Module Title: INTRODUCTION TO 3D MODELLING

Date of Approval: November 2011

Module Code: 4CC500

Pre-requisite: None

Module Level: 4

Credit value: 20

Total Number of Learning Hours: 200

Key Words: Three Dimensional, Computer Graphics, Computer Modelling, Computer-Aided Art

Module Delivery: Blended / Face to Face

Module Description:

This module aims to provide the student with a basic introduction to 3D by acquiring the principal skills and knowledge required to successfully create 3D objects. The module will look at various modelling, basic material, and rendering techniques used within the digital entertainment industry as a whole and provide the student with the necessary skills to demonstrate this. This module is not games focused specifically although 'games specific' techniques will be covered.

The students will also look at how these skills fit in with a creative production process. In essence, how they get an idea from their mind onto a computer screen in 3D.

Module Learning:

On successful completion of the module, students will be able to:

Outcomes

1. Design and create a computer generated 3D model.
2. Demonstrate an understanding of appropriate 3D graphics principles applied to a variety of media.

Module Content:

Students will be given an understanding of:

- 3D Coordinate systems
- 3D Space and spatial awareness
• Scene setup
• Planning
• Modelling Methods: polygonal modelling, NURBS modelling, subdivision surfaces
• Texture mapping, materials and shading
• Reference gathering
• Lighting and shadows
• Cameras
• Rendering

Module Learning and Teaching Methods

This module will be lab based and will be timetabled as two sessions. The first session will focus on concepts using lectures and demonstrations to underpin fundamental techniques and methodologies. The second will focus on support with tutorials and formative feedback in the studio environment for more specialised guidance with set project work.

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>12</td>
</tr>
<tr>
<td>Demonstration</td>
<td>12</td>
</tr>
<tr>
<td>Tutorial</td>
<td>24</td>
</tr>
<tr>
<td>Guided independent study</td>
<td>152</td>
</tr>
</tbody>
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Scheduled learning and teaching activities: 24%
Guided independent study: 76%

Module Assessment
Mode: 100% Coursework

Coursework 1 100%

Students will be formatively assessed through a portfolio of work to demonstrate competency in the use of 3D modelling software and knowledge and understanding of key 3D modelling principles and techniques.

This module has one coursework submission (3000 word equivalent). This will be broken down into a series of in class assessments based on fundamental components of the 3D asset creation process. This piece of work will be based on the development of a 3d asset from concept and will be accompanied by a project journal or presentation.

The journal/presentation should include evidence of research and personal development that illustrates how the student is investigating, learning and becoming confident in the use of a computer based 3D creation.

Reading list
The latest edition of Maya Fundamentals or Mastering Maya will be recommended. However this is updated on a yearly basis.

**Key Texts**
