

Module Title Software Development for Graphics	Reference CM3037 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created March 2012
Keywords 3D Graphics, OpenGL	Approved September 2012 Amended Version No. 1

This Version is No Longer Current

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

Prerequisites for Module

The student will be expected to be familiar with core object oriented concepts gained through attendance at module CM2015 or equivalent.

Key topics will include: control structures, data

structures, classes/data abstraction, pointers, memory management, the standard template library (STL), file processing/input, output.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To extend the student's knowledge and proficiency in object oriented program design, implementation and testing using C++ and OpenGL

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Assessment	10
Laboratories	14
Lectures/Tutorials	12

Directed Study

Coursework Preparation	20
Directed Study	44

Private Study

Private Study	50
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using C++ and OpenGL.

Learning Outcomes for Module

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

- 1.Demonstrate a knowledge and understanding of object oriented design for C++ programs.
- 2.Demonstrate competence in the choice of C++ data structures and other features for application design.
- 3.Demonstrate competence in the use of the Standard Template Library.
- 4.Develop simple event-driven applications using OpenGL.

Indicative Module Content

The module will focus on developing competence in the graphics environment. Programming examples will be drawn primarily from tasks in computer graphics, and will introduce students to the OpenGL graphics library.

Mode of Delivery

Key concepts are introduced in lectures. In the lab sessions the students will learn practical aspects of C++ programming using a modern integrated development environment.

Assessment Plan

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

Component 1 - Coursework

Indicative Bibliography

- 1.DEITEL P.,and DEITEL H. 2014.C++ How to Program.9th ed. Prentice Hall
- 2.SHREINER,D. 2013. OpenGL Programming Guide: The Official Guide to Learning OpenGL, Versions 4.3 Addison Wesley. 8th edition.