MODULE TITLE:	Electroacoustic Composition and Sound Design Technologies
MODULE CODE:	MUS302
YEAR OF INTRODUCTION/ REVISION:	2012
MODULE LEVEL:	5
CREDIT POINTS:	20
MODULE STATUS:	Optional
SEMESTER:	2
LOCATION:	Magee
E-LEARNING:	Web-supplemented
PREREQUISITE(S):	MUS111, MUS112 (MUS319 strongly advised) for BMus students; CRE303 for BA Creative Technologies students
CO-REQUISITE(S):	none
MODULE CO-ORDINATOR(S):	Bridges, B.D., Dr

TEACHING STAFF RESPONSIBLE FOR MODULE DELIVERY: Bridges, B.D., Dr

HOURS:

Lectures	12 hrs
Seminars	0 hrs
Tutorials	12 hrs
Practicals	0 hrs
Independent study (including assessment)	176 hrs

TOTAL EFFORT HOURS:	200
ACADEMIC SUBJECT:	Musics
MODULAR SUBJECT:	MUS

RATIONALE

This module introduces students to the key cultural contexts, aesthetic and perceptual principles and tools of electroacoustic composition and sound design. The module develops students' appreciation and understanding of the application of advanced music technology/signal processing techniques in the context of composition and sound design and facilitates subsequent creative work in these areas.

AIMS

To provide students with a grounding in the key aesthetic and perceptual principles of electroacoustic composition and related forms of sound-based composition, key works from the electroacoustic music and experimental sound-based music repertoires and an exposure to issues in the theory and practice of digital sound design. A range of computer music tools/environments for audio processing, sound design and composition will be introduced.

LEARNING OUTCOMES

A successful student will be able to:

KNOWLEDGE AND UNDERSTANDING

K1 Identify and understand a range of compositional approaches in electroacoustic composition implications of these approaches.

K2 Understand the practical application of a wide range of hardware and software tools in audio processing, sound design and composition.

K3 Demonstrate knowledge of a wide range of technical procedures in digital sound processing.

K4 Understand the difference in aesthetic and perceptual results based on the application of different technical procedures.

INTELLECTUAL QUALITIES

I1 Demonstrate a range of problem-solving strategies.

I2 Analyze and evaluate existing examples of composition.

I3 Analyze and evaluate his/her own creative and technical approach.

I4 Show a capacity for the application of creative and imaginative approaches in a variety of situations.

PROFESSIONAL/PRACTICAL SKILLS

P1 Display critical listening skills.

P2 Operate a wide range of hardware and software.

P3 Develop skills in the combination and processing of source materials for sound design.

P4 Execute appropriate technical procedures.

TRANSFERABLE SKILLS

T1 Manage time and resources effectively.

T2 Work efficiently and creatively on an individual basis to solve simple technical issues and liaise with technical support staff in a professional fashion when supplementary equipment is required.

T3 Demonstrate critical thinking and evaluation skills.

T4 Develop a competent and efficient workflow in the creative application of technological tools.

CONTENT

Students will engage with:

- Critical listening
- Issues in aesthetics
- Cultural issues in composition
- Basic principles of auditory perception
- Issues in sound processing
- Appropriate hardware and software in use in the modern recording studio environment
- Creative and efficient procedures for electroacoustic composition and digital sound processing

TEACHING AND LEARNING METHODS

Tutorials will be used to:

- identify key principles and best practice in the modern studio recording
- introduce appropriate hardware and software
- establish creative and efficient practices in the use of technology
- heighten awareness of health and safety issues

Practical exercises will be used to:

- investigate aesthetic issues in existing recordings
- increase familiarity with appropriate hardware and software
- explore a range of techniques in the application of music technology

Students will be directed to read:

- module handouts
- technical manuals and supplementary texts on software tuition
- key texts on electroacoustic music composition and sound design
- web-based resources on electroacoustic composition and sound design

Students will be directed to listen to:

- a range of compositions with a variety of approaches to the use of technology

Students will be expected to:

- attend all sessions
- work independently to develop their knowledge skills and experience of the areas covered

ASSESSMENT

Coursework 1:

Field recording/sound gathering, cataloguing and sound design, with report. 40%

Students will gather sounds for their composition through field recordings, the use of portable recorders or converged devices or plunderphonics (appropriation of compositional raw materials from recorded sources). They must then proceed to devise some method of categorising these source materials, based on source type and semantic/cultural association or timbral characteristics. These materials will then be processed using some of the advanced sound processing tools and techniques discussed in class with a view to deploying the fruits of this creative sound processing in the final composition assignment. A report of circa 1,000 to 1,500 words must be submitted, reflecting on the process of sound gathering and categorisation and the subsequent sound processing/design phase. The compositional possibilities of materials which are gathered and created must also be discussed.

K2, K3, K4, I1, I2, I3, I4, P1, P2, P3, P4, T1, T2, T3, T4

Coursework 2:

Electroacoustic composition: 60%

Each student must submit an electroacoustic composition utilising *musique concrète*/found sound elements, plunderphonics (elements derived from recorded musical materials which are to be recontextualised), drone-based or other noise-music elements or a combination of these materials and approaches. The composition will derive from materials gathered and/or created during coursework 1. An accompanying essay of circa 2,000 to 3,000 words will reflect on aesthetic and perceptual issues, cultural/contextual issues and relevant technical issues (including any supplementary sound processing or spatialisation techniques which are applied to materials during the process of composition).

K1, K2, K3, K4, I1, I2, I3, I4, P1, P2, P3, P4, T1, T2, T3, T4

100% Coursework 0% Examination

READING LIST

Required

Module handouts and selected articles

Demers, J. (2010) *Listening Through the Noise: The Aesthetics of Experimental Electronic Music.* New York: OUP USA

Hugill A.(2008) *The Digital Musician.* London: Routledge

Recommended Reading

Augoyard, J. and H. Torgue. (2005) *Sonic Experience: A Guide to Everyday Sounds.* Montreal: McGill-Queen's

Cox, C. and D. Warner, ed. (2004) *Audio Culture: Readings in Modern Music*. London: Continuum

Collins N. (2009) *Introduction to Computer Music.* Chichester: John Wiley

Dean, R.T. (2009) *The Oxford Handbook of Computer Music.* New York: OUP USA

d'Escrivan, J. and N. Collins. ed. (2007) *The Cambridge Companion to Electronic Music.* Cambridge: Cambridge University Press

Emmerson S.(1986) *The Language of Electroacoustic Music.* London: Macmillan

Emmerson S. (2000) *Music, Electronic Media and Culture.* Aldershot: Ashgate

Emmerson S. (2007) *Living Electronic Music.* Aldershot: Ashgate

Erickson, R. (1975) *Sound Structure in Music*. Berkeley: University of California Press

Howard D. and Angus J. (2001) *Acoustics and Psychoacoustics.* Oxford: Focal

Johnston, I. (2002) *Measured Tones*. London: Taylor and Francis

LaBelle B. (2006) *Background Noise: Perspectives on Sound Art*. London: Continuum

Manzo, V.J. (2011). *Max/MSP/Jitter for Music: A Practical Guide to Developing Interactive Music Systems for Education and More*. New York: OUP USA

Norman, K. (2004) *Sounding Art: Eight Literary Excursions through Electronic Music.* Aldershot: Ashgate

Sigal, R. (2009) *Compositional Strategies in Electroacoustic Music: Generating materials and creating an effective musical language in electroacoustic music.* Saarbrücken: VDM Verlag

Snyder B. (2004) *Music and Memory: An Introduction.* Cambridge, Mass., and London: MIT

Wishart T. (1996) *On Sonic Art*. London: Routledge

Wishart T. (1994) *Audible Design*. York: Orpheus

Recommended Listening

Adkins, M. (2006) *Monde inconnus.* Audio CD. Montréal: Empreintes Digitales

Barrett, N. (2002) *Isostasie.* Audio CD. Montréal: Empreintes Digitales

Dhomont, F. (2003) *Jalons.* Audio CD. Montréal: Empreintes Digitales

Normandeau, R. (2001) *Clair de terre.* Audio CD. Montréal: Empreintes Digitales

Smalley, D. (2000) *Sources/Scène.* Audio CD. Montréal: Empreintes Digitales

Stockhausen, K. (2001) *Elektronische Musik: 1952-1960.* Audio CD. Germany: GEMA, 2001

Tenney, J. (2003) *Selected works 1961-1969.* Audio CD. New York: New World Records

Various (2008) *GRM Archive.* Audio CD.

Various (1996) *Klang.* Audio CD. England: NMC

Additional listening materials will be distributed to students via playlists on the Spotify streaming music service and/or related services.

SUMMARY DESCRIPTION

This module introduces students to the key theoretical principles and tools of electroacoustic composition and digital sound design.