

BIS2004 Object Oriented 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.

Credit Points	6 credit points
Duration	12 weeks (10 teaching weeks and 2 revision and assessment weeks)

Unit Learning Outcomes

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

1. Demonstrate an understanding of the basic principles of the object-oriented programming paradigm including abstract classes and interfaces, encapsulation, composition, inheritance and polymorphism.
2. Use an object-oriented programming language, and associated class libraries, to develop object-oriented programs.
3. Create, build and deploy Java applications that use user-define classes in conjuncture with a real-world programming environment.
4. Design, develop, test, and debug programs using object-oriented principles including standard conditional and iterative control structures in conjuncture with modern integrated development environment.
5. Create appropriate textual descriptions to communicate the built-in static data structure and desired attributes and dynamic behaviour of an object-oriented solution.
6. Develop accurate documentation so that coding can be re-used.