

Module Title Developing Enterprise Systems	Reference CM4016 SCQF SCQF Level 10 SCQF Points 15 ECTS Points 7.5 Created March 2006 Approved May 2006 Amended August 2007 Version No. 2
Keywords Graphical User Interface, Object Oriented Design, Web Application Programming	

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

Some previous experience of using a component based language, database queries and web programming. This could be evidenced by CM3012 (Component Based Software Development), CM2020 (Introduction to Database Systems), and CM3006 (Internet Based Programming) or equivalent modules.

Database connectivity, SQL and data access tools. Server-side objects. Extended form handling. Data persistence handling. Interfacing with page scripting systems. Established and emerging standards for web services.

Appropriate implementation of active server pages. Interface to an existing application package and be able to retrieve relevant information.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To extend the student's

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Lectures	24
Laboratories	24
Coursework preparation	46
Assessment	10
<i>Private Study</i>	
Private study	46

to extend the student's knowledge and proficiency in component based software programming to include an object oriented approach to modelling and designing an application. To explore issues relating to the design and implementation of component based software that arise in the development of multi-tier web based applications.

Learning Outcomes for Module

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

1. Develop and implement an enterprise software solution using an object oriented model.
2. Analyse and evaluate a multi-tier application.
3. Design and implement a multi-tier application.
4. Analyse and discuss web content accessibility guidelines.

Indicative Module Content

Object oriented programming. Encapsulation, polymorphism, inheritance, namespaces and classes, designing and using a class model. Object lifecycle. Object oriented system modelling and modelling tools.

Mode of Delivery

Key concepts are introduced in lectures. In the lab sessions, the students will develop and implement practical aspects of component based software programming including the use of MS agents and active server pages.

Assessment Plan

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

Component 2 - Coursework

Component 1 - This is a closed book examination.

Indicative Bibliography

1. DEITEL, P.J. 2009. Visual Basic 2008 How to Program. Prentice Hall.
2. HALVERSON, M., 2008. Microsoft Visual Basic 2008 Step By Step. Microsoft Press.

