Module Specification

Audio Technology

Version: 2025-26, v2.0, 11 Feb 2025

Contents

Part 1: Information

Module title: Audio Technology

Module code: UFCFH4-30-1

Level: Level 4

For implementation from: 2025-26

UWE credit rating: 30

ECTS credit rating: 15

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: None

Field: Computer Science and Creative Technologies

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: See Learning Outcomes

Outline syllabus: Familiarisation with fundamental musical acoustic measurements:

Use of time and frequency domain graphs for representation and analysis.

Analogue and digital representations: including analogue to digital conversion, digital to analogue conversion and sampling theory.

Audio storage and transmission formats: including the principles of analogue and digital transmission of audio and audio file formats such as Microsoft Wave and AIFF.

Fundamental principles and types of modification and synthesis:

Synthesis components: oscillators, noise, filters, envelopes.

Interconnection of synthesis components to form synthesiser systems.

Synthesis techniques: subtractive, additive, modulation synthesis.

Fundamentals of graphical programming environments:

Object-based representations of systems.

Event-driven systems.

Audio patching systems.

Use of software packages to explore applications:

Common audio software types: DAWs, sound editor applications, sound processing applications and plug-ins.

Common principles: timelines (and time formats), regions, tracks, edit decision lists (EDLs).

Audio editing: zero-crossings, fade-ins, fade-outs, normalisation, destructive and non-destructive.

Systems, design and problem solving applied to audio technology:

Systems (block) diagrams.

Methodical problem solving techniques.

Language, history, context of audio technology:

History of the developments of audio technology and music technology.

Influence of technological developments on the creative process.

The language of audio technology.

Part 3: Teaching and learning methods

Teaching and learning methods: Theoretical and conceptual aspects of the module will be introduced by lecture on a weekly basis and, where appropriate, contextualised with practical demonstrations of application. Relevant reading material and sections from the course text should be read in preparation for each lecture.

Learners will apply the conceptual elements of taught material in weekly practical sessions where abilities in problem solving and implementation surrounding audio technology concepts will be developed. Learners are required to complete exercises, extend ideas, and develop further understanding independently of the timetabled sessions.

Support will also be provided via email and virtual learning environments.

Assignments will be staged throughout the year which will require students to complete additional unsupervised learning.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Utilise conventional audio applications to analyse, modify, control and synthesise audio material.

MO2 Employ a guided but methodical approach to the completion of technical and creative tasks.

MO3 Discuss the practices, technologies, and creative context used in the execution of tasks.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ufcfh4-30-1.html

Part 4: Assessment

Assessment strategy: The portfolio will contain a practical assignment and write up. It will be used to assess learners' practical skills in the application of music and audio technology systems. This will involve demonstrating an ability to create an extended piece of work beyond the examples seen in lectures and practicals. The assignment activity will be staged in order to allow progressive development of skills and understanding.

Formative assessment will be provided as part of the practical sessions.

Assessment criteria will be supplied with the assignment specification.

The resit will be the same as the main sit.

Assessment tasks:

Portfolio (First Sit)
Description: Practical assignment (3-4mins) and documentation (1000 words - or equivalent accessible format)
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Portfolio (Resit)
Description: Practical assignment (3-4 mins) and documentation (1000 words - or equivalent accessible format)
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Audio and Music Technology [Frenchay] BSc (Hons) 2025-26

Creative Music Technology [Frenchay] BSc (Hons) 2025-26

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