

Glasgow School of Art Course Specification
Course Title: Interactive Audio

Please note that this course specification is correct on the date of publication but may be subject to amendment prior to the start of the 2026-27 Academic Year.

Course Code:	HECOS Code:	Academic Session:
PELC254		2026-27

1. Course Title:
Interactive Audio

2. Date of Approval:	3. Lead School:	4. Other Schools:
PACAAG August 2023	The School of Innovation and Technology	This course is available to students on PGT programmes which include a Stage 2 elective.

5. Credits:	6. SCQF Level:	7. Course Leader:
20	11	Ronan Breslin

8. Associated Programmes:
This course is available to students on PGT programmes which include a Stage 2 elective.

9. When Taught:
Stage 2, On Site and In person – Glasgow Campus

10. Course Aims:
• Provide students an opportunity to create a work using sound, moving image, software, microcontrollers and physical objects coordinated by Max MSP (or PureData) • Enable students to develop a personal and practical understanding as to if and how algorithmic and computer programming techniques could fit into and enable their work, allowing for original expression of individual creativity • Provide a historical and critical overview of algorithmic techniques and computer programming in the context of sound, music making and art practices., discussing key works and techniques from the world of algorithmic sound and art, both with and without computers. • Direct students to critically understand a range of working processes and products using Max/PD as occurs within the contingent contexts of professional music/sound making and audience practices both routine and unfamiliar to the student. This course is offered as a cross school elective to PGT students. The overarching aims are as follows:

- Encourage interdisciplinary, critical reflexivity from within an open set of choices;
- Foster deep investigative approaches to new or unfamiliar areas of practice and theory;
- Cultivate self-directed leadership and initiative-taking in both applied and abstract modes of practice/ study not necessarily associated with a student's particular creative specialism;
- Enable flexible, ethical exploration and connection of diverse knowledge and understanding within a specialist programme of study.

11. Intended Learning Outcomes of Course:

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

1. Exercise substantial autonomy and initiative in using Max MSP, Pure Data or similar digital toolkits to create work that is sensitive to style, uniqueness, generic conventions, professional and ethical codes
2. Apply knowledge, skills and understanding in demonstrating originality and creativity in interactive audio, showing nuanced and controlled use of tools and techniques.
3. Apply critical analysis, evaluation and synthesis in the development of their own work and as it occurs in the practice of others, informed by forefront developments in interactive audio
4. Communicate with peers, more senior colleagues & specialists the conceptual and technical attributes of their practical work, critical insights and learning synthesised during the making of project work.

12. Indicative Content:

The content of this course will include

- Historical contexts of algorithmic composition and sound design.
- Interactive audio case studies
- 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, MIDI controllers, DMX interfaces, OSC data over network or others.

13. Description of Summative Assessment Methods:

Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments)
Portfolio	Tutor review of portfolio	60	Week 11, Stage 2
Design Journal	Tutor review of portfolio	40	Week 11, Stage 2
13.1 Please describe the Summative Assessment arrangements:			
For this course, students must submit:			
• An independent portfolio of work comprised of finished pieces and/or exploratory fragments. MaxMSP and/or Pure Data patch(es) can be the product or must play a significant role in the production of other AV media, installation or physical computing work.			

- Design and development journal detailing process and practical outcomes using autoethnographic tools in order to form a critical rather than descriptive account.

14. Description of Formative Assessment Methods:

Engagement with formative assessment is a mandatory requirement.

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.

14.1 Please describe the Formative Assessment arrangements:

Work in progress presentations will take place in week 5.

15. Learning and Teaching Methods:

Formal Contact Hours

20

Notional Learning Hours

200

15.1 Description of Teaching and Learning Methods:

The course will be delivered through asynchronous online homework tasks and pre-recorded demonstrations. Each of these are followed up with a synchronous online session summarising the work so far and unpacking issues/questions specific to the cohort.

Attending campus will not be necessary for grading, however experience in 2021-22 suggests students are enthusiastic to meet up, share and help each other in a hands on way. Such activities are at student discretion and I have clarified this is not part of their grading.

16. Pre-requisites:

N/A

17. Can this course be taken by Exchange/Study Abroad students?

Yes

18. Are all the students on the course taught wholly by distance learning?

No

19. Does this course represent a work placement or a year of study abroad?

No

20. Is this course collaborative with any other institutions?

No

20.1 If yes, then please enter the names of the other teaching institutions:

N/A

21. Additional Relevant Information:

Course open to all PGT students taking cross-school electives.

22. 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).

Burnard P (2009) *Musical Creativities in Practice*, Oxford: Oxford University Press

Toynbee J (2000) *Making Popular Music*, London: Arnold

Becker H (2008) *Art Worlds Updated and Expanded*, Berkeley: University of California Press