Desktop Audio 2

Module Information

2022.01, Approved

Summary Information

Module Code	5532STE
Formal Module Title	Desktop Audio 2
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Liverpool Institute for Performing Arts

Learning Methods

Learning Method Type	Hours
Lecture	20
Tutorial	2
Workshop	40

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	This module is designed to build on the skills and knowledge acquired in Desktop Audio One. It aims to provide students with the knowledge and understanding of additional areas that can be incorporated into desktop audio production, and to develop some areas covered in the first year to a higher level. The module embraces 'music technology' in its widest sense by covering the broad theoretical concepts that underpin sound synthesis and sampling, and provides students with the practical skills to apply these concepts using software devices in arrange of contexts. Advanced areas of MIDI and sequencing are explored and applied, including synchronisation, MIDI timecode and the creation of simple virtual 'environments' for MIDI control.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate the structure and practical use of MIDI timecode and MIDI clock.
MLO2	2	Explain the theoretical concepts which underpin sound synthesis and audio sampling
MLO3	3	Apply the techniques required to integrate sampling and synthesis within the desktop audio environment, including complex software patching and modulation techniques
MLO4	4	Design MIDI control environments to control hardware and software devices

Module Content

Outline Syllabus	Sampling & Synthesis Theory Sample rates & Nyquist limit; bit depth; time vs. frequency domains; disadvantages of sampling; Understanding waveforms; Building blocks of synthesis – VCAs and VCOs; Envelopes and other modifiers; Filters and resonance; Controlling synthesis by use of modulation; CV and Gates Sampling Practical Operation and use and integration of software samplers; understanding and using 'Recycle' Synthesis Practical Operation of 'Reason'; synthesis building blocks available; sampling with 'Reason'; integrating 'Recycle' and 'Reason'; drum programming and replacement techniques; using virtual instruments Synchronisation MTC structure – quarter frame message protocol; difference between SMPTE and MTC Advanced MIDIUse of Logic's MIDI environment; designing a virtual control surface; manipulating MIDI data with transformers; Automation functions in 'Logic Pro X' Advanced audio sequencing with Pro Tools –advanced automation features – elastic audio
Module Overview	
Additional Information	Mark Atherton is the Module Leader (m.atherton@lipa.ac.uk)

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Practice	Practical Project	60	0	MLO3, MLO4
Exam	Written Exam	40	1	MLO1, MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings