1. **Title of the module**

CMAT6140 Creating Audio Applications

1. **School or partner institution which will be responsible for management of the module**

Centre for Music and Audio Technology (CMAT)

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 6

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Term 1

1. **Prerequisite and co-requisite modules**

None

1. **The programmes of study to which the module contributes**

BSc (Hons) Music Technology and Production

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. demonstrate a systematic understanding of key principles and processes in designing audio applications informed by the forefront of the discipline;
3. demonstrate an understanding of technical, creative and usability issues associated with audio applications;
4. use computer programming skills to create, adapt, edit, and deploy software in an audio context;
5. evaluate contemporary audio applications within an historical context
6. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
7. synthesize knowledge, and information in order to generate output in written, audio, and practical formats;
8. manage time and to plan and set priorities effectively;
9. critically evaluate a range of software tools in order to achieve a solution to a problem;
10. use appropriate methods and advanced cognitive and practical skills to address problems that have limited definition and involve many interacting factors.
11. **A synopsis of the curriculum**

This module will address the issues around different ways in which software can be used to develop audio applications. Taught via a combination of lectures and practical computer lab sessions, students will have the opportunity to design and build their own audio plug-ins, or standalone applications. These may range across a wide spectrum of uses, from performance to recording, from entertainment to interactive installations. Emphasis will be placed on various parts of the design process including prototyping and usability testing, so that students build up a good awareness of the context for which applications need to be designed.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

Boulanger, R. and Victor Lazzarini (eds.) (2010) *The Audio Programming Book*. Cambridge MA: MIT Press

Collins, N (2010). *Introduction to Computer Music*. Wiley.

Dean, Roger (ed.) (2009) The Oxford Handbook of Computer Music. NY: Oxford University Press

Roads, C (1996). *The Computer Music Tutorial*. Cambridge: MIT Press.

Smith, Steven (2002) *Digital Signal Processing: A Practical Guide For Engineers And Scientists.* San Diego: Spectrum, Inc.

1. **Learning and teaching methods**

This module will be taught by means of lectures, workshops and a tutorial.

Total Contact Hours: 22

Independent Study Hours: 128

Total Study Hours: 150

1. **Assessment methods**
   1. Main assessment methods

(1) Portfolio (audio application design) 60%  
(2) Written report (1600 words) 40%

* 1. Reassessment  
     Like-for-like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *8.4* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| **Private Study** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| lecture | **x** | **x** |  | **x** | **x** |  |  |  |
| workshop | **x** | **x** | **x** |  | **x** | **x** | **x** | **x** |
| tutorial | **x** | **x** | **x** | **x** |  |  |  | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |
| Portfolio | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |
| Written report | **x** | **x** |  | **x** | **x** | **x** | **x** | **x** |

1. **Inclusive module design**

The Centre recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Medway, CMAT

1. **Internationalisation**

Many audio applications are standard and used across industry in an international context. The ability to develop audio applications is a key skill that can easily be transferred independent of national borders. Teaching methods will use nationally and internationally developed software.

**FACULTIES SUPPORT OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

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| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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