

Module Details	
Module Title:	3D and VR Workflows and Theory
Module Code:	GAV5022-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Media Design and Technology
Subject Area:	Film and Media
FHEQ Level:	FHEQ Level 5
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	12
Tutorials	6
Laboratory	24
Directed Study	158

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims
The main aim of the module is to introduce, analyse and apply the principles and concepts behind 3D stereo images and Virtual Reality.

Outline Syllabus
Fundamentals of Stereoscopy: Visual requirements, optical depth indicators, parallax, occlusion, accommodation, convergence and binocular disparity. Stereo image production methods, multi-rig stereoscopic cameras, image separation and rendering. Stereo image projection methods: Active e.g. shutter glasses, HMDs . Passive e.g. Polarization

methods, anaglyphs. Auto-stereoscopy.

Technical requirements. Monitor refresh rate, polarising and colour filters. Polarising screens.

Technical Limitations - image flicker, loss of colour information, loss of brightness.

Learning Outcomes

1	Demonstrate a breadth of knowledge of the problems encountered in the theory and production of 3D stereoscopic images by completing structured laboratory classes and completing independent coursework.
2	a) analyse and assess the requirements for a stereo projection b) and develop a well formed solution to a 3D stereo production problem.
3	a) learn and work independently with patience and persistence using good skills of organization and time-management, b) be adaptable with a highly-developed ability to assess problems from new areas logically through an analytical approach, c) write coherently and clearly communicate results.

Learning, Teaching and Assessment Strategy

The theory and illustrative examples will be presented and developed in formal lectures and tutorials (LO1, 2a). Tutorial sheets and worked examples will be used in these sessions and solutions to practical problems will be provided where appropriate (LO2b). These will allow you to analyse problems in stereo projection and production (LO2a,2b,3b) and to demonstrate the development of appropriate solutions (LO2b,3b)

Formative assignments encourage the on-going digestion of the material (LO3a), with the extent of the cumulative knowledge and skills acquired assessed through a coursework assignments and end of module examination (LO1,2a,2b,3a,3b,3c). Supplementary assessment will take form of the original assessment with changed specifications for the coursework assignment.

The module is 30% continually assessed to allow you to demonstrate your subject specific skills. With one assignment that will be completed, marked and feedback will be given during the first semester. There will be a final summative assessment worth 70%. This exam will test your knowledge and understanding of the subject area.

The first assignment will be handed out during the lectures in Week 3. This will be submitted in week 9 or 10 and feedback will be given. Your submission must be uploaded to the VLE before 5.30 pm on the day of your presentation.

Mode of Assessment

Type	Method	Description	Length	Weighting
Formative	Presentation	Informal presentation of project progress to supervisors	5 minutes	%
Formative	Presentation	Informal presentation of idea development to supervisors	5 minutes	%

Summative	Examination - closed book	2 hour closed book exam to confirm understanding of the theoretical underpinning and application	2 hours	70%
Summative	Coursework	Students will work on producing a short piece of stereoscopic content as an individual coursework element throughout the module		30%

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.