

Full Title:	Interactive Systems
Language of Instruction:	English
Module Code:	MUSC H9Z04
Credits:	5
Valid From:	Semester 1 - 2014/15 (September 2014)
Module Delivered in	1 programme(s)
Module Description:	This module will place the study of current music technology in perspective, covering the development of electronic musical instruments, and the consideration of the human as a user of this equipment. Students will consider factors in human computer interaction, and will be required to design an interactive instrumental interface for music production.
Learning Outcomes:	
<i>On successful completion of this module the learner should be able to</i>	
<ol style="list-style-type: none"> 1. Demonstrate a knowledge of interactive instrument design innovations and current trends. 2. Illustrate an awareness of the many HCI considerations for musicians and composers. 3. apply to their own work the skills needed to develop interactive systems using data flow programming languages. 4. show a critical awareness of existing user interfaces developed for audio creation and modification. 	

Module Content & Assessment

Indicative Content
Overview of music technology development in the 20th Century n/a
Human Computer Interaction n/a
Introduction to data flow programming n/a
Interface design and HCI considerations for musicians and composers n/a
Introduction to MIDI as a standard for communication between musical interfaces n/a
Introduction to psychical computing n/a
Interconnection of interfaces using the MIDI protocol n/a
Realtime control: interaction between live performers and computer-generated sound n/a
Music-Image parameter mapping n/a
Alternative communication protocols n/a
Multimedia ramifications and considerations for Interactive system design n/a

Assessment Breakdown	%
Course Work	100.00%

Full Time

Course Work							
Assessment Type	Assessment Description	Outcome addressed	% of total	Marks Out Of	Pass Marks	Assessment Date	Duration
Project	CA consists of a series of data flow programming exercises.	1,2,3,4	50.00	0	0	Sem 1 End	0
Project	The final project takes the form of a working interactive system, developed to the level of a fully functional prototype.	3,4	50.00	0	0	Sem 1 End	0

No Project

No Practical

No End of Module Formal Examination

Reassessment Requirement
A repeat examination Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

DKIT reserves the right to alter the nature and timings of assessment

Module Workload & Resources

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Practical	Practical demos/talks/workshops	3.00	Every Week	3.00
Directed Reading	n/a	2.00	Every Week	2.00
Independent Study	n/a	3.00	Every Week	3.00
Total Weekly Learner Workload				8.00
Total Weekly Contact Hours				3.00

This course has no Part Time workload.

Resources

Recommended Book Resources

Nic Collins 2009, *Handmade Electronic Music: The Art of Hardware Hacking*, Routledge

Supplementary Book Resources

Winkler, T., *Composing Interactive Music: Techniques and Ideas using MAX*, MIT Press, 2000

Chadabe, J., *Electric Sound: The Past and Promise of Electronic Music*, Prentice Hall, 1996

This module does not have any article/paper resources

Other Resources

Website: *New Instruments for Musical Expression*

<http://www.nime.org/>

Website: *Trends in Gestural Control of Music*

http://recherche.ircam.fr/equipes/analys_e-synthese/wanderle/Gestes/Externe/

Module Delivered in

Programme Code	Programme	Semester	Delivery
DK_HMUSC_R	Master of Arts/Master of Science in Music Technology	2	Elective