Module Title
Object-oriented Programming

Keywords
objects, classes, composition, inheritance, object-oriented programming, object-oriented design

Reference	CM3008
SCQF Level	SCQF 9
SCQF Points	15
ECTS Points	7.5
Created	August 2002
Approved	April 2005
Amended	September 2012
Version No.	4

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

The student will normally be expected to have successfully completed the study of a modern structured or object orientated programming language at SCQF7 or SCQF8.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with the ability to explain, design, develop and test simple object-oriented programming applications.

Learning Outcomes for Module

Use of object-oriented Application Programming Interfaces to develop Graphical User Interfaces.

Indicative Student Workload

Contact Hours	Full Time
Assessment	20
Laboratories	24
Lectures	24
Directed Study	
Coursework Preperation	16
Private Study	
Private Study	66

Mode of Delivery

Key concepts are introduced and illustrated through the medium of lectures. However, the main emphasis of the course is focussed on the laboratory sessions in which

On completion of this module, students are expected to be able to:

1. Analyse a simple set of system requirements and develop an object-oriented design which satisfies those requirements.
2. Describe class behaviour and inter-class relationships in an object-oriented design using appropriate notation.
3. Implement and test an object oriented design using an object oriented programming language.
4. Re-use existing classes in an object oriented design and implementation.
5. Design classes for future reuse.

Indicative Module Content

Key concepts of object-oriented programming, including: classes, instance objects, instance members (attributes), methods.
Hierarchical mechanisms for object re-use through composition and inheritance.
Object-oriented design approaches using concepts and techniques of the unified modelling language.
Use of data structures provided by object-oriented Application Programming Interfaces.

the student will progress through a series of graded exercises which are intended to test the student's understanding of the lecture content and to develop proficiency in the practical application of object oriented programming skills.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3,4,5

Component 1 - Coursework

Indicative Bibliography

1. DEITEL, H. AND DEITEL, P., 2014. Java: How to Program (Late objects). 10th ed. Prentice Hall.
2. LIANG, Y. D., 2013. Introduction to Java Programming. 9th ed. Pearson.
3. HORSTMANN, C., 2013. Big Java: Late Objects. 1st ed. Wiley.
4. SAVITCH, W., 2013. Absolute Java. 5th ed. Pearson.