



# MUS 302

## Sound, Image and Interactive Media

S2 Day 2018

*Department of Media, Music, Communication and Cultural Studies*

### Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	4
<u>Delivery and Resources</u>	8
<u>Unit Schedule</u>	8
<u>Policies and Procedures</u>	10
<u>Graduate Capabilities</u>	11
<u>Changes from Previous Offering</u>	16

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## General Information

Unit convenor and teaching staff

Unit Convenor, Lecturer, Tutor

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Y3A 193K

By appointment

Credit points

3

Prerequisites

39cp at 100 level or above

Corequisites

Co-badged status

Unit description

This unit is unit designed for students and digital artists interested in computer-based audiovisual performance. The unit aims at extending production skills gained in music and media production streams, and attempts to build an adaptable skill set for creating customised digital performance and interactive works.

This unit will cover a range of hybrid new media contemporary technologies including MIDI, audio and synthesis, graphics and video, 3D, and gestural and tactile control. It covers programming fundamentals with Max, a graphical programming environment for new media artists.

The core of the unit will be the creation of new media production and performance works, including computer-mediated music and visual art projects.

Skills gained in this unit have relevance to areas including sonic and visual design, interaction design, game sound, and broad areas of computer-based production and performance. This unit assumes no prior knowledge in Max.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts. Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.

Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.

Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.

Develop the ability to apply theoretical and technological concepts to creative works.

Synthesise new creative works through interaction with aural and visual media forms.

Develop problem-solving skills.

## General Assessment Information

With the exception of written work, all work must be digitally submitted to the MUS 302 assessments' dropbox (or iLearn) as outlined during class times.

While media files can be sourced from others' work, patches created in Max/MSP/Jitter should be original works, and any 'borrowed code' or media files should be appropriately attributed or referenced as you would in a formal written assignment. Submission of work that is primarily copied from resources outside of content provided in the unit is subject to the same [Academic Honesty Policy](#) as written works.

Assessment marks are aligned with the university's [grade descriptors](#).

### Late Submission Penalty

Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – two (2) marks out of 100 will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted more than seven (7) days (including weekends) after the original submission deadline. No late submissions will be accepted for timed assessments – e.g. quizzes, online tests.

### Additional information

MMCCS website [https://www.mq.edu.au/about\\_us/faculties\\_and\\_departments/faculty\\_of\\_arts/departments/media\\_music\\_communication\\_and\\_cultural\\_studies/](https://www.mq.edu.au/about_us/faculties_and_departments/faculty_of_arts/departments/media_music_communication_and_cultural_studies/)

MMCCS Session Re-mark Application <http://www.mq.edu.au/pubstatic/public/download/?id=167914>

Information is correct at the time of publication.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Workshop Fundamentals</u>	30%	No	Weeks 2–5
<u>Image Manipulation System</u>	30%	No	Week 8 Class
<u>Creative Brief</u>	10%	No	Week 9 Class
<u>Interactive Multimedia Work</u>	30%	No	Week 13 Class

### Workshop Fundamentals

Due: **Weeks 2–5**

Weighting: **30%**

Students are required to complete tutorial 'worksheets' in Max, and create patches that address micro-challenges in order to demonstrate their understanding of fundamental Max/MSP/Jitter concepts. These worksheets will help give students the skillset to develop their own creative works in Max.

While a number of these might include musical concepts or terms, a demonstrated familiarity with Max and analytical approach is the main focus of these worksheets. Students' engagement with the worksheets will be formatively assessed during each tutorial. Feedback will consist of realtime discussion with the tutor and summative comments.

Worksheets will be submitted to iLearn. Details of submission will be given in class times.

### Marking Criteria

Marks will be awarded for:

- Satisfactorily completing tasks
- Addressing task requirements correctly
- Demonstration of understanding
- Clarity, quality and ingenuity (orderly and easy-to-read patching layout, concise and well structured patching)

On successful completion you will be able to:

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.

- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.
- Develop problem-solving skills.

## Image Manipulation System

Due: **Week 8 Class**

Weighting: **30%**

Students will create a basic Max/Jitter patch that allows a performer (ie. you) to load images or video, and manipulate live (eg. 'cut' between parts, change visual effects etc.). An interface of your choice should be mapped to act as a controller for your system.

A brief demonstration of your patch's functionality and usage will occur in Week 8 tutorial. A pass mark for this assessment will be granted for a demonstration of technical proficiency, and intention behind and understanding of the function of your patch. [Students are encouraged to experiment with and incorporate *forms of visual modification* and *control* of their choosing in their patches.]

The patch should be accompanied by a process diary submitted via iLearn. Details of submission will be given prior to the semester break.

After demonstration, submit your patch (and media files) to the MUS 302 Assignments' Dropbox on the server in a folder named LASTNAME\_FIRSTNAME\_Assessment2. Feedback will consist of realtime discussion with the tutor and summative comments.

## Marking Criteria

Marks will be awarded for:

- Satisfactorily completing project objectives
- Demonstration of understanding
- Suitable conversion and formatting of visual/aural media forms
- Effective forms of control over the visuals
- Clarity, quality and ingenuity (orderly and easy-to-read patching layout, concise and well structured patching) of your patch

On successful completion you will be able to:

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate

audiovisual media forms in realtime.

- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## Creative Brief

Due: **Week 9 Class**

Weighting: **10%**

Students must write a 500-word brief outlining their intended construction of a performable presentation/installation using Max. At this stage in the unit, students should have a familiarity and understanding of the creative possibilities of Max and the brief should address the what the intended work will entail audiovisually, and technical concepts such as how the patch will function, how it will create/control visual/aural media, and how/whether special control interfaces will be used. Students should reflect on the creative brief in their process diary for their completed work in Week 13.

The creative brief is to be submitted via iLearn. Submission details will be outlined in class time.

## Marking Criteria

Marks will be awarded for:

- Outlining objectives for your creative work
- Evidence of understanding of how it could be realised
- Outlining steps to achieve this given existing levels of knowledge
- Clarity, quality and ingenuity of ideas
- Quality of writing

On successful completion you will be able to:

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.

## Interactive Multimedia Work

Due: **Week 13 Class**

Weighting: **30%**

Students must design and create a short interactive sound/music/image/video based installation/performance work that employs elements of new media performance practices, and demonstrates knowledge and skills developed throughout the course. The installation will be performed in Week 13 during 302 class time.

This is a summative assessment that should build on the Creative Brief and incorporate techniques and concepts practiced and discussed throughout the course. A pass mark for this assessment will be granted for a demonstration of technical proficiency and the ability to successfully realise a creative work in a multimedia form, integrating image and sound.

Group work (of two students) is allowed in this assignment. Marks will be allocated based on individual contribution to the final product (as evidenced by students' contribution in the weeks preceding the final performance.)

**Note:** If this patch is based on a previously submitted Image Modification System, it should show a distinct progression from and marked difference between previously demonstrated work.

The patch/performance should be accompanied by a process diary submitted via iLearn. Details of submission will be given in class prior to the assessment due date. As well as presenting your work, please submit a copy to the assignments' dropbox on the server as a folder containing all of your patches and media files entitled LASTNAME\_FIRSTNAME\_FinalWork.

## Marking Criteria

Marks will be awarded for:

- Construction and demonstration of a coherent performable art/work
- Evidence of understanding of audiovisual performance and control
- Suitable control inputs and interaction with media forms
- Quality, achievability and realisation of creative ideas
- Effective engagement with audiovisual media forms through gestural inputs and computer-based controls

On successful completion you will be able to:

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
- Examine and critically analyse audiovisual works and be able to understand,

deconstruct, and apply similar skills/practices to original creative works.

- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## Delivery and Resources

As MUS 302 is a practical unit, students are expected to attend both lectures and practical tutorial workshops (workshops are heavily dependent on lecture content). Workshops are designed to give students time to develop practice-based learning with instructional support.

Prior knowledge of Max is not a requirement, however general computer literacy skills are assumed (creating files/folders, copying files etc).

Students are required to bring headphones to class each week, and to source/create their own media (music, sound, images, film) for assignments, assessments, and performances. Students are encouraged to bring USB sticks or portable Hard Drives (**not** formatted as NTFS) to class.

## Readings

Readings and extra curricular tasks will be disseminated via iLearn.

### Core-readings and interactive exercises:

As this course is computer-focussed and practical in nature, a number of interactive readings and examples will be available in the Max 7 Help and Documentation and the in-built Max/MSP/Jitter tutorials within Max.

### Optional Readings:

Manzo, VJ (2011) Max/MSP/Jitter for Music: A Practical Guide to Developing Interactive Music Systems for Education and More

Colosanto, F (2012) Max 6: Interface

... both available via <http://cycling74.com/wiki/>

[index.php?title=Max\\_Documentation\\_and\\_Resources](http://cycling74.com/wiki/index.php?title=Max_Documentation_and_Resources) (please discuss any areas you wish to read about in more detail with teaching staff first)

## Unit Schedule

### Week 1

- Course introduction.
- Overview and assignment guidelines. Past projects.

### Week 2

- Fundamentals of Max/MSP/Jitter 1: Message Types, Programmatic Flow



- Tutorial Task: Max Worksheet 1
- **Assessment 1a:** Max Worksheet 1

## Week 3

- Fundamentals of Max/MSP/Jitter 2: introduction to MIDI
- Tutorial Task: Max Worksheet 2
- **Assessment 1b:** Max Worksheet 2

## Week 4

- Fundamentals of Max/MSP/Jitter 3: Basic Input Controls (keys/mouse)
- Tutorial Task: Max Worksheet 3
- **Assessment 1c:** Max Worksheet 3

## Week 5

- Fundamentals of Max/MSP/Jitter 4: Musical Control
- Tutorial Task: Max Worksheet 4
- **Assessment 1d:** Max Worksheet 4

## Week 6

- Max: Working with Visuals 1.
- Introduction to video.
- Manipulation of video playback.

## Week 7

- Max: Working with Visuals 2.
- Interfaces.
- Constructing controller interfaces for controlling visual performance.

## Week 8

- Max: Working with Audio
- Introduction to Audio. Synthesis and manipulation of sound playback.
- **Assessment 2:** Basic Video/Image Manipulation System

## Week 9

- Max: Working with Audio 2.
- Human Interface Devices.
- Constructing controller interfaces for sonic performance.

- **Assessment 3:** Creative Brief for Live Performance System/Final Work.

## Week 10

- Audiovisual performance
- Integrating visuals and audio.

## Week 11

- Max: Tying It All Together
- Working with semi-autonomous agents for live performance.

## Week 12

- Free Lab Time

## Week 13

- Max Performances
- **Assessment 4:** Interactive Multimedia Work in Max/MSP/Jitter performances in tutorial

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](http://ask.mq.edu.au).

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

## **Learning outcomes**

- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## **Assessment tasks**

- Workshop Fundamentals
- Image Manipulation System
- Creative Brief
- Interactive Multimedia Work

## **Capable of Professional and Personal Judgement and Initiative**

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

## **Learning outcomes**

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## **Assessment tasks**

- Image Manipulation System
- Creative Brief

## **Commitment to Continuous Learning**

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships

with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

## **Learning outcomes**

- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Develop problem-solving skills.

## **Assessment task**

- Interactive Multimedia Work

## **Discipline Specific Knowledge and Skills**

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

## **Learning outcomes**

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.
- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## Assessment tasks

- Workshop Fundamentals
- Image Manipulation System
- Creative Brief
- Interactive Multimedia Work

## Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## Learning outcomes

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
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- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## Assessment tasks

- Workshop Fundamentals
- Image Manipulation System
- Creative Brief
- Interactive Multimedia Work

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in

order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

## **Learning outcomes**

- Demonstrate a knowledge, understanding and application of course concepts, including new media and audiovisual performance practices, interactive and computational arts.
- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
- Examine and critically analyse audiovisual works and be able to understand, deconstruct, and apply similar skills/practices to original creative works.
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- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.
- Develop problem-solving skills.

## **Assessment tasks**

- Workshop Fundamentals
- Image Manipulation System
- Creative Brief
- Interactive Multimedia Work

## **Effective Communication**

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

## **Learning outcomes**

- Develop information and technological literacy surrounding contemporary practices of computer-based audiovisual performance, and an understanding of how to manipulate audiovisual media forms in realtime.
- Illustrate theoretical understanding of, and competence with unit material and the Max/MSP/Jitter software toolkits.

- Develop the ability to apply theoretical and technological concepts to creative works.
- Synthesise new creative works through interaction with aural and visual media forms.

## **Assessment tasks**

- Image Manipulation System
- Creative Brief
- Interactive Multimedia Work

## **Engaged and Ethical Local and Global citizens**

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

## **Learning outcome**

- Develop the ability to apply theoretical and technological concepts to creative works.

## **Changes from Previous Offering**

Based on past student feedback, more open hands-on lab time will be allocated during class times.