

Course Code:

PELC254

1. Course Title:

Interactive Audio (with MaxMSP/PureData)

2. Academic Session:

2017-2018

3. Level:

SCQF 11

4. Credits:

15

5. Lead School/Board of Studies:

School of Simulation and Visualisation

6. Course Contact:

Ronan Breslin

7. Course Aims:

- Provide students an opportunity to create a work using sound, moving image, other software, haptic devices, microcontrollers and physical objects coordinated by Max MSP (or PureData)
- Enable students to develop a practical understanding as to if and how algorithmic and computer programming techniques could fit into and enable their own work
- Provide a historical overview of algorithmic techniques and computer programming in the context of sound, music making and art practices and introduce key works and techniques from the world of algorithmic sound and art, both with and without computers.
- Direct students to critique their own work within the context of professional practice within algorithmic techniques and computer programming in the context of sound, music making and art practices.

8. Intended Learning Outcomes of Course:

On successful completion of the course the student will be able to:

1. Discuss and critically evaluate the use of algorithmic and computer programming

- techniques in creative audio-visual practice, past and present
2. Use Max and/or Pure Data to create work that is sensitive to style, uniqueness, generic conventions and shows thoughtful, controlled use of tools and techniques
 3. Describe and evaluate the creative process of using algorithmic and computer programming techniques within their work
 4. Analyse the strengths and weaknesses of Max MSP and/or Pure Data in the context of their own work and more broadly across the AV practice of others.

9. Indicative Content:

The content of this course will include

- Historical contexts of algorithmic composition and sound design.
- Current developments in algorithmic composition and sound design.
- Conceptual models of interactivity – past and present.
- MaxMSP/Jitter programming.
- Pure Data programming.
- Use of interactive I/O interfaces such as Arduino, Raspberry Pi or others.

10. Description of Summative Assessment:

For this course, students must submit:

- A portfolio of work created using MaxMSP and/or Pure Data along with a design and development journal.

10.1 Please describe the Summative Assessment arrangements:

No	Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments) or length (exam)
1	Portfolio	Tutor review of portfolio	80	10
2	Design Journal	Tutor review of journal	20	10

11. Formative Assessment:

Formative review sessions for the assessment will be scheduled where students can present work in progress and receive feedback from staff and peers. Feedback may be provided verbally and/or through a moderated online form.

Individual feedback on work in progress will also be available during scheduled lab sessions.

11.1 Please describe the Formative Assessment arrangements:

Work in progress presentations will take place in week 6 or 7.

12. Collaborative:

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
12.1 Teaching Institutions:	
7T	

13. Requirements of Entry:
7T

14. Co-requisites:
None

15. Associated Programmes:
None

16. When Taught:
Stage 2

17. Timetable:
Timetable will be available in the induction week.

18. Available to Visiting Students:	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

19. Distance Learning:	
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

20. Placement:	
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

21. Learning and Teaching Methods:		
Method	Formal Contact Hours	Notional Learning Hours (Including formal contact hours)
Lecture		
Studio		
Seminar/Presentation	12	20
Tutorial	8	20
Workshop		
Laboratory work		
Project work		50
Professional Practice		
E-Learning / Distance Learning		
Placement		

Examination		
Essay		
Private Study		60
Other (please specify below)		
TOTAL	20	150

22. Description of "Other" Teaching and Learning Methods:
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N/A

23. Additional Relevant Information:

Course open to all PGT students taking cross-school electives.
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24. Indicative Bibliography:

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

Manzo, V.J. 2016. *Max/MSP/Jitter for Music*. 2nd Ed. Oxford: Oxford University Press.

Lechner, P. 2014. *Multimedia Programming Using Max/MSP and TouchDesigner*. Packt Publishing.

Farnell, A. 2010. *Designing Sound*. MIT Press.

Muller, M. 2015. *Fundamentals of Music Processing: Audio, Analysis, Algorithms, Applications*. Springer.

Cipriani, A. & Giri, M. 2016. *Electronic Music & Sound Design – Theory & Practice with Max 7 – Vol. 1*. 3rd Ed. Contemponet.

Collins, K., Kapralos, B., Ressler, H., 2014. *The Oxford Handbook of Interactive Audio*. Oxford University Press (USA).

Date of production / revision	23 April 2017
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