Module Specification

Module Summary Information

1	**Module Title**	Digital Audio Effects
2	**Module Credits**	20
3	**Module Level**	6
4	**Module Code**	DIG6106

5	**Module Overview**
Digital Audio Effects (DAFx) will provide continuation from the Digital Signal Processing module in the previous year and will provide you with an applied understanding of the subject. You will be given the chance to develop a range of audio processing techniques and will learn the basics of efficient real-time algorithm design. DAFx is a well-established area in audio engineering and provides you with the technical knowledge required to work in a wide range of disciplines. The module will cover linear and nonlinear systems, time and frequency domain processing algorithms and will explore future generations of methods in the field such as adaptive, cross-adaptive and intelligent music production systems.	

6	**Indicative Content**
Detailed revision and exploration of basic digital audio processing blocks. Signal arithmetic, Delay, Feedback, Filtering, Dynamics processing, Distortion, Bit level manipulation, Panning, Reverberation, Pitch manipulation and Time manipulation. Theory of advanced Digital Audio Processing. Waveshaping, Excitation, Spatialisation, Diffusion, Convolution, Multiband processing, Spectral processing, Feature extraction and Feature based automation. Implementation and application of DAFX. Individual research into a specific branch of audio effects that results in development and implementation of novel processing units. The context of application can vary from production and mastering to live mixing and dj performance.	

7	**Module Learning Outcomes** **On successful completion of the module, students will be able to:**	
	1	Implement a range of common signal processing techniques.
	2	Formulate processing algorithms underpinning common signal processing techniques in audio effects.
	3	Create useful documentation for developed digital effects designed for end user knowledge transfer.

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1-3	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	52
Private Study (PS) includes preparation for exams	100
Total Study Hours:	200