

Module Code	EEPMMT07
Module Name	AUDIO ENGINEERING
ECTS Weighting²	5 ECTS
Semester taught	Semester 1
Module Coordinator/s	JIMMY EADIE
Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline	<p>On successful completion of this module, students should be able to:</p> <p>LO1. Acquire critical listening skills that will enable audition of audio material for optimum spectral and dynamic content. Recognise recording errors such as noise/phase/distortion and implement appropriate solutions.</p> <p>LO2. Gain insights into measurement techniques for room acoustics to critique the acoustic properties of a space for audio production.</p> <p>LO3. Proficiently record material using a variety of DAW and hardware, understanding signal flow and implementation of correct metering to deliver a broadcast ready master file.</p> <p>LO4. Work competently and safely in a studio environment as part of a team in a creative and technical capacity.</p> <p>Graduate Attributes: levels of attainment</p> <p>To act responsibly - Attained</p> <p>To think independently - Attained</p> <p>To develop continuously - Attained</p> <p>To communicate effectively - Attained</p>
Module Content	<p>This module aims to provide students with an introduction to the theory and practical skills central to audio engineering practice. The skillsets acquired will enable the student to carry out recording tasks to a proficient level. Critical and analytical listening is a learnt skill and can be acquired through practice. Students will be introduced to techniques to refine their ability to distinguish, programme frequency response, tone, spatial and spectral content and dynamic control. The module also aims to provide practical and theoretical knowledge in the main areas of studio design and acoustics. Stereo recording techniques will be investigated and practiced comprehensively. Through analysis of stereo program material the student will gain valuable insights into</p>

¹ [An Introduction to Module Design](#) from AISHE provides a great deal of information on designing and re-designing modules.

² [TEP Glossary](#)

creating broadcast ready material for multiple mediums, such as radio, vinyl, TV and digital distribution platforms.

Teaching and Learning Methods

This module is presented through a combination of lectures dealing with audio engineering principals, workshops and tutorials focused on practice. Critical and analytical listening sessions will also be held during the semester, culminating with an in-class test. Studio orientation will be held at the beginning of the semester to equip the student with the necessary skills to operate the studio equipment safely and competently. Acoustic measurement and analysis will be delivered as a workshop and each student will work with industry standard software to gain a practical understanding of principals such as reflection, diffusion and absorption. Students will also attain the ability to identify problems within a space such as flutter echo, excessive reverberation or absorption and incorrect sound transmission setup. Stereo recording techniques will be presented looking at principals such as: microphone type/operation, phase/polarity of signals, audio connections, analogue/digital, spectral/dynamic processing.

Assessment Details³ Please include the following: <ul style="list-style-type: none"> • Assessment Component • Assessment description • Learning Outcome(s) addressed • % of total • Assessment due date 	Assessment Component	Assessment Description	LO Addressed	% of total	Week due
	Assignment 1	In-class critical listening test	1&4	20%	5
	Assignment 2	In-class acoustic analysis test.	2	30%	7
	Assignment 3	Stereo recording and critical reflection paper	1234	50%	10

Reassessment Requirements

Contact Hours and Indicative Student Workload³

Contact hours: 11X2 hour lectures.
Independent Study (preparation for course and review of materials): 50 hours
Independent Study (preparation for assessment, incl. completion of assessment): 50 hours

Recommended Reading List

Ballou, G., 2008. Handbook for Sound Engineers, 4th edition
Streicher R. & Everest F.A., 2006. The New Stereo Sound book, 3rd edition.
Everest, F, Master Handbook of Acoustics
Rumsey, F. & McCormick, T., 2009. Sound and Recording: An Introduction; 6th edition
Katz, B., 2014. Mastering Audio: The Art and the Science; 3rd edition
Huber, D., 2013. Modern Recording Techniques,
Owsinski, B., 2009. The Mix Engineers Handbook, 3rd edition

Module Pre-requisite

None

Module Co-requisite

None

Module Website

Blackboard

Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.

No

³ [TEP Guidelines on Workload and Assessment](#)

Module Approval Date

Approved by

Academic Start Year

Academic Year of Date