext. 7696	achoo@swinburne.edu.my
Unit Convenor's office	E203		
Lecturer/s / Tutor(s)	Choo Ai Ling (Group 1, 2) Alison Khoo (Group 3, 4)	Ext. 7696	achoo@swinburne.edu.my akhoo@swinburne.edu.my
Dean of Faculty	Dr Ida Fatimawati Binti Adi Badiozaman	Ext. 8755	ifaBadiozaman@swinburne.edu.my
Dean's Office	G202		
Dean's Personal Assistant	Dayang Norasikin Abang Talhata	Ext. 8744	ntalhata@swinburne.edu.my
Faculty Administrative Officer	Dayang Norasikin Abang Talhata	Ext. 8744	ntalhata@swinburne.edu.my

Class Time & Assessments	Student's Personal Learning Time	Total Scheduled Hours
97.5	142.5	240

3. Unit Outline	
Unit Type	Stream
Pre/Co-Requisites	NIL
Unit Aims	The purpose of the module is to introduce learners to the general principles of program design, the basic syntax of a suitable programming language, and concepts such as sequence, selection and variables, and object and event-driven programming.
Learning Outcomes	Upon successful completion of this unit students will be able to:
1	Explain the basic conceptual and elements of the chosen program development Environment.
2	Explain the concepts of objects and event driven programming; and manipulate object properties to change the appearance and functioning of graphical user interface objects.
3	Use the basic syntax features of the chosen language to write simple instructions.
4	Implement the concepts of sequence and selection in the chosen language.
5	Define, use, and apply variables of at least three different types in a chosen programming language.

6	Implement repetition in the chosen language.
7	Use complex logical structures.
8	Develop algorithms to solve problems.
9	Acquire a broad knowledge in a chosen programming language.
10	Apply theoretic concepts, in a chosen stream, to a range of situations.
11	Demonstrate skills for purpose of pursuing higher education.

4. Assessment Details – Graded Assessment and Linkage		
Assessment Outline (NB Assessment task to be linked to learning outcomes)		
Assessment Task	Weighting	Learning Outcomes
Software Development Folio (Lab exercises)	20%	1,2,3,4,5,6,7,8,9,10,11
Software Development Project (Assignment)	20%	1,2,3,4,5,6,7,8,9,10,11
Mid-semester Test	10%	1,2,4,5,6,7
Final Examination	50%	1,2,3,4,5,6,7,8

In order to achieve a pass in this unit of study, you must:

- Achieve an aggregate of **50% or more.**

5. Learning Resources	
Books	Michael Dawson, 2010, For the Absolute beginner - Python Programming, third Edition, United States of America.
Materials	<p>Zelle, J (2016), <i>Python Programming: An Introduction to Computer Science</i>, 3rd Ed., Franklin, Beedle & Associates.</p> <p>Connolly, T & Begg, C (2014), <i>Database Systems: A Practical Approach to Design, Implementation, and Management</i>, 6th Ed., Pearson.</p>
List Other	https://www.tutorialspoint.com/python/python_files_io.htm

6. Weekly Schedule

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TIMELINE – TEACHING PERIOD 2, 2017

Week Beginning (Monday)		Topic	Explanation and/or Exercises	Tutorial	Assessment
1	21 Aug	Introduction to Python Programming	<ul style="list-style-type: none"> Features of Python Python IDE: Interactive Mode Python IDE: Development Mode 	<ul style="list-style-type: none"> Creating simple code for displaying a sentence 	
2	28 Aug	Python Types, Variable, Simple I/O and Strings	<ul style="list-style-type: none"> Variables Input() Function Useful Mathematical Operators Python Assignment Statement Swap Variables Numbers Strings 	<ul style="list-style-type: none"> Convert Radian to Degree Calculate the area of trapezoid Calculate number of days between 2 dates 	
3	4 Sept	Python Tuples, Lists, Set, and Dictionaries	<ul style="list-style-type: none"> Tuples Lists Sets Dictionaries 	<ul style="list-style-type: none"> Display current date and time Calculate Radius of Circle 	
4	11 Sept	Planning a Procedure Using Pseudocode Selection: If-elif-else	<ul style="list-style-type: none"> Pseudocode If-statement If-else statement If-elif-else statement Nested if-else statement Generate random numbers 	<ul style="list-style-type: none"> If-statement If-else statement If-elif-else statement 	
5	18 Sept	Repetition: While Loop	<ul style="list-style-type: none"> While Loop Infinite Loop While-else statement While loop with if-else and break statement 	<ul style="list-style-type: none"> While loop While-else loop While, if-else loop 	Assignment Released
6	25 Sept	Repetition: For Loop	<ul style="list-style-type: none"> For Loop For Loop and range() function Random access with len() function Iterating over type, list, dictionary 	<ul style="list-style-type: none"> For loop 	
7	2 Oct	Mid-Semester Revision			
	9 Oct	Mid-Semester Assessment Week (9th October – 13th October) Topics covered Week 1 – Week5			
8	16 Oct	Python: User defined functions	<ul style="list-style-type: none"> Call a function Function without arguments The return statement in function Default argument values Arbitrary Argument Lists 	<ul style="list-style-type: none"> Create function Function with and without arguments 	
9	23 Oct	Python Module	<ul style="list-style-type: none"> Importing a module From..import statement Executing modules as scripts Modules Path Standard Module 	<ul style="list-style-type: none"> Create module Import module 	
10	30 Oct	Python Files I/O	<ul style="list-style-type: none"> Raw_input Function Input Function 	<ul style="list-style-type: none"> Input function Opening, closing 	

			<ul style="list-style-type: none"> Opening and Closing Files The file Object Attributes Reading and Writing Files Renaming and Deleting Files Directories in Python 	<ul style="list-style-type: none"> files Reading, writing files Renaming, deleting files 	
11	6 Nov	Assignment Inspection			
12	13 Nov	Assignment Submission & Revision			
13	20 Nov	Study Week			
	27 Nov	Final Exam Week (27 th Nov – 2 nd December)			

Section B

Information you need to know for successful completion of the unit

Content

The topics to be studied are:

1. Introduction to Python Programming
2. Python Types, Variable and simple I/O
3. Planning a Procedure, Using Pseudocode, Selection: If-elif-else
4. Repetition: While Loop
5. Repetition: For Loop
6. Python: User defined functions
7. Python Module
8. Python Files I/O

Swinburne Graduate Attributes

Swinburne graduate attributes signify that the university intends that its teaching programs assist all its graduates to be:

- capable in their chosen professional, vocational or study areas;
- entrepreneurial in contributing to innovation and development within their business, workplace or community;
- effective and ethical in work and community situations;
- adaptable and able to manage change; and
- aware of local and international environments in which they will be contributing (eg socio-cultural, economic, natural).

Key Generic Skills for this Unit of Study

During the semester, you will be provided with feedback on your progress in attaining the following generic skills at foundation level:

- Teamwork skills
- Leadership skills
- Analysis skills
- Problem solving skills
- Applying knowledge
- Technical competence
- Skills in participating and contributing ideas
- Ability to tackle unfamiliar problems

Blackboard Site for this Unit of Study

Important information concerning this unit of study is placed on a website on the Swinburne course management system (Blackboard), accessible via <http://blackboard.swinburne.edu.my>

It is your responsibility to access on a regular basis

- the Blackboard site for your unit of study,
- the Announcements section on Blackboard, and
- any emails sent by the teaching staff to your email address via Blackboard.
- It is your responsibility to ensure that your email address on Blackboard is set to your preferred email address. To set your email address on Blackboard, go to My Institution, click on TOOLS > PERSONAL INFORMATION > EDIT PERSONAL INFORMATION.

Participation requirements

ALL students are expected to attend and participate in ALL lecture and tutorial activities set in the unit outline. In general, a student must maintain a minimum of 80% attendance for all units.

For long semester (i.e. 14 weeks semester), there will be three review period: Weeks 1 – 3, Weeks 4 – 6 and Weeks 7 -9.

For short term:

- a. 6 weeks term: The review periods will be Week 1 – 2 and Weeks 3 – 4.
- b. 9 weeks term: The review periods will be Week 1-3, Weeks 4 - 6 and Week 7-8.

Students failing to meet the attendance requirement in each review period will be issued warning letters. If you should receive more than one warning letter, you may be barred from taking your final examination or passing the unit.

If you are not able to attend the lecture class due to unforeseen circumstances, you must inform the Unit Convener and Lecturer beforehand. Please note that you must supply a valid a medical certificate if you fell ill on your missed class. This must be done within 72 hours of the class missed.

If you should miss three consecutive lecture or tutorial sessions, you will be issued a warning letter on your attendance and participation from Student Operations and your Course Coordinator. If you should receive more than one warning letter, you may be **barred** from taking your final examination or passing the unit.

Students are considered and will be reported as '**absent**' if they are late for class for more than 15 minutes. '**Absent**' also includes disappearing and reappearing after sometime in class.

Minimum requirements to pass this unit of study:

In order to achieve a pass in this unit of study, a student:

- must achieve an aggregate of **50% or more**.

Assessment criteria:

- Assessment criteria for the assessments will be available on Blackboard.

Grading Scheme

Start Marks	End Marks	Grade	Grade Description	Grade Point	Status
80	100	HD	High Distinction	4.00	Pass
75	79	D	Distinction	3.67	Pass
70	74	D	Distinction	3.33	Pass
65	69	C	Credit	3.00	Pass
60	64	C	Credit	2.67	Pass
55	59	P	Pass	2.33	Pass
50	54	P	Pass	2.00	Pass
40	49	N	Fail	1.00	Fail
0	39	N	Fail	0	Fail

The accredited Swinburne Foundation Studies (2013) does not provide the option for a *Last to Complete* or *Conceded Pass* on the basis that a student must pass all the required units of the specific Foundation course (program) to be sufficiently prepared in a discipline (stream) upon which to start his / her undergraduate studies.

Late Assignments or missed Tests

Absence from any scheduled assessments due to participation in personal events will be considered as having failed the assessment, unless the student represents the country, state or Swinburne in any event that is verified beforehand with official documentation. If you are not able to take a test due to unforeseen circumstances such as accident or taken ill, the lecturer must be informed via email within 72 hours of the test missed with supporting document such as a police report or a valid medical certificate with the illness indicated clearly. A replacement test is subject to the approval of the Unit Convener.

A consistent policy has been adopted regarding submission of assignments after the designated due date. This policy includes the following:

- Assignments need to follow the Harvard standard/style of presentation. A style brochure is available in the library
- Assignments are to be handed directly to the Unit lecturer or in a designated Assignment Dropbox as stated in the submission requirements.
- Students need to ensure they keep a hard copy of any assignments they submit. This copy needs to be DATED. Keeping an electronic copy on file is not adequate.
- Students should note that Saturday and Sunday are deemed to be working days in the case of late submission of assignments.
- Plagiarism will not be permitted. Students need to attach an assignment declaration form available from the admin office
- Any assignment submitted **after the designated due date and time will be penalised by deduction of 10% of the marks for each working day** that the assignment is late.
- Late assignments will only be accepted without penalty if a student has a valid medical reason or an extension has been applied for and granted, in writing. **A medical certificate must accompany any valid medical reason for a late assignment or test being missed and must be provided within 72 hours of the assignment or test due date.**
- Any assignment that is more than five working days late will not be accepted for marking.
- The first deduction of 10% for late assignments will be applied to any assignment handed in after the first 15 minutes of the designated date and time.

- Extensions will only be granted in exceptional circumstances and any request for an extension should be made, in writing, at least a week before the assignment is due.
- If a Unit Convenor or lecturer designates that an assignment is to be handed in to the office, students must ensure that the assignment is date stamped or signed by the Administration staff.

Resubmission of Assignments

Students may resubmit an assignment or assessment piece that has not received a pass at the discretion of the Unit convener. Re-submitted work can only achieve a pass grade.

Availability of Assessment Results, Retention of Assessed Materials:

Assessed material will be returned to you and feedback will be provided, but you must retain all assessed material that contributes to the final grade up until such time as the final grades are published. The assessed material must, after a reasonable time, be produced on demand for review by the Convenor. Non-compliance with this requirement may result in loss of all credit for the assessed material not so produced.

Feedback will be provided for all assessments, but the Unit Convenor or lecturer has the right to retain the assessed material.

Group Work Guidelines:

“A group project is the collective responsibility of the entire group, and if one member is temporarily unable to contribute, the group should be able to reallocate responsibilities to keep to schedule. In the event of longer-term illness or other serious problems involving a member of a project group, it is the responsibility of the other members to make the project supervisor aware of the situation straight away.

Group project reports must be submitted with the project cover sheet, signed by all members of the group.

All group members must be satisfied that the work has been correctly submitted. Any penalties for late submission will apply to all group members, not just the person who submitted.”

Swinburne University of Technology’s definition of plagiarism:

Plagiarism is the action or practice of taking and submitting or presenting the thoughts, writings or other work of someone else as though it is your own work. Plagiarism includes any of the following, without full and appropriate acknowledgment to the original source(s):

- (i) The use of the whole or part of a computer program written by another person;
- (ii) the use, in essays or other assessable work, of the whole or part of a written work from any source including but not limited to a book, journal, newspaper article, set of lecture notes, current or past student’s work, any other person’s work, a website or database;
- (iii) the paraphrasing of another’s work;
- (iv) the use of musical composition, audio, visual, graphic and photographic models,
- (v) The use of realia, that is objects, artefacts, costumes, models and the like.

Plagiarism also includes the preparation or production and submission or presentation of assignments or other work in conjunction with another person or other people when that work

should be your own independent work. This remains plagiarism whether or not it is with the knowledge or consent of the other person or people. It should be noted that Swinburne encourages its students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but that where independent assignment is required, submitted or presented work must be the student's own.

Enabling plagiarism contributes to plagiarism and therefore will be treated as a form of plagiarism by the University. Enabling plagiarism means allowing or otherwise assisting another student to copy or otherwise plagiarise work by, for example, allowing access to a draft or completed assignment or other work.

The information outlined in this section above is covered in more detail in Swinburne Sarawak's Student Academic Misconduct Regulations 2012 found at

<http://www.swinburne.edu.au/policies/regulations/academicmisconduct.html>

Students must be familiar with the regulations found at Student Administration > Assessment > Misconduct and Plagiarism at <http://www.swinburne.edu.au/student-administration/assessment/misconduct.html>

Assessment and Results Policy

The information outlined in the Assessment sections above is covered in more detail in Swinburne Sarawak's Assessment and Results Policy. Students must be familiar with the Policy found at <http://www.swinburne.edu.au/policies/academic/assessment.html>

The Policy provides details about:

- Assessment issues such as the conduct of examinations, plagiarism policies and details explaining how to apply for a review of results and other appeals, and
- Student progress issues such as unsatisfactory academic progress and early intervention procedures, and
- Information for students with disabilities and special needs and procedures for applying for special consideration.

Students should make themselves familiar with all aspects of the Policy, as failure to do so is not grounds for appeal.

Student Feedback:

Swinburne seeks student feedback in a number of ways, including through periodic "Student Feedback on Units" and "Student Feedback on Teaching" surveys, as part of the university's approach to quality assurance and improvement. Possible improvement based on both student and staff feedback is considered by Unit Convenors, Unit Panels made up of relevant teaching staff, Program Panels, Faculty Academic Committees, and the Academic Programs Quality Committee, as appropriate.

Safety Standards and Conduct Requirements:

The University executes safety drills without warning. Be prepared to follow instructions from staff and/or wardens to evacuate the building in a safe and orderly manner.

All students are expected to respect the rights and sensibilities of their fellow students and teaching staff. This also applies in respect of the content of video and audio work submitted for assessment. The University had implemented anti-discrimination and harassment policies and procedures to promote a discrimination and harassment free work and study environment for all staff and students: <http://www.swinburne.edu.au/policies/hr/behaviour.html>

Safety procedures in laboratories must be followed. For your own safety, bare feet, thongs and other open sandals are forbidden. Eating, drinking or smoking in laboratories is not allowed. A mature, sensible attitude and a healthy respect for the equipment is always required. Juvenile, ill-mannered or reckless behaviour will not be tolerated, and the laboratory supervisor has the right to exclude students from the laboratory should their behaviour constitute a danger to themselves or others. Such behaviour would result in forfeiture of all marks for that experiment. The playing of computer games is not allowed in the computer labs.

Special Needs

If you have special needs you should advise your School and the Unit of Study Convenor by the end of the second week of the teaching period. In addition, you are recommended to notify the Equity Office if you have not already done so.

See also the Swinburne “Adjustments to assessment arrangements and Special Consideration” Section of the Assessment and Results Policy, at
<http://www.swinburne.edu.au/policies/academic/assessment.html#special>