Module Specification

Module Summary Information

1	**Module Title**	Digital Media Processing
2	**Module Credits**	20
3	**Module Level**	5
4	**Module Code**	DIG5125

5	**Module Overview**

For graduates wishing to pursue a career in digital media development a comprehensive understanding in the fields of image, video and mixed reality processing is essential.

Many current applications rely on the combination of image and video information, and so an in-depth understanding of the capture, storage, and processing of this information is essential. Furthermore, mixed- and augmented-reality systems are now becoming popular, with applications ranging from entertainment through to engineering being commonplace. This is complemented with the rise in mobile computing and novel sensor systems. Thus, the fundamental concepts in digital image processing, video acquisition and mixed-reality creation underpin many common applications.

All of these elements are becoming prolific for many digital media products from games development, codec design, animation systems and also intelligent imaging. A mastery of this an essential element for employability in the Digital Media Technology field.

6	**Indicative Content**

Module is focused on three core themes, image processing, video processing, sensor signal processing.

Image processing

Digital images
Image data types and formats
Image colourspase
Local and global image operations
Image filtering
Image segmentation
Image transformations

Video processing

Video data and formats
Video frame processing
Feature extraction
Video segmentation
Tracking and motion

Sensor signal processing Human computer interaction Sensors, types and data Sensor and signal processing

7	**Module Learning Outcomes** **On successful completion of the module, students will be able to:**	
	1	To demonstrate knowledge of the key techniques and processes for capturing and manipulating digital image and video data.
	2	To design and develop video and mixed digital media solutions.
	3	To analyse technical theory and relate findings to practical development solutions.
	4	To present informed findings from a technical development.

8	**Module Assessment**		
Learning Outcome			
	Coursework	**Exam**	**In-Person**
1-4	**X**		

9	**Breakdown Learning and Teaching Activities**
Learning Activities	**Hours**
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	48
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	36
Private Study (PS) includes preparation for exams	116
Total Study Hours:	200