Unit of Study: BIS1003 Introduction to Programming

Overview:

This unit provides students with an overview of the fundamental knowledge and skills required to code applications. The goal of this unit is to provide a theoretical and practice foundation for understanding the basic concepts of programming. The unit provides a foundational understanding of program design and implementation of algorithms to solve simple problems. Topics covered include basic input and output, program control structures, basic data structures and modular program structure.

Course(s)	Diploma of Business Information Systems Bachelor of Business Information Systems Bachelor of Information Technology
Credit Points	6 credit points
Duration	12 weeks (10 teaching weeks; 1 revision week; 1 final assessment week)
Level	Undergraduate Introductory
Student Workload	Students should expect to spend approximately 10 hours per week over 12 weeks (totalling approximately 120 hours) on learning activities for this unit.
Mode(s) of Delivery	On campus, Blended
Pre-Requisites	None
Unit Coordinator	As per current timetable
Contact Information	Consultation: 1 hour scheduled session

Unit Learning Outcomes

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

ULO-1: Analyse a given problem and construct a logical solution suitable for implementation as a computer language.
ULO-2: Demonstrate an understanding of basic structured programming concepts and constructs.
ULO-3: Design an algorithm that applies structured programming techniques to solve a given problem.
ULO-4: Use programming skills and basic usability principles to design and implement simple applications.
ULO-5: Apply testing strategies to demonstrate that an application meets its specifications.

Weekly Schedule

Detailed information for each week's activities can be found on Unit's Weekly Modules in Canvas.

Week	Topic
Week 1	Programming Fundamentals
Week 2	Input, Processing, and Output
Week 3	Selection Structures
Week 4	Repetition Structures
Week 5	Functions I
Week 6	Functions II
Week 7	Files and Exceptions
Week 8	Sequences and Lists
Week 9	Strings and Dictionaries
Week 10	Object-Oriented Programming
Week 11	REVISION
Week 12	FINAL ASSESSMENT

Assessments

1. All assessments are compulsory.
2. To pass the unit students must:
    - achieve a total of 50% or more of marks offered; and
    - pass all individual invigilated assessments; and
    - have attempted all assessments.

    Where one or more of these requirements are not met, the Board of Examiners will consider a student's overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision.
3. The Board of Examiners may grant a supplementary assessment where a student:
    - achieves a total of 45% or more; and
    - has passed all individual invigilated assessments in the unit; and
    - has attempted all assessments; and
    - has a recommendation for supplementary assessment by the Unit Coordinator and the Head of Discipline.

    Where one or more of these requirements are not met, the Board of Examiners will consider a student's overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision. Attendance and engagement in class will be considered.
4. APIC awards common result grades as set out in the Award of Grade Policy.

5. Detailed information for each assessment can be found on the Unit's Home Page and in the Assessment Brief.

Assessment Task	Type	Weighting	Due	Length	ULO
Assessment 1: Quiz Quiz on Python language basic elements	Individual	20% (10% each quiz)	Week 5, 7	30 mins (equiv. 1000 words)	ULO2
Assessment 2: Programming Lab Test Practical lab test: to develop and test application programs to solve a given problem.	Individual	20%	Week 9	1 hour (Equiv. 1000 words)	ULO1 ULO2 ULO3
Assessment 3: Laboratory Practicum Assess student understanding of weekly content through problem-solving.	Individual Invigilated	35%	Week 2, 4, 6, 8, 10	2000 words	ULO1 ULO2 ULO3 ULO4 ULO5
Assessment 4: Applied Project Design an algorithm and programs to solve a given problem and implement the design.	Group	25%	Week 12	3000 words	ULO1 ULO2 ULO3 ULO4 ULO5

equiv. – equivalent word count based on the Assessment Load Equivalence Guide. It means this assessment is equivalent to the normally expected time requirement for a written submission containing the specified number of words.

Course Reserve

Course Reserve includes all required resources and reading material for the unit of study. You can access Course Reserve via APIC Library or via the Course Reserve link on the unit's homepage.

Prescribed text(s):

Gaddis, T & Agarwal, R 2018, *Starting out with Python*, 4th edn, Pearson, Australia.

Other Recommended Resources:

Python online documentation: https://www.python.org/about/gettingstarted/

Downloading Python: https://www.python.org/downloads/

Python *online Tutorials:* https://www.learnpython.org/en/Variables_and_Types

Academic integrity

Ethical conduct and academic integrity and honesty are fundamental to the mission of APIC and academic misconduct will not be tolerated by the College. It is the responsibility of every student to make sure that they understand what constitutes academic misconduct and to refrain from engaging in it. Please refer to APIC's Academic Integrity Policy for further details.

Other Important Information and Links

Special consideration If your academic work is impacted by significant documented illness, hardship, or other adverse circumstances beyond your control, you may make an application for Special Consideration. Please refer to the Assessment Policy for further details.	**Late submission** Penalties apply when work is submitted after the due date without approval. Please refer to the Assessment Policy for information about late submission.
Assessment appeals If you are concerned about a mark you have received for an assessment or final grade, you may apply to formally appeal the grade. Please see the Assessment Policy for further details.	**Award of grades** APIC awards common result grades, set out in the Award of Grade Policy.
Expectations of student conduct Students are expected to conduct themselves in a manner that is consistent with a safe and respectful study environment. More information can be found in the Student Code of Conduct.	**Study resources** APIC Library and Student Learning Support resources and services can be accessed via the Student Lounge or your Dashboard on the OLS (Canvas).
Student Services The Student Services team provides administrative support for students and handles enquiries about enrolment, timetables, important dates and submitting forms. More information can be found on the Student Services page on the OLS (Canvas).	**Key dates** Key dates through the academic year, including teaching periods, census, payment deadlines and exams can be found on the Academic Calendar section of the APIC website.

Changes and Updates to the Unit of Study Guide

This Unit of Study Guide may be updated and amended from time to time. Students will be notified of any changes to the unit via the Online Learning System (Canvas) space for the unit.

This Unit of Study Guide was last modified on 31st August 2022.