

## Overview of Coursework elements

This coursework represents 50% of your overall mark for the module.

### Group coursework element

For the **Group Component**, your group is required to develop an OpenGL application that implements a Graphics Demo or a Game (see later under “*Specification for Group coursework element*”). This application should be stored in GitHub repository and the project URL has to be sent to the Lecturer, you should also endeavour to keep this repository up to date. This repository should be created by the team leader following the instructions on GCU Learn titled **Creating a Repository for Coursework** and all team members should be given read/write access to the repository.

You do not need to submit any supporting documentation; however, marks will be awarded for the quality of the code submitted by your group (see below under *marking scheme*).

For the Group component your group must give a **presentation** that demonstrates the group’s work and describes the approach taken and you must also personally submit an **individual reflective evaluation** of your own effort and the effort of your fellow group members.

Your overall mark for the Group coursework will be determined from the mark achieved by the group (derived from the group presentation and code review) and the reflective evaluations submitted by the group members.

### Individual coursework element

For the **Individual Component**, you are required to give a **presentation** explaining, and (optionally) demonstrating, the feature that you have contributed in the group coursework. Any implementation of the technique that you have undertaken should also be demonstrated during the presentation. This will be awarded extra marks (see below under *marking scheme* for more details).

## Specification for Group coursework element

### Required elements

Your group application must have the following elements:

1. The application World must contain the assets that have been assigned to the group; these are also available from the Lab Tutor.
2. The 3D objects must be correctly positioned in the world using scaling, rotation and translation matrices
3. The application World must have appropriate lighting; the use of dynamic lighting is encouraged for dynamic game object. Static Lighting(light maps) may be used for static level geometry.
4. All objects in the game world should be textured(within reason)
5. Two different views of the application World must be available, one is the main game view(which is controlled by the user but constrained by geometry in the World) and the other view must be a debug one
6. Appropriate graphical effects such as Parallax Mapping
7. Appropriate Game Architecture

## Optional Elements

Additional marks may be gained by implementing up to **three** of the following optional features:

1. Post processing effects
2. Shadows
3. Scene Management
4. A feature of your choice, you must explain this in your presentation

## Individual Component Specification

For the individual component of the coursework you have to maintain a branch of the main code base, which demonstrates your contribution to the group course. This branch should be clearly identified as your own but may contain other group member's work, in the code you should clearly state what is your work using code comments.

You should also demonstrate your part of the application by the way of an individual presentation to the lab tutor.

## Required elements

Your individual submission should have the following elements:

1. Visual Studio Project containing your own individual code
2. Presentation or presentation notes which explain your contribution to the group. This presentation should address theoretical underpinnings, practical implementation, and possible applications of chosen feature

## Deliverables and due dates

### Group Coursework

#### 1. Group code base

The project must be submitted via GitHub, the Lecturer will download a copy of the repository from GitHub. You must create a branch called **Coursework-Submission** and the date/time on the branch must be no later than the hand in date of the **12<sup>th</sup> of December 2014** at **4pm**.

Your project must contain a read-me text file, which contains a list of **group members**, **matriculation numbers**, and their **roles within the group**, any special **compilation instructions** and any **controls** needed.

All other documentation should be submitted via GCU Learn by the **12<sup>th</sup> of December 2014** at **4pm**.

#### 2. Group presentation

You will be required to demonstrate your application and answer related questions. The group presentation will be scheduled to take place in the lab session on the day of submission. A specific date and time for your presentation will be issued in due course on GCU Learn. The format of your presentation should be as follows:

Describe the approach taken by the group to allocate work, monitor progress and manage the code base.

Demonstrate required features in turn.

Demonstrate any optional features added.

Answer any questions posed by staff present.

The presentation session should last no more than 15 minutes and all group members should attend.

#### 3. Reflective evaluation

You must submit a file containing your reflective evaluation. Guidelines for constructing your reflective evaluation are contained in the file "*Reflective Evaluation Format*" in the assessment section on GCU Learn.

The zip file must be named according to the following naming scheme:  
**YOUR\_MATRICULATION\_NUMBER-GP2-REFLECTIVE-EVALUATION.ZIP**.

The zip file must be placed in the GCU Learn. E-mail submissions will not be accepted.

The zip file must be submitted into the Assignment Area **no later than 4pm on the submission date**

## Marking schemes

The following schemes will be used to assess coursework submissions:

### Group Coursework Component

Your Group Coursework mark will be calculated as follows:

$\text{My\_Group\_Coursework\_mark} =$

$\text{Our\_Group\_mark} * (\text{My\_Effort\_Evaluation\_mark} / \text{Max\_Possible\_Effort\_Evaluation\_mark})$

The next few paragraphs explain how the Group mark and your effort evaluation mark that are used in the above formula are determined.

### The Group mark

Up to 80 marks are available for the Group mark. This is made of the following components:

Required features – up to 5 marks for each required feature (up to 35 marks possible)

Optional features – up to 10 marks for each optional feature (up to 30 marks possible).

Professionalism of approach taken as described in presentation and evidenced by code base (up to 15 marks possible).

### Effort evaluation marks for individual students

The individual reflective evaluation documents are collectively used to derive individual effort evaluations: the actual mark awarded to a student is based on their own self evaluation and their evaluation by other group members. The maximum possible effort evaluation mark is 20.

### Individual Coursework Component

Up to 20 marks are available. This is made of the following components:

Explanation of theoretical underpinnings, practical implementation, and possible applications of chosen feature (up to 15 marks possible).

Implementation of chosen feature, a demonstration of the feature will be allocated up to an extra 5 marks

### Additional points of note

Unless there are special factors, a late submission into the Digital Drop Box will be considered a non-submission. Additionally, no marks will be assigned until work is demonstrated and marks will be lost for failing to demonstrate at an agreed time.

The minimum group size is three.

### Further information

If you have any queries about the coursework then please contact Brian McDonald ([Brian.McDonald@gcu.ac.uk](mailto:Brian.McDonald@gcu.ac.uk)).