

MTD205e Audio Technology

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

E-Learning: BLENDED - Learning is done MAINLY online using interactive study materials in Canvas. Students receive guidance and support from online instructors via discussion forums and emails. This is supplemented with SOME face-to-face sessions. If the course has an exam component, this will be administered on-campus.

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

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

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:

Continuous Assessment Component	Weightage (%)
TUTOR-MARKED ASSIGNMENT	15
QUIZ	9
PRE-CLASS QUIZ	2
PRE-CLASS QUIZ	2
PRE-CLASS QUIZ	2
Sub-Total	30

Examinable Component	Weightage (%)
Written Exam	70
Sub-Total	70

Weightage Total **100**