SBM4103 Introduction to Programming

Unit description

The goal of this unit is to provide an extensive theoretical and practice foundation for understanding the basic concepts in object-oriented programming (OOP) techniques, focusing on object-oriented terminology using clear, familiar language. It combines the principles of programming, and in particular, OOP principles and constructs, such as data types, common control flow structures, basic data structures, console input/output, and file input/output. In addition, this unit offers the students an opportunity to use java language to learn and implement the basic programming and OOP. It also stresses the value of the object-oriented programming paradigm in IS discipline as an appealing field of study and the IS graduate as an integral part of today's organisations.
This unit is a core unit in the DipBIS and BBIS programs.

Learning outcomes

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

[ULO1] Demonstrate an understanding of the basic principles of the object-oriented programming paradigm including abstract classes and interfaces, encapsulation, composition, inheritance and polymorphism.

[ULO2] Use an object-oriented programming language, and associated class libraries, to develop object-oriented programs.

[ULO3] Create, build and deploy Java applications that use user-define classes in conjuncture with a real-world programming environment.

[ULO4] Design, develop, test, and debug programs using object-oriented principles including standard conditional and iterative control structures in conjuncture with modern integrated development environment.

[ULO5] Create appropriate textual descriptions to communicate the built-in static data structure and desired attributes and dynamic behaviour of an object-oriented solution.

[ULO6] Develop accurate documentation so that coding can be re-used.

Summary

Credit Points	6
Courses	DipBIS, BBIS
Total Credit Points	DipBIS: 48 credit points, BBIS: 144 credit points
Pre-Requisites	N/A
Co-Requisites	N/A
Other Requirements	N/A
Unit Level	Core
Duration	14 weeks (12 teaching weeks; 1 study week; 1 final assessment week)
Mode of Delivery	On-campus
Assessment	Quiz: 10%; Applied Project -1: 20%; Applied Project – 2: 20%; Laboratory submission: 10%; Examination: 40%
Prescribed Textbook	Gaddis, T., 2019. Starting Out with Java: From Control Structures through Objects. 7th edn, Pearson Publications, Australia.

Expected student workload	Students should expect to spend approximately 8.5 hours per week over 14 weeks on learning activities for this unit. This includes time spent attending scheduled classes, undertaking private study, preparing assessments, and completing examinations.