

Liverpool John Moores University

Title: DESKTOP AUDIO 2
Status: Definitive
Code: **5511STE** (118571)
Version Start Date: 01-08-2019

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Liverpool Institute for Performing Arts

Team	Leader
Karl Jones	Y

Academic Level: FHEQ5 **Credit Value:** 24 **Total Delivered Hours:** 81.5
Total Learning Hours: 240 **Private Study:** 158.5

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	30
Workshop	50

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	PRACTICAL	PRACTICAL ASSIGNMENT AND DEMONSTRATION	60	
Exam	EXAM	WRITTEN EXAM	40	1.5

Aims

This module is designed to build on the skills and knowledge acquired in Desktop Audio One. It aims to provide you 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 introducing you to

the broad theoretical concepts that underpin sound synthesis and sampling, and provides you with the practical skills to apply these concepts using software devices.

Advanced areas of MIDI and sequencing are explored and applied, including synchronisation, MIDI timecode and the creation of simple virtual 'environments' for MIDI control.

Learning Outcomes

After completing the module the student should be able to:

- 1 Recall the structure and use of MIDI timecode and MIDI clock.
- 2 Explain the theoretical concepts which underpin sound synthesis and audio sampling
- 3 Apply the techniques required to integrate sampling and synthesis within the desktop audio environment, including complex software patching and modulation techniques
- 4 Design MIDI control environments to control hardware and software devices

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

PRACTICAL	3	4
ASSIGNMENT & DEMO		
WRITTEN EXAM	1	2

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 MIDI

Use of Logic's MIDI environment; designing a virtual control surface; manipulating MIDI data with transformers; Automation functions in 'Logic'

Learning Activities

This module is delivered in both lecture and workshop format. The lecture will generally cover some theoretical or general concepts that you will cover practically in supervised workshops later.

As some of the software packages you will be learning can be complex, at times an extended demonstration will take the place of lectures and workshops. Where this happens, it will be offset in the following week by having longer workshop times.

Notes

Workshops in the early stages of the module will be task-based and tutor led. In the later stages of the module the workshops will be focussed towards the completion of your coursework, with the opportunity to book individual tutorials to help you with this, or to revisit subjects that you are having difficulty with.

Your coursework is designed to assess both your practical ability and your understanding of certain concepts and techniques. In addition to handing in a finished project, you will be expected to demonstrate and talk about your work to your tutor during a scheduled assessment time.