LIVERPOOL JOHN MOORES UNIVERSITY

Core Recording Skills

Module Information

2022.01, Approved

Summary Information

Module Code	4520STE
Formal Module Title	Core Recording Skills
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
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	36
Practical	1
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 aims to provide a solid foundation in the practical use and operation of modern recording studio technology. Although the module is predominantly based in a recording studio environment, it has been designed to ensure that much of the content is immediately transferable to other, more specialised areas. Although most of the module is of a practical nature, it is part of LIPA's core philosophy that students can not only do something, but also understand why they are doing it and how it happens. Because of this, there is a strong theoretical backbone to the module, but this is always in the context of practical applications.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Use basic recording studio technology effectively and efficiently
MLO2	2	Select appropriate techniques to record and mix multi-track recordings involving acoustic and non-acoustic sources
MLO3	3	Demonstrate a clear grasp of signal path and routing in an analogue studio environment
MLO4	4	Identify and solve common technical faults in a studio environment

Module Content

Outline Syllabus	Recording Studio BasicsThe history and development of the modern studio; Key components of a recording studio; Basic principles of multitrack recording; 'Split' vs. 'In-Line' recording console architecture and function; Patch bays - basic principles and normalling conventions; Input channels, busses and tape monitors; Console master section; Signal routing and pan; Signal levels and gain; Metering; PFL and Solo; Basic Auto locator functions; Recorder Monitor Modes; Backup and RestoreWorking With MicrophonesMicrophone types and operating principles; Polar patterns; Frequency response and audio characteristics; Phantom power; Care and feeding of microphones; Setting up microphones; Observation of polar patterns and responses; The inverse-square law in practice; Critical listening tests with different microphones; Using auxiliary sends and foldback; Studio communicationsEQEqualiser function; Frequency and Timbre; Equaliser Types - Fixed, Sweep, Graphic, Parametric; Equaliser Responses - Peaking, Shelving, High Pass,Low Pass, Band Pass; Equaliser Bandwidth - 'Q' and what it means; General suggestions for use; Matching numbers to sounds; Describing timbres; Demonstration of differences in responses; Using a sweep EQ; Cutting and Boosting - the knob goes both ways!; Corrective EQ exercises; Creative EQ exercisesMixingFunctions of a mix; Stereo / mono compatibility; Dynamic range considerations; Playback system considerations; Fletcher-Munson curves and their importance to your final mix; Mixing with EQ rather than level; Spatial separation and imaging; Strategies for a successful mixdown; Using groups as an aid to mixing; Balancing FX levels - some advice; Checking for mono compatibility; Achieving a uniform balance across playback systems; Compressing/EQing a complete mix; Using exciters (or perhaps not...).; Cleaning up your mixRecording GuitarsRange of guitars - acoustic, electric, semi-acoustic; How sound is generated; Tuning and guitar set-up; Acoustic guitar microphone approaches; Electric Guitars and guitar cabs; Micing Guitar Cabs - typical approaches; DI Boxes and impedance matching; DI vs. Mic; Practical microphone placements for acoustic guitars; Practical microphone placements for electric guitars; Working with DI boxes - demonstration of incorrect impedance matching; Using compression and EQ with electric guitarsRecording VocalsImportance of vocals to pop music; How sound is generated; Typical microphone technique for lead vocals; Coaching a vocalist; Alternative techniques for recording backing vocals; Foldback techniques to combat pitching problems; Practical microphone placement exercises; Avoiding popping and sibilance with mic placement; Using de-essers; Compression for vocals; FX suggestions for vocals; Vocal 'comp' tracks; Double tracking, ADT and pitch correctionRecording DrumsElements of the drum kit; How the sound is generated; Drum Tuning; Minimum mic technique - advantages & disadvantages; Maximum mic technique - advantages and disadvantages; Review of common mic selections; Crosstalk and how to get around it; Drum Tuning exercises; Damping and eliminating rings; Practical microphone placements; Using EQ and filters; Using noise gates - working with side chain filters; Using compressors with drumsOther Instrument RecordingMicrophone selection and placement for acoustic piano, brass and stringed instruments. Session ManagementWays of recording - As Live, Tracked or a Combination; Strengths and weaknesses of each method; How much time to allow; Strategies for maximising your studio time; Record Keeping - track sheets, settings files and song maps; Labelling conventions for master recordings; Performing manual drop-ins; Performing automatic drop-ins; Cleanup, Editing functions, file export and import to ProToolsBasic Dynamics ProcessorsDifferences between effects and processors; Dynamic range; The need for compression; Function of a compressor; Typical controls and their use - threshold
Module Overview	
Additional Information	Jon Thornton is the Module Leader (J.Thornton@lipa.ac.uk)

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Practical Test	20	0	MLO3, MLO4
Artefacts	Coursework – Multitrack Record	80	0	MLO1, MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings