MTD205 Audio Technology

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

This course provides the theoretical foundation on the operation of audio systems as components used in multimedia production, distribution and reproduction. Students will be given a broad perspective on how transforms, signal theory, discrete mathematics, information theory, electronics and physics all come together in audio applications.

Topics:

- Introduction to Sound
- Sound Transducers
- Quantization
- Sampling and Digitization
- Music technology systems and DSP
- MIDI- Musical Instrument Digital Interface
- Format of MIDI messages
- The Human Ear
- MPEG2 audio compression
- Spatial Audio
- Sound Synthesis
- Analog and Digital Synthesis

Textbooks:

Kirk, R, Hunt, A,: Digital Sound Processing for Music and Multimedia (eTextbook) Focal Press 2001 (Taylor & Francis)
ISBN-13: 9781136116377

Learning Outcome:

- Describe the principles of audio technology
- Explain sound generation and transducers
- Demonstrate the application of audio technology in multimedia
- Execute sampling for audio technology
- Analyse audio compression and spatial audio
- Discuss synthesizing an audio system

Assessment Strategies (Evening Class):

Components	**Description**	**Weightage Allocation (%)**
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	TUTOR-MARKED ASSIGNMENT 1	15
	QUIZ 1	9
Overall Examinable Components	Written Exam	70
Total		**100**