

Module Title Software Design and Development for Digital Media	Reference CM1021 SCQF Level SCQF 7 SCQF Points 30 ECTS Points 15 Created March 2007 Approved June 2014 Amended September 2012 Version No. 1
Keywords Object Oriented Programming, Algorithm Design, Stepwise Refinement, Testing Strategies, Documentation, Object Oriented Design.	

This Version is No Longer Current

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

Prerequisites for Module

None, in addition to course entry requirements.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with an introduction to the skills needed to design, develop and evaluate solutions to simple programming problems and to develop the student's proficiency in implementing and testing programs in a modern object oriented programming environment.

Language syntax will cover fundamental data types, declarations and expressions, object concepts such as classes and instances (including visibility rules for instance and class members), methods, parameter passing mechanisms and arrays. Class construction from existing classes by composition and association will also be discussed.

Indicative language for programs is Javascript.

The module content will also emphasise appropriate coding style, testing techniques and strategies, and documentation standards.

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Lecture/Lab/Tutorial	120
Assessment	10

Learning Outcomes for Module

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

1. Use systematic and structured approaches to design, develop and implement algorithms.
2. Recognise and discuss key concepts in object oriented programming.
3. Analyse simple requirements in order to identify the basis for an object oriented design.
4. Select and apply effective strategies for testing programs.
5. Write documentation to describe the design, testing and use of software.

Indicative Module Content

The module provides an introduction to the design and implementation of object oriented programs. Design techniques will follow structured programming principles using stepwise refinement to develop more complex algorithmic solutions.

Implementation of designs will be in an appropriate development environment.

Directed Study

Directed Study 30

Private Study

Private Study 140

Mode of Delivery

This module is lab-based and is delivered throughout the teaching session.

Assessment Plan

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

Component 1 - Coursework

Indicative Bibliography

1. JAMSA, Kris (2013). Introduction to Web Development using HTML 5. Jonas and Bartlett. 978-144-9686543
2. BRUCHARD, Evan (2013). The Web game developer's cookbook. Addison-Wesley Professional. 978-0321898388.
3. LAMBERTA, B., and PETERS, K. (2011) "Foundation HTML5 Animation with JavaScript" Apress, 978-1-4302-3665-5