STUDENT HANDBOOK: BA (Hons) Creative Music Technology 2017-18

Major, Joint, Minor or Specialised	Specialised
School	College of Liberal Arts
Department	Music and Performance
Campus	Newton Park
Final award	BA (Hons) Creative Music Technology
Intermediate awards available	Cert HE, Dip HE, BA
UCAS code	J931
Details of professional body accreditation	N/A
Relevant QAA Benchmark statements	Music
Date specification last updated	June 2017

INTRODUCTION

What you will study

The programme will engage students in exploratory relationships between technologies and composition. The 'music' content is responsive to very a broad spectrum to include contemporary genres in the commercial and urban music arena, experimental music, sonic art and the broader creative industries. In each case the students are seen as creative/composers rather than sound reinforcement, engineering or purely technical roles. A wide range of audio and digital media is referred to across the modules offered, in recognition of the merging and interdisciplinary nature of the professional and creative practice in the subject field. Additionally, we aim to furnish our students with a wide range of sector related transferable skills. These are intended to broaden the scope of employment opportunities open to you.

What our students say:

"CMT at Bath Spa University is the Music Tech Degree for people who want to cross artistic boundaries and break technical ones. Great facilities, great staff and a great course. There's very little that I learned during my three years at Bath Spa that I haven't used and built upon, on a daily basis in my professional career." Alumni comment

"Extremely approachable staff who each bring something unique to the course." National Student Survey comment May 2017

"The teaching facilities are excellent and have provided me with an opportunity to excel in areas where I wasn't confident or skilled in before going to Bath Spa." National Student Survey comment May 2017

"CMT helped me so very much that it is hard to quantify: the course (and tutors) literally changed my life. It was my first introduction to so much (such as electroacoustic music, sound art, audio DSP programming...)!" Alumni comment

"Thanks for everything you and the lecture team have done for me/us over the span of the course. It's been a blast and I think we owe most of it to you guys for giving us so many opportunities so really; thank you." Final year student comment, June 2015

COURSE CONTENT

Level 4 modules:

MT4001-20 Creative Practice
MT4002-20 Sound Design for Moving Image
MT4003-20 Critical Theory
MT4004-20 Synthesis and Sampling
MT4005-40 Digital Audio Recording

Level 5 modules:

MT5002-20 Digital Signal Processing
MT5003-40 Sonic Art: Theory and Practice
MT5004-20 Digital Audio Techniques
MT5005-20 Multimedia Production
MT5006-20 Sound and Music Industires

Level 6 modules:

MT6001-40 Devised Project: Proposal, Context, Project - Compulsory

MT6002-40 Professional Portfolio A – Compulsory

Two optional pathways from:
Production Techniques
Composition for Broadcast Media
Electroacoustic Composition
Audiovisual Composition and Performance

MT6003-40 Professional Portfolio B – Compulsory

Two optional pathways from:
Audio Post for Moving Image
Game Audio
Sonic Performance
Audio Software Development

Module descriptors are included at end of this handbook

COURSE AIMS – WHAT WILL YOU LEARN?

This course covers a wide range of approaches to creative and technical engagement.

The aims of the **Creative Music Technology** programme are to -

1. Develop confident, creative and industry competent graduates that are able to contribute to and/or define emerging artistic and technical boundaries

2. Enable students to explore and gain confidence on a wide range of software and technologies that can capture, edit, process and organise audio, sound, and visual media alongside broader digital literacies including the creation of web content.

3. Equip students with transferable techniques, artistic approaches, and working practices that can continue to evolve beyond their degree in a cultural landscape where software and technology are in a constant state of change

4. Promote the exploration and harnessing of a personal creative voice within all creative and technical projects through the development of innovative approaches to their work.

5. Support students to engage in audio and inter/multi discipline works that freely explore experimental uses of technology and challenge received expectations of artistic work in the field

6. Produce highly digitally and culturally literate graduates that are confident to engage with and contribute to an internationally networked creative and cultural industry

7. Create students that are confident to discuss, promote and market their creative work, allowing them to thrive across a full range of professional and creative working scenarios ranging from brief driven commissions to multidisciplinary or interdisciplinary collaborations and team working.

The aims above run parallel to a set of more general skills that you will acquire throughout the course -

- Knowledge
  The cultural and academic contexts in which you listen, compose and create
- Thinking skills
  How, and why you compose, create and listen - and what determines measurements applicable to these activities
- Subject-based practical skills
  Competency, fluency and choice in hardware and software use
- Skills for life and work:
    - Development of your own style of independent learning
    - Ability to communicate ideas to others and to debate relevant issues
    - Digital Literacy skills
    - Communication skills
    - Team work
    - Time management
    - Confidence

LEARNING ENVIRONMENT

Learning is encouraged through participation in a wide variety of activities, for example lectures, presentations, seminars, workshops and individual tutorials. Each module has a published number of hours of formal contact, but you should allow yourself an additional 20 hours each week for private study/student-centred learning so as to explore learning tasks and develop assessment projects to completion. Where resources permit spaces are appropriate to activities. Session lengths, and intervals between sessions, are mapped to permit effective learning.

ASSESSMENT

Assessments are intended to allow you to demonstrate your developing knowledge and skills. Students are assessed by a variety of methods. These are designed to allow for the focus of the assessment to be evidenced most clearly. You may be required to engage with

- Long and short scale creative and/or practical projects and portfolio building
- Essays, short papers, written reports and critical reflections
- Presentations and demonstrations
- Online tests

Assessment is specific to each module and is clearly articulated in all module handbooks. Your work is required to be submitted to the published deadlines. Penalties for late submission result in 'capped' grades or potential module failure.

Please speak to your tutor if you foresee any difficulties that a particular style of assessment would present you – it may be that an alternative style of assessment or submission can be agreed.

WORK EXPERIENCE AND PLACEMENT OPPORTUNITIES

Much of your creative work across the entire programme has a specific focus on developing outward facing content and portfolio, and working in industry style teams and collaborations that will prepare you to engage with the broader creative industry models of employability. More specifically, the Professional Development module in year 2 includes the opportunity to find, and report on, a placement or professional work experience or collaboration with an existing media creative.

PROJECT WORK

There may be the opportunity to work on 'live' industry projects. You will also have many opportunities to be involved in collaborative and inter disciplinary student projects, within the course and across the wider community of courses and students at Bath Spa.

CAREERS
Careers webpage

Creative Music Technology can offer expertise to many areas of employment in the creative industries sector. Example destinations listed below can be further subdivided to specialism.

- Production
- Producer/artist
- Performance
- Game audio
- Software/hardware development and design
- Multimedia authoring
- Composition
- Publishing
- Education
- Audio engineering
- Sound recording
- Foley artist
- Sound designer

ADDED VALUE
In addition to the lecture and workshop experience your studies here should also access -

- Extensive personal support from a friendly and caring staff
- A good practical and theoretical education
- Availability of careers, advice and support

TEACHING QUALITY INFORMATION

- National Student Survey data 2016

Creative Music Technology's overall student satisfaction was reported at 82%. A number of components to this overall statistic include 92% for teaching, 91% for academic support, and 94% for learning resources.

- The DLHE (Destination of Leavers in Higher Education) measures our graduate employment statistics. The 2015 survey recorded 80% in employment and 50% of that year's CMT graduates are already in full time 'professional level' employment.

HOW WE SUPPORT YOU

- Student Support (general personal and welfare areas)
- Student Services (Studies and academic areas)
- Writing and Learning Centre (referencing, writing skills etc.)
- Mitigating Circumstances (supporting difficult circumstances that affect assessment)

HOW WE ASSURE THE QUALITY OF THE COURSE

Before the course started, a process of course approval took place which included consultation with academic and industry subject experts. The following was checked:

- There would be enough qualified staff to teach the course
- Adequate resources would be in place
- Overall aims and objectives are appropriate
- Content of the course meets requirements of Quality Assurance Agency for Higher Education and European Standards and Guidelines
- The course maps to subject benchmark statements
- The course meets any professional/statutory body requirements
- Internal quality criteria, such as admissions policy, teaching, learning and assessment strategy and student support mechanisms

HOW WE MONITOR THE QUALITY OF THE COURSE

The quality of the course is annual monitored through evaluating:

- Student feedback, including module evaluation questionnaires.
- University and national surveys.
- External examiner reports (considering quality and standards).
- Peer observation of teaching and staff development review.
- Statistical information, considering issues such as pass rate.

The course team use this information to undertake annual monitoring, which, in turn, is monitored by the University's Academic Quality and Standards Committee.

Every six years an in-depth periodic review of the subject area is undertaken by a review panel, which includes at least two external subject (academic and industry) specialists. The panel considers documents, meets with current/former students and staff before drawing its conclusions. This results in a report highlighting good practice and identifying areas where action is needed.

THE ROLE OF THE COURSE COMMITTEE

This course has a Course Committee comprising all relevant teaching staff and student representatives from each year group. The committee has responsibilities for the quality of the course and plays a critical role in the University's quality assurance procedures.

THE ROLE OF EXTERNAL EXAMINERS

The standard of this course is monitored by an external examiner whose duties include reviewing the grading of student submissions and all aspects of curriculum. The external examiner in 2016 - 2017 is Dr Rob Mackay, University of Hull.

LISTENING TO THE VIEWS OF STUDENTS

Student feedback is important and is obtained through:

- Module evaluations
- Student representation on course committees, meeting three times per year
- Personal tutor and module leader dialogue and discussions

Students are notified of action taken in response to feedback through:

- Student representation at Course Committee
- Module Handbook content
- Access to the Eternal Examiner reports via Minerva

LISTENING TO THE VIEWS OF OTHERS

The views of other interested parties are obtained, for example:
- Former students
- Employer/professional liaison engagement with curriculum and delivery

STUDENT PRIZES

An annual prize is awarded to one student from each of the three levels of study. The selection is by agreement of the programme's teaching staff. In each case the prize is awarded to the student who is judged to have made most individual progress through the academic year, irrespective of relative start and finish position. To be eligible for this prize a student must have submitted all coursework and will not have been awarded this prize in an earlier period of study.

ONLINE REGULATIONS, POLICIES AND GUIDANCE

- Undergraduate Academic regulations This is a guide to regulations and procedure regarding submission requirements and all matters relating to university wide policy on assessment, marking and award classification.
- Plagiarism/unfair practice policy It is vital that you understand what constitutes plagiarism in academic work and submissions
- Referencing guidance This is a set of resources intended to support appropriate referencing in your academic writing. In particular the Cite Them Right online resource
- Equality Policy

ONLINE STAFF PROFILES
Martin Dupras
Prof Joseph Hyde
Paul Jebanasam
Dr Andy Keep
Jan Meinema
Dr Ben Ramsay

Module Descriptors – Levels 4, 5 and 6

Code	MT4001-20
Title	Creative Practice
Subject area	CMT
Pathway	n/a
Level	4
Credits	20
ECTS*	
Contact time	52
Acceptable for	CMT only
Excluded combinations	n/a
Core/Optional	Core
Module Co-ordinator	Dr Andy Keep

Description & Aims
This module aims to support and encourage student creative activity. The broad perspectives of aural awareness, contextual influences, and technological construction are used to develop an objective evaluation of both existing musical works and the student's own creative practice. The module then offers support toward the development of an original musical or creative project.

Outline Syllabus & Teaching & Learning Methods
Weekly 2-hour sessions will include a wide variety of learning and teaching methods including lecture presentations, seminars and group discussion, timed research tasks, open tutorials, and student presentations. Students are also expected to undertake 'directed study' i.e. working independently to deepen their understanding of each session's content. This may involve continuing particular set tasks, evaluating a key text or musical work, or developing their own creative project.

Intended Learning Outcomes	How assessed**
On successful completion of this module students will be able to	
• Analyse existing musical works and their own creative practice from musicological and technical perspectives.	1
• Create a new musical/creative work that recognises and refers to their current creative practice.	1,2,3

Assessment Scheme	Weighting %
Formative: My Music presentation draft Negotiated Brief 'negotiation' tutorial Original Music Project draft peer presentation Summative: 1. Aural Analysis essay (1500 words) 2. 'My Music' Presentation (10 minutes) 3. Original Music Project, with accompanying document (500 words)	 30 20 50

Reading Lists/Key Texts & Websites
Gibson, D. 2005. *The Art of Mixing: A visual guide to recording, engineering, and production* (2nd Ed.). Boston: Thompson Course Technology Cobley, P. and L. Jansz 1997. *Semiotics for beginners*. Cambridge; Icon Books Hugill, A. 2008. *The Digital Musician*. London; Routledge Sound on Sound magazine – www.sospubs.co.uk Wire Magazine Students are also encouraged to critically interpret online and journal interviews, commercial and artist profiles and artists' work.

Learning Resources
Audio examples Library journals Worksheet and summary PDF's on Minerva

Code	MT4002-20
Title	Sound Design for Moving Image
Subject area	Creative Music Technology
Pathway	n/a
Level	4
Credits	20
ECTS*	
Contact time	52 hours
Acceptable for	CMT only
Excluded combinations	
Core/Optional	Core
Module Co-ordinator	Jan Meinema

Description & Aims

This module seeks to equip students with an historical, theoretical and practical understanding of:

- The use of sound design and music within film, broadcast media and other media
- Issues of style, convention and meaning

Outline Syllabus & Teaching & Learning Methods

The module is delivered through a mixture of lectures, seminars and practical workshops. The lectures will focus on key concepts and principles related to sound design, music within film. Seminar workshops provide opportunities for an analysis and evaluation of important historical, stylistic and aesthetic issues. Examples will demonstrate fundamental approaches and techniques and focus on the work of eminent composers and practitioners in the field.

The workshop sessions will enable students to develop, refine and consolidate their ability to work effectively with audio technology. Seminars will focus on reflective engagement with assessment briefs and peer assessment. Students will have the opportunity to work through briefs that allow creative exploration of composition for film and broadcast media. The workshops are primarily opportunities for task-focused practical and creative work. Tutorial guidance will be provided on an ongoing basis. You will receive worksheets, online supporting materials and instruction to support them in their use of directed study time. The assessment provides you with opportunities to demonstrate your achievement of the module's aims and objectives and contribute to the realisation of a portfolio of practical work.

Intended Learning Outcomes	How assessed
Through this module you will: Synchronise sound and image using a Digital Audio Workstation. Design music and sound for film and broadcast media that demonstrates an awareness of stylistic conventions. Demonstrate an awareness of how music and sound is combined with image to construct meaning.	 Prescribed practical projects Prescribed practical projects Prescribed practical projects
Assessment Scheme	**Weighting %**
Formative: Television Ident task Television Advert task Film Clip task Summative: Prescribed Practical Projects	 100%

Reading Lists/Key Texts & Websites

Bordwell, D. 2008. Film art: an introduction. McGraw-Hill Link to Library Catalogue

Chion, M. 2009. *Film: a Sound Art.* New York: Columbia University Press.

Link to Library Catalogue

Holmann, T. 2010. *Sound for Film and Television.* Focal Press Link to Ebook

Wyatt, H. / AMYES, T. 2005. *Audio Post Production for Television and Film.* Focal Press Link to Ebook

Internet

http://www.designingsound.org

http://www.filmsound.org

Learning Resources

Worksheets

VLE Minerva

Audio-visual examples

Recommended Reading

Tutorial Videos

Digital Audio Workstation

Code	MT4003-20
Title	Critical Theory
Subject area	Creative Music Technology
Pathway	n/a
Level	4
Credits	20
Contact time	52 hours
Pre-requisites	n/a
Acceptable for	CMT only
Excluded combinations	n/a
Core/Optional	Core
Module Co-ordinator	Martin Dupras

Description & Aims

This module provides students with an introduction to theoretical, historical, cultural and political perspectives relevant to the study of Creative Music Technology, as well as instruction for academic writing, research and presentation skills.

The module introduces theoretical perspectives through using contemporary debates and examples from art, music and media. The module will explore different forms of writing and oral discourse and aims to inform and support the development of effective expression of complex abstract ideas.

Outline Syllabus & Teaching & Learning Methods

The delivery of this module is through lectures, seminars and workshops. The lecture series introduces a series of key debates and philosophical investigations related to aesthetics, methodologies of analysis, theories of meaning, society & culture, and argumentation. Staff and speakers from other disciplines contribute to the lecture series to cultivate cross-disciplinary awareness.

Taught lectures will focus on methodology and good practice in research. Critical enquiry will be explored and demonstrated with comparisons between a number of published text and media. Tasks focusing on the critical theory approaches will be set; you will be expected to respond through an online journal. Workshops and plenary sessions will offer opportunities for you to work in groups and peer review work in progress. Sessions will be offered that focus on specific academic writing skills.

Intended Learning Outcomes	How assessed*
You will be able to: - Clearly articulate ideas relating to issues discussed in this module. - Research and reference appropriate sources - Author a timed audio visual presentation	 Essays, Presentation Essays, Presentation Presentation
Assessment Scheme	Weighting %
Essays (3000 words) Presentation	70% 30%

Reading Lists/Key Texts & Websites

Craig, E. 2005. The shorter Routledge Encyclopedia of Philosophy. Routledge

Harrison-Barbet, A. 2001. Mastering Philosophy. Palgrave

Hawkes, T. (editor) 2003. Structuralism and Semiotics. Routledge

Livingstone, P. 2005. Art and Intention – A philosophical study. Oxford University Press

Neill, A. / Ridley, A. 2008. Arguing about art – Contemporary Philosophical Debates. Routledge

Stinati, D. 2004. An introduction to theories of popular culture. Routledge

Audio Lecture:

Zarefski, D. 2008. *Argumentation: The Study of Effective Reasoning 2nd edition.* The Teaching Company

Learning Resources

VLE Minerva

Video Broadcasts

1	Module code	MT4004-20
2	Module title	Synthesis and Sampling
3	Subject field	Creative Music Technology
4	Pathway(s)	n/a
5	Level	4
6	UK credits	20
7	ECTS credits	
8	Core or Compulsory or Optional	Core
9	Acceptable for	CMT only
10	Excluded combinations	
11	Pre-requisite or co-requisite	n/a
12	Class contact time: total hours	Total Hours: 52 hours
13	Independent study time: total hours	Total Hours: 148
14	Duration of the module	26 weeks
15	Main campus location	NP
16	Module co-ordinator	Dr Ben Ramsay
17	Additional costs involved	None
18	Brief description and aims of module This module focuses on recent developments in, and principles of, sound synthesis and digital audio. Practical projects in synthesis, audio sample playback/modulation and audio/MIDI sequencing will enable you to deploy this knowledge and understanding within a creative context. You will be introduced to modular design using a graphical object oriented programming environment. The module aims to introduce significant personalisation of tools to extend your awareness beyond frameworks intended by some familiar commercial composition and audio software. You will explore software representations of hardware technologies and create interactive environments using MIDI protocol both as controller and within audio sequencing software. The sonic potential of even modest sound sources will be exploited through evaluative listening, and the development of a variety of synthesis and sample playback ideas.	

19	Outline syllabus The following topic areas will be covered: • Sampler instrument building • Max/MSP sample playback and manipulation • Synthesis and modulation principles • AM and FM synthesis • Granular synthesis • Noise and filtering	
20	Teaching and learning activities Lectures will deliver key theoretical content and introduce models applicable to building software synthesis instruments. Workshops will enable you to undertake directed practical tasks supported by the tutor. On-line video will offer problem based extended ideas and revision content. Formative assessment will measure your ability to manage emerging content by the use of practical timed tasks.	
21	Intended learning outcomes Upon successful completion of the module, you will be able to: 1. Design and build a software instrument that demonstrate contemporary sample manipulation and playback techniques 2. Design and build a software instrument that demonstrate fundamental synthesis principles	*How assessed* S1, F2 S2, F1, F2
22	Assessment and feedback Formative exercises and tasks: F1. Sit a multiple choice examination F2. Design and submit a synthesiser specification proposal	
	Summative assessments: S1. Sampling Project. S2. Synthesis Project.	Weighting% 50% 50%
23	Learning resources *University Library print, electronic resources and Minerva:* **Key texts** • Alessandro, C. & Giri, M. (2010) Electronic Music and Sound Design - Theory and Practice with Max/MSP Vol 1 & 2. Rome: ConTempoNet	

	• Miranda, E. (2002). Computer Sound Design: Synthesis techniques and programming. 2nd edition. Oxford; Boston: Focal Press. • Russ, M. (2008). Sound Synthesis and Sampling. 3rd edition. Boston: Focal Press. **Other resources that may be of use include:** • ADSR (2016). Kontakt Tutorials. [Online]. Available from: http://www.adsrsounds.com/kontakt-tutorials [Accessed: September 2016]. • Giaquinta, S. (2015) Up And Running With Kontakt. [Online]. Available from: http://www.lynda.com • Sutton, E. (2015) Advanced Instrumentation and Sound Design with Kontakt. [Online]. Available from: http://www.lynda.com • Said, A. (2015). The Art of Sampling: The Sampling Tradition of Hip Hop/Rap Music and Copyright Law. Superchamp Books. • Wherry, M. (2010). Customise Kontakt Patches | How to Create Scripts In NI Kontakt. [Online]. Available from: http://www.soundonsound.com/sos/jul10/articles/kontakt1.htm
24	Preparatory work Some background use of software such as Native Instruments Kontakt, as well as Cycling 74s Max/MSP would be benefit study on this module.

1	Module code	MT4005-40			
2	Module title	Digital Audio Recording			
3	Subject field	Creative Music Technology			
4	Pathway(s)	n/a			
5	Level	4			
6	UK credits	40			
7	ECTS credits				
8	Core or Compulsory or Optional	Core			
9	Acceptable for	CMT only			
10	Excluded combinations				
11	Pre-requisite or co-requisite				
12	Class contact time: total hours	Total Hours: 104			
13	Independent study time: total hours	Total Hours: 296			
14	Duration of the module	27 weeks			
15	Main campus location	Newton Park			
16	Module co-ordinator	Jan Meinema			
17	Additional costs involved	None			
18	Brief description and aims of module This module seeks to equip you with a theoretical, practical and critical understanding of: • The audio recording process through the use of a variety of digital audio recording systems • Signal Routing, connections and the use of an audio mixing desk • Audio editing, mixing and mastering using audio production software.				
19	Outline syllabus The following subjects will be addressed in the module: ● Microphone designs, types, polar patterns, and their applications				

	● Studio connections and signal flow topology ● Mixing desk and outboard processors ● Features and signal flow of Digital Audio Workstations Recording techniques	
20	Teaching and learning activities Lectures will focus on key concepts and principles related to digital audio theory and its management in a studio, in the field and in computer software environments. The workshop sessions will enable you to develop, refine and consolidate your understanding of digital audio technologies. The workshops are primarily opportunities for task-focussed practical and creative work often engaging with practical exploration of lecture content. Tutorial guidance will be provided on an on-going basis within the workshop sessions. You will receive worksheets and online VLE tasks & materials, devised to support your use of directed study time for this module. The assessments provide you with opportunities to demonstrate your achievement of the module's aims and objectives.	
21	Intended learning outcomes *By successful completion of the module, you will be able to demonstrate:* 1. Basic understanding of Digital Audio Recording theory evidenced through a reflective assessment object. 2. The ability to employ a recording studio and field-recording equipment to record audio using appropriate audio recording systems. 3. The ability to use a Digital Audio Workstation to edit, mix and master audio.	*How assessed* S1, F1 S1, F1 S2, F2
22	Assessment and feedback *Formative exercises and tasks:* F1. Audio Recording Task F2. Production Skills task	
	Summative assessments: S1. Audio Recording Project S2. Production Project	Weighting% 50% 50%

23	Learning resources *University Library print, electronic resources and Minerva:* • *Key texts* • Collins, M. (2013). *Pro Tools 11: Music Produc2on, Recording, Editing, and Mixing*. London: Focal Press • Huber, D. (2014). *Modern Recording Techniques*. 8th ed. London: Focal Press • Izhaki, R. (2012). *Mixing Audio. 2nd Edition.* London: Focal Press • Katz, K. (2015). *Mastering Audio: The Art and the Science*. 3rd ed. London: Focal Press • Pohlmann, K. (2011). *Principles of digital audio*. 6th ed. New York: McGraw-Hill. • Rayburn, Ray A. (2011). *Eargle's microphone book: from mono to stereo to surround.* 3rd ed, London: Focal Press. • Rumsey, F./ McCormick, T. (2014). *Sound and Recording - an Introduction*. 7th ed. London: Focal Press. • *Key web-based and electronic resources* ***Lynda.com*** *Pro Tools 12 – Essential Training* *https://www.lynda.com/Pro-Tools-tutorials/Pro-Tools-12-Essential-Training/385356-2.html?org=bathspa.ac.uk* *Ableton Live 9 Essential Training* *https://www.lynda.com/Ableton-Live-tutorials/Ableton-Live-9-Essential-Training/120600-2.html?org=bathspa.ac.uk* Logic Pro X Essential Training *https://www.lynda.com/Logic-Pro-tutorials/Logic-Pro-X-Essential-Training/96308-2.html?org=bathspa.ac.uk* *Foundations of Audio: EQ and filters* *https://www.lynda.com/Audio-DAW-tutorials/Foundations-of-Audio-EQ-and-Filters/86649-2.html?org=bathspa.ac.uk* Foundations of Audio: Reverb https://www.lynda.com/Audio-tutorials/Foundations-Audio-Reverb/89707-2.html?org=bathspa.ac.uk Foundations of Audio: Delay and Modulation https://www.lynda.com/Audio-DAW-tutorials/Foundations-of-Audio-Delay-and-Modulation/89708-2.html?org=bathspa.ac.uk

	Foundations of Audio: Compression and Dynamic https://www.lynda.com/Logic-Pro-tutorials/Foundations-of-Audio-Compression-and-Dynamic-Processing/85998-2.html?org=bathspa.ac.uk Foundations of Digital Audio https://www.lynda.com/Acoustics-tutorials/Foundations-Digital-Audio/383529-2.html?org=bathspa.ac.uk ***Sound On Sound*** http://www.sospubs.co.uk *Specialist resources:* - Recording Studio / Foley Recording Studio / Field Recording Equipment - Digital Audio Workstation with Audio Recording and Production Software - VLE – Minerva - Tutorial Videos
24	Preparatory work We use many specialised terms in the studio; prepare yourself by familiarising yourself with some of the common terminology used in recording studios. The Wikipedia page for "Recording Studio" is a good start.

Code	MT5002
Title	Digital Signal Processing
Subject area	Creative Music Technology
Pathway	n/a
Level	2
Credits	20
Contact time	52 hrs
Pre-requisites	None
Acceptable for	CMT only
Excluded combinations	None
Core/Optional	Core
Module Co-ordinator	Martin Dupras

Description & Aims

This module covers the theoretical foundations of acoustics, signal processing and audio programming as a basis from which students develop personal and experimental approaches to creating audio work. The module aims to equip the students with a background of knowledge, strategies and tool use that will allow them to explore, discover and implement increasingly effective ideas and techniques.

Outline Syllabus & Teaching & Learning Methods

Syllabus:

The module introduces and investigates sound in three domains: the acoustic domain, the electrical domain and the numerical domain.

The acoustic domain focuses on the physics of sound. We look at how sound is produced acoustically, how it is transmitted, and how it is received by the ear or by microphones. The focus is on sound as an acoustic signal that can then be converted in the other domains.

The electrical domain focuses on how sound, once converted into an electrical signal, can be manipulated in different ways. This is covered mostly from an “understanding” point of view rather than a practical knowledge since we expect the students to understand how existing electronic processors work, but we do not expect them to design their own.

The numerical domain (“digital signals”) is the main focus of the module. We demonstrate and explore the notion that we can accomplish in the digital domain most transformations that can happen in the acoustic and electrical domains. Thus, we can explain and manipulate

understood techniques of sound manipulation with software-based methods. The emphasis is on “textbook” techniques since they are widely known and understood, well documented, and with a variety of practical applications in the creative use of sound.

Learning:

You will learn through a combination of:

- Video lectures,
- Practical tasks,
- Critical analysis of your own and peers' work
- The realisation of two audio programming projects implementing textbook processing techniques

Intended Learning Outcomes	How assessed*
You will demonstrate theoretical and functional understanding of digital processing principles and techniques. You will implement selected techniques in real-time working audio processing programmes.	1,2 2
Assessment Scheme	**Weighting %**
Portfolio of Practical Project and Written Examination – 100% 1. Acoustics and signal processing examinations (20%) 2. Audio programming projects (80%)	100

Reading Lists/Key Texts & Websites

Roads, C., 1996 The Computer Music Tutorial. Cambridge, MA: The MIT Press.

Puckette, M.,2007. The Theory and Technique of Electronic Music. London: World Scientific Publishing Co. .,

Steiglitz, K., 1996. A Digital Signal Processing Primer. Menlo-Park,CA: Addison-Wesley.

Kreidler, J., 2009. Loadbang: Programming Electronic Music in Pure Data. Wolke Verlag Hofheim.

Learning Resources

Worksheet tasks on Minerva
Example programme/patches
On-line tutorials
Lecture and workshop notes, Minerva

Code	MT5003-40
Title	Sonic Art: Theory and Practice
Subject area	Creative Music Technology
Pathway	n/a
Level	5
Credits	40
Contact time	78 hours
Pre-requisites	
Acceptable for	N/A
Excluded combinations	n/a
Core/Optional	Core
Module Leader	Prof Joseph Hyde

Description & Aims

This module investigates sound as an artistic medium. A wide variety of twentieth century and contemporary artists and their work will be examined and discussed. Ideas and techniques will be distilled from this work, and explored in both academic and applied contexts.

The principal aims of the module are:

• To provide a broad overview of the development of sonic art with the emphasis on key innovations and influences that directly inform contemporary practice

• To support students in independent academic research and enquiry through an individually-negotiated research area and question

• To enable students to combine skills and techniques examined in taught delivery in practical and creative work

• To help students to develop their skills of presentation and argument

Outline Syllabus & Teaching & Learning Methods

Syllabus

The practice of sonic art will be introduced and discussed in lectures; workshops will allow the students to explore and experience sonic art in relation to their own creative work.

The first half of the module will be delivered in the form of:

• Two-hour weekly lecture

• One-hour taught workshops

The second half of the module will be delivered in the form of:

• One-hour weekly seminar/tutorial

• Two-hour taught workshops

Teaching and Learning Methods

Teaching will be delivered through:

• Taught lectures in which the focus will be historical, contextual and scientific information.

• Guided workshops, in which tutor-led tasks will be explored

• Tutor feedback in tutorials and in online journals

Students will learn by:

• Reading, analysis and critique of texts or artefacts

• Practical experimentation in workshops and formative tasks

• Intellectual enquiry leading to the documentation of their progress in their online journals

• Delivering presentations and testing their ideas in seminar discussions

Intended Learning Outcomes	How assessed*
Knowledge and understanding of: • A range of historical ideas and issues related to developments in technology and sonic art • A range of aesthetic approaches and techniques drawn from these ideas Thinking skills: • Independent research • Contextualise compositional approaches You will develop the practical skills that will enable you to: • Use software and hardware in the creation of original musical works You will develop academic skills enabling you to: • Formalise and distil research findings • Formulate a closely-argued and structured academic discussion	Essay Composition Written proposal Essay Composition Essay

Employability You will acquire and develop key life skills that will enable you to: • Build self-confidence and encourage effective articulation of ideas through seminar presentations and class discussions	(presentation)
Assessment Scheme	Weighting %
Formative: reflective log (Minerva journal) *Summative assessed:* soundscape composition *Summative assessed:* 750-word proposal for negotiated brief composition, detailing relationship to lecture/workshop content *Formative:* 10 minute topic review seminar presentation *Formative:* essay draft to form the basis of tutorial feedback *Summative assessed:* negotiated brief composition *Summative assessed*: a 3000-word essay, negotiated title, exploring the chosen research area and question in depth.	 20 10 30 40
Reading Lists/Key Texts & Websites	
W. Jay Dowing and Dane L. Harwood. (1986). *Music Cognition*. San Diego, CA: Academic Press. Pierre Schaeffer. (2005). *Solfège de l'objet sonore*. Audio CD. Paris: Institut National de L'audiovisuel. Leigh Landy. (2007). *Understanding the Art of Sound Organization*. Cambridge, MA: MIT Press. Trevor Wishart and Simon Emmerson (ed.) (1996). *On Sonic Art*. Harwood Academic Simon Emmerson (ed.) (1986). The Language of Electroacoustic Music. Palgrave Macmillan Nick Collins and Julio d,Escrivan (2007). *The Cambridge Companion to Electronic Music*. Cambridge University Press Kodwo Eshun (1998*). More Brilliant than the Sun: Adventures in Sonic Fiction*. Quartet Books David Toop (2001). *Ocean of Sound: Aether Talk, Ambient Sound and Imaginary Worlds*. Serpent's Tail Alex Ross (2007). *The Rest is Noise: Listening to the Twentieth Century*. Fourth Estate Students are also expected to source articles and papers relevant to their individual work in Computer Music Journal, Organised Sound, Contemporary Music Review and online.	
Learning Resources	
Minerva online journals Minerva will be used to host materials supplemental to taught sessions	

Code	MT5004-20
Title	Digital Audio Techniques
Subject area	CMT
Pathway	n/a
Level	5
Credits	20
ECTS	
Contact time	52 hours
Acceptable for	CMT only
Excluded combinations	n/a
Core/Optional	Core
Module Co-ordinator	Dr Andy Keep

Description & Aims
This module aims to equip students with a range of advanced digital audio techniques. Commercial studio practices, adapted classic electronic and tape music techniques, and digital sound aesthetics will inform approaches to the creative editing, designing, and processing of audio.
Outline Syllabus & Teaching & Learning Methods
1-hour lectures are used to introduce theories, concepts and technical information. These are followed by 1-hour practical demonstrations, and 2-hour workshops in which the practical application of this developing content is explored under the guidance of a tutor. These sessions will be predominantly task-focussed. Students are also expected to undertake 'directed study': i.e. working independently to deepen their understanding of each session's content. This may involve continuing particular set tasks, making a close reading of a key text, following a mapped plan of activity, or working toward an assignment.

Intended Learning Outcomes	How assessed**
On successful completion of this module students will be able to edit, design, and process audio using concepts and techniques derived from commercial studio practice, classic electronic and tape music techniques, and current digital sound aesthetics	1,2 Portfolio of original audio productions

Assessment Scheme	Weighting %
Formative: 'Break Beat' task 'No Regions' task Summative: 1.Remix audio project 2. Wrong Pro Tools audio project	 50 50

Reading Lists/Key Texts & Websites
Ballou, G. 2002. Handbook for sound engineers (3rdedition) Oxford; Focal Press Butler, M. J. 2006. Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Music. Bloomington; Indiana University Press Collins, M. 2002. Pro Tools 5.1 for music production, Oxford; Focal Press Collins, N. and J. d'Esrivan (eds) 2007 The Cambridge Companion to Electronic Music. Cambridge: CUP Danielsen, A (Ed.) 2010. Musical Rhythm in the Age of Digital Reproduction. Farnham; Ashgate Gard, S. 2008 Nasty Noises; Error as a compositional element in electro-acoustic music. Saarbrücken; VDM Verlag Huber, D. M. 2001. Modern Recording Techniques, Oxford; Focal Press Hugill, A. 2008 The Digital musician. London; Routledge Owsinski, B. 1999. The Mixing Engineers Handbook, London; Music Sales Ltd Senior, M. 2011. Mixing Secrets for the Small Studio. Oxford; Focal Press White, P. 2002. Basic Mastering. London; Sound on Sound

Learning Resources
Digital audio workstations Audio source material/resources on local network for use during practical workshops Lecture notes, PPT's, hand-outs, pro-forma worksheets available in Minerva

Code	MT5005-20
Title	Multimedia Production
Subject area	CMT
Pathway	n/a
Level	5
Credits	20
Contact time	52 hours
Pre-requisites	None
Acceptable for	CMT only
Excluded combinations	None
Core/Optional	Core
Module Leader	Paul Jebanasam

Description & Aims

In this module students will explore the creation, integration and delivery of a range of rich media elements, including sound, image and video. They will learn how to use industry-standard authoring and editing software to develop a media-rich multimedia project that is delivered in an appropriate digital format.

Outline Syllabus & Teaching & Learning Methods

Introduction to multimedia authoring.

Buttons and movie clips; navigation and animation.

Timeline sound and video.

Introduction to digital video.

Basic editing and effects.

Export and compression.

- Lecture 1hr
- Lab based workshop 2hr
- Minerva based study resources 1hr equivalent

Intended Learning Outcomes	How assessed*
• Knowledge & understanding of key principles of multimedia development and design • Plan, design & develop a multimedia product • Practical authoring and editing skills • Acquisition of industry-relevant new skills to enhance employability	Coursework
Assessment Scheme	Weighting %
Formative: Pass/fail practical activities that assess specialist practical knowledge & skill *Summative*: Final multimedia project	 100%
Reading Lists/Key Texts & Websites	
Reinhardt, Robert. Adobe Flash CS3 Professional Bible. Wiley. 2007. Mark Schaeffer. Adobe Flash CS3 Professional. Peachpit Press. 2008. Diana Weynand. Final Cut Pro. Peachpit Press.2008. Ulliman, John. Adobe Flash CS3 Professional Essentials. Total Training. 2007. http://library.creativecow.net/	
Learning Resources	
CMT labs Minerva	

1	Module code	MT5006-20
2	Module title	Sound and Music Industries
3	Subject field	Creative Music Technology
4	Pathway(s)	N/A
5	Level	5
6	UK credits	20
7	ECTS credits	
8	Core or Compulsory or Optional	Core
9	Acceptable for	CMT Only
10	Excluded combinations	
11	Pre-requisite or co-requisite	N/A
12	Class contact time: total hours	Total Hours: 52 hours
13	Independent study time: total hours	Total Hours: 148
14	Duration of the module	26 weeks
15	Main campus location	Newton Park
16	Module co-ordinator	Paul Jebanasam
17	Additional costs involved	N/A
18	Brief description and aims of module This module develops your employability skills and enhances your professional development as a practitioner across a range of music and sound industries. You will engage in discussions of music business issues (labels, copyright, publishing etc) and research specific practices that offer future employment. The module offers an opportunity to undertake and evaluate a professional placement, a creative collaboration or a commercial project. The module aims to: ● Develop an awareness of industry practice ● Engage you in the evaluation of professional creative work ● Equip you with the skills to design and deliver an effective online presence	
19	Outline syllabus The module covers the following areas: - Music business (contracts, copyright, collection) - Professional identity (Online presence, web design) - Digital platforms (Distribution, digital publishing) - Marketing strategies (Music promotion, press releases)	

	- Contextual studies (Sound and music business case studies)	
20	Teaching and learning activities The module will be delivered in the form of weekly a two-hour lecture in which topics will be presented and form the basis for discussion and research tasks. You will also attend lectures in the "Think Tank" series, which feature sound and music industry guests intended to provide information, promote thought, and provide insight to wide ranging sector ideas and issues.	
21	Intended learning outcomes *By successful completion of the module, you will be able to:* 1. Report on a chosen sector of potential commercial activity/employment 2. Evaluate ideas related to your creative activity 3. Design and deliver an effective online presence	*How assessed* S1, S2, F1 S1, F1 S1
22	Assessment and feedback *Formative exercises and tasks:* F1. Industry Research Journal	
	Summative assessments: S1. Professional Protocol Investigation S2. Professional Experience Report	Weighting% 50% 50%
23	Learning resources *University Library print, electronic resources and Minerva:* ● Gordon, S (2014) *The Future of the Music Business: How to succeed with the new digital technologies (4th Edition)*. Milwaukee. Hal Leonard. ● Harrison, Ann. (2014) *Music - The Business : The essential guide to the law and the deals.* London. Virgin Books. ● Hull, Geoffrey P. (2011) *The Music Business and Recording Industry: Delivering music in the 21st century.* London. outledge. ● Wikstrom, P. (2009) *The Music Industry: Music in the Cloud.* Cambridge. Polity. ● Hutchison, T. (2010) *Record Label Marketing.* New York. Focal Press. ● Jones, L and Basingstoke, L. (2012) *The Music Industries: from conception to consumption.* Basingstoke. Palgrave Macmillan. ● Rutter, P. (2011) *The Music Industry Handbook.* London. Routledge. ● Gammons, H. (2011) *The Art of Music Publishing.* London Focal Press. ● Harper, Adam. (2011) *Infinite Music: Imagining the Next Millennium of Human Music-Making.* Alresford. Zero Books.	

	Key web-based and electronic resources ● Music Business Training and Tutorials - Lynda.com Because of the width of possible individual focus, each student will support their specific area of interest through additional relevant texts
24	Preparatory work Some background in academic research methods would benefit study on this module.

Code	MT6001-40
Title	Devised Project
Subject area	CMT
Pathway	n/a
Level	6
Credits	40
ECTS*	
Contact time	Tutorial Dependent
Acceptable for	CMT only
Excluded combinations	n/a
Core/Optional	Core
Module Co-ordinator	Paul Jebenesam

Description & Aims

This Module aims to support students in researching, developing, and delivering a substantial creative project.

This is a double module (40 credits) that runs throughout the entire academic year, culminating in a 'degree show' style event to showcase the completed projects. The initial stages will focus on identifying, defining/refining, and then proposing an appropriate practice based project through contextual research and early prototype activity. The remainder of the year will work towards delivering the final project. Projects can be in the form of an audio portfolio, live or mediated performance, short film or animation, interactive/multimedia environment, gallery or site-specific artwork, original software application, or product design.

Outline Syllabus & Teaching & Learning Methods

After introductory presentations and seminar discussions there will be ongoing guidance and support in the form of individual tutorials, small group seminars, and peer research / resource sharing sessions. There are a number of required activities throughout the year designed to help keep students on track with their project development. To support the assessment of the main practical project there are two assessed text based documents - an initial project proposal that includes contextual research, and an online descriptive and reflective account to accompany the final project.

Intended Learning Outcomes	How assessed**
On successful completion of this module students will be able to • Define, propose and contextualise a creative project in a chosen area of focus • Develop and complete a substantial project that articulates a high level engagement with, and delivery to, an area of creative practice • Document and critically evaluate the resulting completed project	1 Written proposal 2 Practical Project 3 Online
Assessment Scheme	Weighting %
Formative: Draft Proposal Summative: 1. Project Proposal 2. Practical Project (exhibited, performed, presented, demonstrated) 3. Contextual Reflection	 20 60 20

Reading Lists/Key Texts & Websites
Individual students will define their own particular areas for reading and research. Generic texts include – Herbert, T. 2001. Music in words; a guide to researching and writing about music. London; Associated Board of the Royal Schools of Music Punch, K. 2000. Developing effective research proposals. London: Sage
Learning Resources
Examples of proposal applications within the arts, and previous projects Focused library session for advanced contextual research Proposal writing documentation and a CMT 'Guide to written submissions' available on Minerva

Code	MT6002-40
Title	Professional Portfolio A
Subject area	CMT
Pathway	-
Level	6
Credits	40
Contact time	56 hours
Pre-requisites	-
Acceptable for	CMT only
Excluded combinations	-
Core/Optional	Core– with optional pathways
Module Co-ordinator	Martin Dupras

Description & Aims

The module seeks to encourage students to identify areas of expertise, academic content and creative opportunity which will best support their individual relationship to the subject's wide boundaries and its variable emphases on delivery to academic study and employability. This is achieved through offering focus to thematically linked content and delivery to specialist areas of the subject discipline. The module seeks to encourage students to develop strong portfolio items generated through engagement with selected expertise, academic content and creative opportunity. This can be viewed as both reflecting on, and developing through output, delivery to strong individual examples of practical and academic work. This work is one means through which to develop identity and evaluate and measure attributes, skills and opportunities with which to inform future professional/employment/post graduate study.

Students opt for two of the following study pathways:

Production Techniques

Composition in Broadcast Media

Electroacoustic Composition

Audiovisual Composition and Performance

Outline Syllabus & Teaching & Learning Methods	
These will be bespoke to the specific needs of each area of study/pathway option and may also include rehearsal, extended workshop and beyond timetable periods of intensive additional delivery • Series of lecture/workshops • Seminars • Visiting practitioners/industry speakers • Individual tutorials • Directed study	
Intended Learning Outcomes	How assessed*
• Transferable skills enabling planning and production of extended projects and effective management of workloads. • Identification and development of selected subject strands or specialism to support professional level focus • an ability to interpret and deliver to professional creative and technical briefs Each pathway has additional learning outcomes	See pathway guides
Assessment Scheme	Weighting %
Pathway Option 1 Pathway Option 2 See pathway handbooks	50 50
Reading Lists/Key Texts & Websites	
• These texts are specific to each option and are available within the guides published for each professional studies portfolio area (1-4)	
Learning Resources	
See pathway handbooks	

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Code	MT6003-40
Title	Professional Portfolio B
Subject area	CMT
Pathway	-
Level	6
Credits	40
Contact time	56 hours
Pre-requisites	-
Acceptable for	CMT only
Excluded combinations	-
Core/Optional	Core – with optional pathways
Module Co-ordinator	Martin Dupras

Description & Aims

The module seeks to encourage students to identify areas of expertise, academic content and creative opportunity which will best support their individual relationship to the subject's wide boundaries and its variable emphases on delivery to academic study and employability. This is achieved through offering focus to thematically linked content and delivery to specialist areas of the subject discipline. The module seeks to encourage students to develop strong portfolio items generated through engagement with selected expertise, academic content and creative opportunity. This can be viewed as both reflecting on, and developing through output, delivery to strong individual examples of practical and academic work. This work is one means through which to develop identity and evaluate and measure attributes, skills and opportunities with which to inform future professional/employment/post graduate study.

Students opt for two of the following study pathways:

Audio Post for Moving Image

Game Audio

Sonic Performance

Audio Software Development

Outline Syllabus & Teaching & Learning Methods	
These will be bespoke to the specific needs of each area of study/pathway option and may also include rehearsal, extended workshop and beyond timetable periods of intensive additional delivery • Series of lecture/workshops • Seminars • Visiting practitioners/industry speakers • Individual tutorials • Directed study	
Intended Learning Outcomes	How assessed*
• Transferable skills enabling planning and production of extended projects and effective management of workloads. • Identification and development of selected subject strands or specialism to support professional level focus • An ability to interpret and deliver to professional creative and technical briefs Each pathway has additional learning outcomes	See pathway guides
Assessment Scheme	Weighting %
Pathway Option 1 Pathway Option 2 See pathway handbooks	50 50
Reading Lists/Key Texts & Websites	
• These texts are specific to each option and are available within the guides published for each professional studies portfolio area (1-5)	
Learning Resources	
See pathway handbooks	