



Academy of Music and Performance  
BA (Hons) Music & Creative Music Technology

**Module MCM607**  
**Music Technology System Design**  
MODULE BOOKLET  
2016 – 2017

**Deadline for submission**

**Presentation: 25<sup>th</sup> January 2017**

**Report: 8<sup>th</sup> February 2017, 3pm**

**Tutor: Matt Horobin**

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**Wednesdays 12.30pm**

**Room: 125 (Big Mac Suite)**

**Start date: 05/09/16**

**End date: 08/02/17**

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## **What will you do to complete this module?**

This project will develop students' ability to design music technology / Sonic Arts systems to suit particular requirements, specifications and situations. Each student will gain experience in designing systems to a specific agreed brief, within a specific budget and time frame.

There are three stages. **All** stages must be complete in order to be able to satisfactorily pass the module overall.

### **Stage 1: BRIEF**

Students are required to generate a brief for a sophisticated music technology / audio / sonic arts system that provides a specific function. Consultation with the module leader will help develop the brief into a list of specific requirements, specifications and budget. On acceptance by the module leader, students may begin to progress onto stages 2 and 3. *(500 words suggested)*

### **Stage 2: PRESENTATION**

Students are to design the specific system with the agreed requirements, specifications and within the set budget as detailed in the brief. You are required to deliver a **presentation** to discuss the equipment and design of a modern music/sonic arts system. The presentation will be informed by self directed research and investigations, and should be **10 minutes duration**.

Students should consider the following aspects of the systems design:

- What the system is trying to achieve and how
- The individual component choices
- How the equipment is connected
- A systems work flow
- Acoustic considerations (if relevant), space and physical layout of components
- Any other interesting features of the design

### **Stage 3: REPORT**

The design should also be presented in the form of a technical report; and should include the following elements as a minimum: *(2000 words suggested)*

- Overall system design, functions and specifications
- Equipment lists
- Comprehensive annotated system diagrams
- System layout, connectivity and wiring schematics
- Justification of specific components
- Demonstrate knowledge of music technology digital/analogue theory and standards in relation to system
- Acoustic considerations / Surround sound / Diffusion capabilities
- Cost analysis and commercial context
- Appendix containing all equipment specifications, including references.

Also include

- Evaluation of the system, its' components and its' expected level of performance *(500 word suggested)*

All decisions should be justified and referenced to the briefs' requirements. The final design should fall within budget and cost analysis should include

figures for all peripherals, extras, cabling and labour costs (where relevant). Students should provide a financial quote that conforms to accepted industry standards.

Written submission should total 3000 words in length for the module as a whole (Stages 1 & 3); and include diagrams and tables where appropriate. Any other relevant information can be included as an appendix.

***Report should demonstrate suitable technical and academic research skills to both support the brief and satisfy the learning outcomes for the module.***

### **How will the subject be taught?**

Initial information, guidance, case studies and sources of research.

You will attend 1-1 tutorials during the process that will enable you to debate with your subject tutor on the development; technical requirements.

### **How will the design be submitted?**

The design (report) will be submitted in PDF format and emailed to [chris.hickling@ncn.ac.uk](mailto:chris.hickling@ncn.ac.uk)

The presentation element will be video recorded from the session

### **How will the design be assessed?**

It will be assessed in accordance with the [Module Learning Outcomes](#).

### **What is the assessment strategy?**

The assessment strategy will reflect the aims and learning outcomes of the module.

### **What are the deadlines for this module?**

Stage **1**: Brief - Should be submitted for tutor approval *before* commencing with stages 2&3  
Brief should be submitted by **Friday 9<sup>th</sup> December** at the latest, and will be discussed in your scheduled 1-1 tutorial.

Stage **2**: Presentations – **Wednesday 25<sup>th</sup> January 2017** 12.30-2pm & Wednesday 1<sup>st</sup> February 12.30-2pm

All students should be prepared to do presentation on the 25<sup>th</sup> January

Stage **3**: Report – **Friday 10<sup>th</sup> February 2017, 3pm**

### **What are the penalties for late submission?**

A late submission will result in a maximum grade of 40%. A submission after 5 working days of the deadline will result in failure.

### **What is the process for a deadline extension?**

Complete the extension form and email to [nick.redfern@ncn.ac.uk](mailto:nick.redfern@ncn.ac.uk) 5 working days before the deadline.

## MODULE MANAGEMENT

<b>Credit points and Duration:</b>	20 credit points – 15 weeks
<b>Module Leaders:</b>	Matt Horobin
<b>Subject:</b>	System Design
<b>School:</b>	Academy of Music & Performance
<b>Pre- or post-requisites:</b>	None
<b>Site of Delivery:</b>	<b>ncn</b> – Clarendon Campus
<b>Date:</b>	October 2016

## Higher Education Teaching Plan

Course: <b>BA(Hons) Music &amp; Creative Music Technology</b>		Module: <b>MCM607: System Design</b>	Validating Organisation NTU
Session: <b>System Design</b>		Subject Tutor: <b>Matt Horobin</b>	Academic Year <b>2016-17</b>
Date (week commencing)	Week	WEDNESDAYS. 12.30pm	
03-Oct-16	5	ASSIGNMENT SET / MODULE HANDBOOK / BRIEF	
10-Oct-16	6	System Design - Key components <b>pt1</b>	
17-Oct-16	7	System Design - Key components <b>pt2</b>	
24-Oct-16	8	Reading Week	
31-Oct-16	9	<i>1-1 Tutorial.</i>	
07-Nov-16	10	<i>1-1 Tutorial.</i>	
14-Nov-16	11	<i>1-1 Tutorial.</i>	
21-Nov-16	12	No Session – Seminar Week	
28-Nov-16	13	No Session – Seminar Week	
05-Dec-16	14	<i>1-1 Tutorial. Stage 1 Submission</i>	
12-Dec-16	15	<i>1-1 Tutorial.</i>	
19-Dec-16	16	CHRISTMAS HOLIDAY	
26-Dec-16	17	CHRISTMAS HOLIDAY	
02-Jan-17	18	No Session	
09-Jan-17	19	No Session	
16-Jan-17	20	<i>1-1 Tutorial.</i>	
23-Jan-17	21	<b>Stage 2: FINAL PRESENTATIONS</b>	
30-Jan-17	22		
06-Feb-17	23		





## Module Specification 2012/13

Basic Module Information		
1	<b>Module Title</b>	Music Technology System Design
2	<b>Module Code</b>	MCM607
3	<b>Credit Points</b>	20 Credit points
4	<b>Duration</b>	15 weeks
5	<b>School</b>	Creative, Cultural & Digital Cluster
6	<b>Date</b>	01/09/2013

**7 Pre, Post and Co-requisites**

These are modules that you must have studied previously in order to take this module, or modules that you must study simultaneously or in a subsequent academic session

<u>Pre, Co, Post</u>	<u>Module Code</u>	<u>Module Title</u>
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None

**8 Courses containing the module**

<u>Level</u>	<u>Core/Option</u>	<u>Mode</u>	<u>Code</u>	<u>Programme Title</u>
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6	Option	FT/PT	MCM607	BA (Hons) Music & Creative Music Technology
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## **9 Overview and Aims**

This module aims to give you a deeper understanding of the components, design and integration of a variety of systems used in music technology. You will study a range of music technology standards, both established and developing, and how these standards are used and maintained in modern system design.

## **10 Module content**

The Module examines:

- Knowledge of a variety of established and developing standards in both professional and consumer music technology systems
- Application and integration of these standards in music technology system design
- Understanding of the design process of a music technology system in order to address a specific purpose, task or brief
- Study of current trends in music technology systems
- Understanding of the history and development of music technology

## **11 Indicative reading**

1. McCartney, T. (2003). *Recording Studio: Technology, Maintenance and Repairs*. McGraw-Hill Education.
2. Borwick, J. (1996). *Sound Recording Practice*. APRS.

## 12 Learning outcomes

Back to [How will the design be assessed?](#)

Learning outcomes describe what you should know and be able to do by the end of the module

**Knowledge and understanding.** After studying this module you should be able to:

1. Demonstrate knowledge and understanding of established and developing standards in music technology
2. Show an understanding of the relationship between the theory of sound recording and how this is implemented in the design of music technology systems

**Skills, qualities and attributes.** After studying this module you should be able to:

1. Demonstrate the ability to design systems to a brief
2. Recognise how music technology is implemented in a commercial situation
3. Present and discuss complex technical data
4. Conduct research within a specific subject area

### **13 Teaching and learning**

#### ***Range of modes of contact***

This indicates the range of direct contact teaching and learning methods used on this module, eg, lectures, seminars

Lecture	15
Seminar; preparation for assessment	15

**Total contact hours                      30**

#### ***Range of other learning methods***

This indicates the range of other teaching and learning methods used on this module, eg, directed reading, research

Self-directed learning - Directed reading, preparing assignment, individual research, internet searching, literature search, original empirical research	170
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**Total non-contact hours                      170**

## **14 Assessment methods**

This indicates the type and weighting of assessment elements in the module

<b><u>Weighting</u></b>	<b><u>Type</u></b>	<b><u>Description</u></b>
80%	Report	A 3000 word report detailing the design of a bespoke Sonic Arts system to an agreed specific brief.
20%	Presentation	A 10 minute presentation detailing and analysing the design and equipment list of a professional music system.

### **Diagnostic/formative assessment**

This indicates if there are any assessments that do not contribute directly to the final module mark:

*Throughout the module you will have the opportunity to discuss your progress with your tutor and receive informal feedback*

### **Further information on assessment**

This section provides further information on the module's assessment where appropriate

*Report: The report will include equipment specifications, wiring diagrams and cost analysis. All decisions will be justified and evaluated.*

*Report: Detailed summative written and verbal feedback*

*Presentation: Detailed summative written feedback*

## Assessment Descriptors: Studio Design (MCM607)

The module is assessed using **two** assessment components. Each component is graded out of 100%.

You are required to submit work towards **both** components to successfully pass the module.

The assessment components are then weighted (refer to table) to calculate the final module grade.

<b>Assessment Component Weighting</b>	Report = 80%
	Presentation = 20%

<b>Assessment Component 1: Report</b>					
	<b>Understanding the Topic</b>			<b>Research</b>	
Weighting	<b>70%</b>			<b>30%</b>	
80-100% Upper first	40+	An exceptional exposition of the subject & displays a deep understanding of the complexities of the subject. The student is objective. Theories are sensitively and critically applied. Own theory developed. Demonstrates full understanding of topic within a wider context. Shows excellent critical and analytical abilities. A powerful argument, which is much focused. The transition from findings to analysis is clear.		40+	Outstanding level of research to underpin report. Excellent attention to detail in researching components, costings and system requirements; together with diverse, relevant and valid research to support argument effectively. Exceptional use of referencing – correctly implemented, and quotations used are carefully selected. Evidence of up to date journals used. Carefully selected primary (if applicable) and secondary sources used. A high level of understanding of research paradigms.
70 – 100% First	35-39	A convincing exposition of the subject & displays a deep understanding of the complexities of the subject. The student is able to stand back from the subject and place it in a wider context. Theories are sensitively and critically applied. Demonstrates full understanding of topic within a wider context. Shows excellent critical and analytical abilities. The reader is convinced by the power of the argument presented. It is laid out in a well-structured and coherent fashion. Sections relate well to each other and build up to form a convincing whole.		35-39	Excellent level of research to underpin report. Very good attention to detail in researching components, costings and system requirements; together with diverse, relevant and valid research to support argument effectively. Extensively and accurately referenced throughout, and quotations used are carefully selected; supported by a detailed list of references and bibliography identifying all sources (on separate pages). Shows extensive use of both primary (if applicable) and secondary sources. An emphasis of a link between theory and research has been made.
60-69% 2:1	30-34	Demonstrates substantial understanding of topic within a wider context. Shows good critical and analytical abilities. The available theories are critically applied, with justified choices being made. A clear argument is presented which engages the reader and prompts a debate. Positions are not merely listed but are weighed carefully. The argument flows, with good cross-referencing between parts of the essay.		30-34	Good level of research to underpin report. System components, costings and system requirements are researched in some detail; together with, relevant and valid research to support argument effectively. The piece is thoroughly referenced throughout and uses an adequate number of quotations. Accurate referencing throughout with detailed list of references & bibliography



50-59% 2:2		A reasonable understanding of the subject area, with evidence of knowledge of the major works in the area. The importance of relevant theories is understood. There is clear sense of a position being developed, with the argument being developed through the report. There might, however, be points at which it could be expressed more clearly. Or argument strengthened. Demonstrates reasonable but incomplete understanding of topic and its context.		Evidence of acceptable research into system components, costings and system requirements, although not comprehensive and could be improved with further in-depth investigation. Includes some relevant research to support argument, Some attempt at referencing, although possibly with (minor) errors.
40-49% 3rd	20-29	Demonstrates limited or patchy understanding of the topic and its context. Little evidence of critical and analytical abilities, although key components are identified and discussed appropriately in the context of the brief. The argument is implied rather than being explicit. The themes presented are confused and lack flow and coherence.	20-29	Evidence of acceptable research into system components, costings and system requirements, although not comprehensive and could be improved with further in-depth investigation. Includes some relevant research to support argument, Some attempt at referencing, although possibly with (minor) errors.
35 – 39% Marginal Fail	18-19	Only limited evidence of an understanding of the basic parameters of the subject. Difficult to relate the questions either to the topic selected or the available literature. Demonstrates little understanding of topic and its context. Very little evidence of critical and analytical abilities. There is little sense of a sustained argument. The work is fragmented and lacks clear themes.	18-19	Evidence of some (limited) research into system components, costings and system requirements, although not to a satisfactory standard. Some key areas for discussion are not supported with sufficient research and argument lacks substance. May include some attempt at incorporating suitable quotations within report, but either not used effectively or not enough relevant material. Some attempt at referencing, although not implemented correctly.
0 – 34% Fail	0-17	Unacceptable standard. Demonstrates very little understanding of topic and its context. No (or limited) evidence of critical and analytical abilities.	0-17	Poor research to support report. Limited or no evidence of research into system components, costings and/or other key requirements of the system. Major key areas are either not considered at all, or in very little detail. Little or no attempt at correct referencing.

## Assessment Component 2: Presentation

<b>Assessment Component 2: Presentation</b>						
	<b>Content</b>		<b>Structure and Presentations Skills</b>		<b>Visual aids and diagrams</b>	
Weighting	<b>50%</b>		<b>25%</b>		<b>25%</b>	
80-100% Upper first	24+	An exceptional exposition of the subject & displays a deep understanding of the complexities of the subject. The student is objective. Theories are sensitively and critically applied. Own theory developed. Demonstrates full understanding of topic within a wider context. Shows excellent critical and analytical abilities. Detailed and comprehensive presentation.	32+	Exceptional structure to presentation and excellent pace to delivery. Professional manner throughout. Has strong ability to interact with groups and individuals. Confident and relaxed body language. Excellent eye contact with audience. Excellent and seamless division of material. Major points handled at an easy pace, which makes effective use of time available. Strong, audible voice throughout.	24+	Presentation aids are used as an integral part of the work. Visuals are well designed and have a consistent appearance. Very effective in communicating information.
70 – 100% First	21-23	Imaginative and thorough search for materials. Theory and practice are well integrated with critical and creative issues being raised for discussion. Demonstrates full understanding of topic within a wider context. Shows excellent critical and analytical abilities. Detailed and comprehensive presentation.	28-31	Excellent structure to presentation and very good pace to delivery. Professional manner throughout. Has strong ability to interact with groups and individuals. Confident and relaxed body language. Excellent eye contact with audience. Excellent and seamless division of material. Major points handled at an easy pace, which makes effective use of time available. Strong, audible voice throughout.	21-23	Presentation aids are used as an integral part of the work. Visuals are well designed and have a consistent appearance. Work very well in communicating information and include suitable level of detail.
60-69% 2:1	18-20	Evidence of a wider search for material and the application of critical thought to this. The main issues are competently covered and additional questions raised. Demonstrates substantial understanding of topic within a wider context. Shows good critical and analytical abilities.	24-27	Good structure to presentation and generally good pace to delivery. Professional manner in parts. Has good ability to interact with groups and individuals. Confident and relaxed body language in parts. Good eye contact with audience. Good division of material. Most points handled at an easy pace. Strong, audible voice in most parts.	18-20	Presentation aids are mostly used as an integral part of the work. Visuals are generally well designed in most parts.
50-59% 2:2	12-17	Competent discussion of main points with evidence of reading, but limited to major texts. Generally covers key points reasonably well – although could be improved with further in-depth details in places.	16-23	Reasonably effective structure to presentation. Pace of delivery acceptable although some sections were either too long or too short. Professional manner in parts. Has good ability to interact with groups and individuals. Confident and relaxed body language in parts. Good eye contact with audience. Good division of material. Most points handled at an easy pace. Strong, audible voice in most parts.	12-17	Presentation aids include some use of images and diagrams but could be more effective / more consistent.
		Reasonable discussion of main points. Generally covers key points satisfactory – although not comprehensive and lacks the research to support		Satisfactory structure to presentation, although pace of delivery could have been improved. Professional manners are limited. Has some ability to interact with groups and		Presentation aids include some limited use of images and diagrams but are not generally

40-49% 3 <sup>rd</sup>		argument.		individuals. Evidence of confident and relaxed body language limited. Brief eye contact with audience. Some division of material. Some points handled at an easy pace. Voice weak in most parts.		integral to the work.
35-39% Marginal Fail		Material has been poorly and superficially researched with little connection to brief.		Structure of presentation could have been more focussed, and/or the pace of delivery could have been improved. Has some ability to interact with groups and individuals, although not confidently presented effectively.		Presentation aids are poor, with very limited use of images and diagrams.
0-34% Fail		Little or no evidence of an understanding of the basic parameters of the subject. Difficult to relate the questions either to the topic selected or the available literature.		Poor structure to presentation and poor timing delivery.		Presentation aids are poor, with very limited use of images and diagrams.