

Module Details	
Module Title	Look Development - Environment Creation, Lighting and Rendering
Module Code	GAV5029-B
Academic Year	2021/2
Credits	20
School	Department of Media Design and Technology
FHEQ Level	FHEQ Level 5

Contact Hours	
Type	Hours
Lectures	12
Laboratories	24
Directed Study	164

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
To attain a broad foundation in all aspects of the field of Look Development, to the level that students can start building informed but simple pipelines. Enable the student to develop skill and confidence with light in order to create a spread of different set-ups. Impress on the student the interrelationship of lighting, shaders, rendering and compositing. Acquire a broad knowledge base in terms of the technologies and processes of LOOK-Development. We will develop an understanding of the design principles, creation methodologies and technical implementation of modelling, texturing, lighting and rendering 3D environments, sets and props, with a focus on industry techniques through a combination of research and task based learning.

Outline Syllabus
Exploring real lighting, Matching light, History of CG light and shaders, Light in CG , Shadows and occlusion, Lighting Environments, Lighting Characters, Optics, Grading in depth, Roles in Look-Dev, Compositing, Shaders, Rendering, Render Layers and Passes. Image formats. Environment design with action in mind; Scene-setting and progression in sets and environments; Detailed requirement of props and models; 3D modelling and texturing techniques for natural and urban environments; Lighting and mood; Surfaces for expressive or realistic surface design; UV unwrapping and layout; Texturing in Photoshop. Art direction for modelling and surfacing.

Learning Outcomes	
Outcome Number	Description
01	Identify individual tasks required to produce convincing CG elements.
02	Identify and compare production methodologies to create efficient pipelines;
03	Utilise appropriate technological solutions to work creatively towards a brief.
04	Create realistic 3D environments with textures and surface shaders, lighting design and optimization within a realistic pipeline.
05	Apply the theories and standard industry practice of 3D environment art to your work.
06	Manage both time and resources and apply your own art direction to a project based on an industry style brief.

Learning, Teaching and Assessment Strategy
A series of lectures will explore core skills including concepts, theories and principles which constitute and surround the role of the lighting technical director as well as the fundamental skills required by generalists who cover more than one role when working on smaller projects. Practical learning is supported by laboratory sessions and directed study which enables the development of essential knowledge into the process of balancing CGI texturing, shader development, lighting and rendering to match a reference image. This module is concerned with providing the mixture of art, science and maths skills needed. We will be covering the detailed design principles behind environmental and set design and development in 3D visual media such as games or animation. Laboratory/practical sessions will facilitate the practical exploration and implementation of these principles and enable students to demonstrate their understanding of the theory of environment, set and prop design and the different technical constraints of environmental graphics in 3D. Supplementary assessment is to repair deficiencies in original submission.

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Coursework - Written	Look Development Diary ? a continuous record and critical analysis of your LOOK development project (1000 words)	30%
Summative	Coursework - Portfolio/e-portfolio	Production renders and breakdown reel (1 maya Scene, 3 Beauty shots, seconds Video)	70%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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