STUDENT AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Information			
Module Title	Audio Technology		
Module Code	UFCFH4-30-1	Level	Level 4
For implementation from	2020-21		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

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.

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. On average this will require a total of 3 hours study each week.

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. On average this will require a total of 4 hours study each week.

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. Typically this will require 4 hours study each week although it should be anticipated that the majority of this time will be biased towards the assignment deadlines.

Contact time: 72 hours
Assimilation and development of knowledge: 148 hours
Exam preparation: 20 hours
Coursework preparation: 60 hours
Total study time: 300 hours

Part 3: Assessment

The examination will be used to establish learners' understanding of the module content as described in lectures and reading materials.

The assignment 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. Individual feedback will be provided on the assignment and group (generic) feedback on the exam.

Marking of any group components of assignment work will include an opportunity for students to indicate individual contributions.

Assessment criteria will be supplied with the assignment specification and in example exam papers.

First Sit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	25 %	Online Exam (2 hours) 24 hour window
Practical Skills Assessment - Component B		26 %	Practical assignment and write up
Practical Skills Assessment - Component B		49 %	Practical assignment and write up
Resit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	25 %	Online Exam (2 hours) 24 hour window
Practical Skills Assessment - Component B		75 %	Practical assignment and write up

Part 4: Teaching and Learning Methods	
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Identify and describe properties of audio signals in the time and frequency domains with reference to fundamental musical acoustic measurements	MO1
Utilise conventional audio workstation applications to analyse, modify, control and synthesise audio signals and construct such systems in graphical programming environments	MO2
Breakdown problems into smaller manageable components and employ a methodical approach to analysing and solving problems in audio technology and wider technological domains	MO3
Recognise and discuss the historical and cultural significance of audio technologies using appropriate language for a professional context	MO4

Contact Hours	**Independent Study Hours:**

Independent study/self-guided study	228

	Total Independent Study Hours:	228
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	72
	Total Scheduled Learning and Teaching Hours:	72
	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ufcfh4-30-1.html	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: Audio and Music Technology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21 Audio and Music Technology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2020-21 Audio and Music Technology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2019-20 Broadcast Audio and Music Technology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2019-20 Broadcast Audio and Music Technology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20 Audio and Music Technology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20