

Unofficial translation from the original Finnish document

MUSIC TECHNOLOGY

RECORDING AND SOUND/MUSIC PRODUCTION	
Recording and sound production 1	S-MT1
Recording and sound production 2	S-MT2
Recording and sound production 3	S-MT3
Mixing workshop 1	S-MT6
Mixing workshop 2	S-MT7
Artistic producing of popular music 1	S-MT8
Artistic producing of popular music 2	S-MT9
Recording of classical music 1	S-MT10
Recording of classical music 2	S-MT11
Synthesisers in popular music	S-MT12
Individual tuition only	
Assistant in sound production	S-MT82
Recording and sound production exercise	S-MT83
Recording and sound production project	S-MT75
VENUE AMPLIFICATION	
Basics of venue amplification	S-MT15
Venue amplification, training	S-MT16
Venue amplification, advanced	S-MT17
MEDIA AND SOUND ART	
Media and sound art 1	S-MT18
Media and sound art 2	S-MT19
Media and sound art, advanced studies	S-MT20
Research group on expression through sonic and body movement	S-MT21
ELECTROACOUSTIC MUSIC	
Preparatory course in electroacoustic music	S-MT22
Composition and theory of acousmatic music	S-MT23
Electroacoustic music workshops	S-MT24
Electroacoustic seminar	S-MT25
Electroacoustic sound diffusion	S-MT26
Individual tuition only	
Electroacoustic composition	S-MT52
BUILDING EXPERIMENTAL INSTRUMENTS FOR SOUND ART AND PERFORMANCE	
Electronic music performance studio	S-MT27
Electroacoustic improvisation	S-MT28
SuperCollider	S-MT29

Programming with Max	S-MT30
Physical IT	S-MT67
Individual tuition only	
Synthesisers	S-MT56
Performance using electronic equipment	S-MT53
MUSIC AND TECHNOLOGY: CREATIVE TOOLS, METHODS AND DEVELOPMENT	
Basics of digital signal processing	S-MT33
Application of digital signal processing	S-MT34
Basics of analog signal processing	S-MT31
Application of analog signal processing	S-MT32
Computer-assisted composition	S-MT35
APPLIED MUSIC	
Lecture series on film music and cinematic narrative	S-MT36
Film music composition and production workshop	S-MT37
Workshop for directors, sound designers and composers	S-MT38
Game music: theory and working environments	S-MT40
Film score recording and sound production	S-MT39
Game music: composition and game narrative	S-MT41
Game music recording workshop	S-MT42
Game music VR environment	S-MT87
Game repertoire unit	S-MT43
MUSIC TECHNOLOGY PEDAGOGY	
Music technology pedagogy 1	S-MT44
Music technology teaching materials and literature	S-MT45
Command and pedagogical use of basic tools	S-MT46
Producing teaching materials and introduction to teaching environments	S-MT47
Orientation practicum (teaching practice)	S-MT48
Music technology pedagogy 2	S-MT49
Design and delivery of music technology courses	S-MT50
Orientation practicum 2	S-MT51
MAIN SUBJECT SUPPORTING STUDIES	
Music technology tools studies	S-MT58
Technical aural skills	S-MT72
Theoretical basics of music technology	S-MT71
Music acoustics	S-MT59
Bachelor's proficiency demonstration workshop	S-MT88
Master's thesis seminar 1	S-MT61
Master's thesis seminar 2	S-MT62
Introduction to the electronic music studio at the Music Centre	S-MT63
Introduction to the control rooms in the studio block at the Music Centre	S-MT64
Introduction to the minor control rooms at the Music Centre	S-MT65
Introduction to venue amplification at the Music Centre	S-MT66

IPSAT – Introduction to principles of Spatial Audio Technology	S-MT13
GENERAL STUDIES	
Workshop	S-MT80
Specialisation studies 1	S-MT76
Specialisation studies 2	S-MT79
Individual tuition only	
Music performance studies	S-MT54
Composition	S-MT57
Research exercise	S-MT77
Individual guidance	
Portfolio	S-MT81
Project	S-MT74
Production exercise	S-MT78
Proficiency demonstration (Bachelor of Music)	S-MToK
Proficiency demonstration (Master of Music)	S-MToM
Master's thesis	S-MT69
Major project	S-MT70
Musical assistant	S-MT55

To study a subject area, students must first take the Level I course and then progress through Levels II to V: preparatory, basic, advanced, professional and expert.

UNIT DESCRIPTIONS

Module: RECORDING AND SOUND/MUSIC PRODUCTION

S-MT1 Recording and sound production 1 (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the history of recording music
- be familiar with recording equipment typically used in recording studios
- be familiar with the operating principles and use of microphones
- be familiar with typical work procedures in recording
- be able to make recordings independently in a multi-track studio
- be familiar with the stages of the recording production process

Assessment

On a scale of 0 to 5

Prerequisites

Music technology tools studies

Recommended year of completion

1st year

Level I

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Completion

Active class attendance

Homework

Teaching and learning methods

Small group tuition, 79 h

Homework, 31 h

Coordinating teacher

Miikka Huttunen

Tuition language

Finnish / English

Keywords

Studio, microphone, recording, studio work, popular music

S-MT2 Recording and sound production 2 (8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the special features of recording production in various music styles
- know how to record various styles of popular music
- have improved competence in how to use a recording studio and its equipment
- be aware of the interactions between a recording engineer, producer and musicians and their work procedures in various recording and amplification situations

Assessment

On a scale of 0 to 5

Recommended year of completion

2nd year

Level II

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Completion

Active class attendance

Homework

Teaching and learning methods

Small group tuition, 131 h

Homework, 89 h

Coordinating teacher

Miikka Huttunen

Tuition language

Finnish / English

Prerequisites

Recording and sound production 1

Target group

Students whose main subject is Music Technology

Keywords

Studio recording, ensembles, microphone techniques, recording

S-MT3 Recording and sound production 3 (8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be conversant with mixing recordings of popular music
- be conversant with surround sound recording and mixing

Assessment

On a scale of 0 to 5

Recommended year of completion

3rd year

Level III

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Completion

Active class attendance

Homework

Teaching and learning methods

Small group tuition, 131 h

Homework, 89 h

Coordinating teacher

Miikka Huttunen

Tuition language

Finnish / English

Prerequisites

Recording and sound production 2

Keywords

Mixing, surround sound, multi-channel sound, film music, sound processing

S-MT6 Mixing workshop 1 (6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to develop a personal approach to audio mixing
- have the technical competence to execute his/her visions

Teaching and learning methods

The unit is an introduction to audio mixing as a technical and artistic process through exercises and examples. The focus is on individual creative work with various musical styles and on analysing student projects in the group.

Completion

Completion requires active class attendance (80%) and completing all assignments.

Assessment

pass/fail

Recommended year of completion

4th year

Level IV

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Coordinating teacher

Risto Hemmi

Tuition language

Finnish

Prerequisites*Recording and sound production 3***Keywords**

Mixing

S-MT7 Mixing workshop 2 (6 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to manage large, challenging projects
- have a command of surround sound mixing for various purposes

Teaching and learning methods

The unit is an in-depth study of audio mixing projects through exercises and examples. The focus is on individual creative work with various musical styles and on analysing student projects in the group.

Completion

Completion requires active class attendance (more than 80%) and completing all assignments.

Assessment

pass/fail

Recommended year of completion

5th year

Level V**Target group**

Students at the Sibelius Academy whose main subject is Music Technology

Coordinating teacher

Risto Hemmi

Tuition language

Finnish

Prerequisites*Mixing workshop 1***Keywords**

Mixing, surround sound

S-MT8 Artistic producing of popular music 1 (8 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- understand the various roles and pressures of an artistic producer in the recording production chain
- understand the producer's responsibility for quality control of the recording
- be familiar with the various technical, commercial and logistical stages of the recording production process
- be familiar with various production practices and models in modern popular music
- understand the current state of the commercial popular music industry (recording industry, radio, media)

- be familiar with pressure points in the production process and know ways to resolve them
- understand what makes a hit
- be familiar with the history of producing popular music from the 1930s to the 2010s
- understand the impact of technological advancement on production practices
- be aware of his/her personality as a producer
- be aware of the producer's role as a professional opportunity for himself/herself

Assessment

On a scale of 0 to 5

Recommended year of completion

4th year

Level IV

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Teaching and learning methods

Small group tuition, expert lectures

Thematic discussion in a lecture format

Analysis of music samples

Discussion and deliberation on the various aspects of a producer's role

Analysing current productions

Studying and analysing production case studies

Evaluation and further development of student productions

Completion

Active class attendance

Coordinating teacher

Riku Mattila

Tuition language

Finnish

Prerequisites

Recording and sound production 3

Keywords

Music production, popular music, producer, history of music

S-MT9 Artistic producing of popular music 2 (8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have produced a musical track for the commercial market from start to finish during the unit
- have studied, analysed and organised a production scheme for a specimen performer
- be familiar with production modes suitable for various genres
- have come across all aspects of being a producer in the course of the process
- understand how vital it is to manage the psychological dimension of the production process
- understand how vital it is to take personal artistic risks in order to succeed
- understand how unpredictable the process is and how important troubleshooting skills are
- understand that unless he/she assumes personal responsibility, nothing will happen

Assessment

On a scale of 0 to 5

Recommended year of completion

5th year

Level V**Target group**

Students at the Sibelius Academy whose main subject is Music Technology

Teaching methods

Project launch and follow-up sessions in the group

Producing music independently with a performer

Critique sessions and improving the production on the basis of those

Completion

Active class attendance

Independent producing of music

Coordinating teacher

Riku Mattila

Tuition language

Finnish

Prerequisites

Recording and sound production 3

Artistic producing of popular music 1

Keywords

Music production, popular music, producer, history of music

S-MT10 Recording of classical music 1 (4–5 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be familiar with the most common types of ensemble in classical music
- be familiar with the most common miking practices and be able to apply them in practice in recording projects
- be able to design and organise a recording project on the basis of a musical score

Assessment

pass/fail

Completion and feedback

Active class attendance

Participating in recording projects

Mixing and mastering recordings (Sadie, Pro Tools)

Presenting a recording project to the group

Oral feedback

Teaching and learning methods

Lectures and listening to music in class, maximum 35 h

Project supervisor sessions, maximum 10 h

(maximum 10 students)

Assignments, maximum 15 h

Recording projects in a small group, maximum 48 h

Optional extra work, maximum 27 h

Tuition language

Finnish

Prerequisites

Music technology tools studies

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st to 2nd year

Level I

Target group

Students whose main subject is Music Technology

Coordinating teacher

Matti Heinonen

S-MT11 Recording of classical music 2 (8–11 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to independently design, organise and deliver a recording project
- have a command of mixing and mastering in a recording project
- have been involved in or observed one major recording project (symphony orchestra, opera, etc.)

Assessment

pass/fail

Prerequisites

Recording of classical music 1

Completion and feedback

Active class attendance

Managing recording projects, including study of repertoire, recording, mixing and mastering (2 to 4 projects)

Participating in excursions and involvement in a major recording project

Presenting a recording project to the group

Oral feedback

Teaching and learning methods

Lectures and listening to music in class, maximum 30 h

At least two recording projects managed alone or in a group of maximum 2–3 students (solo performance, chamber music, choir, etc.), 40 h

Excursions (e.g. Finnish Broadcasting Company (YLE), commercial studios, Opera), maximum 15 h

Recording project of a symphony orchestra or opera in a small group (maximum 5 students), maximum 40 h

Mixing and mastering of own projects, maximum 90 h

Project supervisor sessions, maximum 20 h

Extra projects as determined by the supervising teacher, maximum 81 h (maximum 10 students)

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 2nd to 3rd year

Level II

Tuition language

Finnish

Target group

Students whose main subject is Music Technology

Coordinating teacher

Matti Heinonen

S-MT12 Synthesisers in popular music (8 cr)

Introduction to the use of synthesisers in popular music. Students complete exercises, meet professionals in the field and study how they work.

Learning outcomes

A student who has completed the unit is expected to:

- have an in-depth awareness of various types of sound synthesis
- have an in-depth familiarity with the use of synthesisers in various styles of popular music
- be familiar with workstation environments in synthesiser-based music

Assessment

On a scale of 0 to 5

Recommended year of completion

4th year

Level IV**Target group**

Students at the Sibelius Academy whose main subject is Music Technology

Completion

Active class attendance

Homework

Teaching and learning methods

Small group tuition, 104 h

Homework, 110 h

Coordinating teacher

Miikka Huttunen

Tuition language

Finnish / English

Prerequisites

Recording and sound production 3

Keywords

Sound synthesis, popular music, sequencer, sampler, synthesiser

S-MT82 Assistant in sound production (7–21 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to work as a team member on a music or research project
- understand his/her duties thoroughly and to design and deliver his/her contribution independently and reliably
- be able to keep up with work in the project group in technical, artistic and social terms and to have a good command of the required skills

Assessment

The teacher and one colleague assess the unit on a scale of 0 to 5.

Completion and feedback

Practical exercises, planned work situations

Reporting and documenting

Written feedback

Teaching and learning methods

Individual tuition, maximum 4 h per 1 cr, 28–84 h but maximum 30 h

Independent work on projects, 103–477 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Target group

Coordinating teacher

To be appointed by the head of the department as required

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS).

The unit may include working as a composer's assistant on an electroacoustic composition project in a studio, designing and configuring digital and analog devices for live electronics performances, or troubleshooting technology-based improvisation problems as a technical and artistic assistant.

S-MT83 Recording and sound production exercise (1–20 cr)

Learning outcomes

The production exercise concerns a technical and artistic recording or sound production project that supports the student's main subject studies and is approved by the teacher.

Assessment

pass/fail, with a statement from the instructor

Completion and feedback

Design, delivery and documentation of the exercise. The student may complete multiple production exercises.

Oral feedback

Teaching and learning methods

Individual tuition as needed, maximum 1 h per 1 cr

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Target group

Students whose main subject is Music Technology

Tuition language

Finnish / English

Level

-

Coordinating teacher

To be appointed by the head of the department according to the student's needs

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS). In a production exercise, the student works independently or as a member of a team.

S-MT75 Recording and sound production project (3–18 cr)

Learning outcomes

The student is required to prepare a work plan for the project, which is then to be approved by the supervising teacher.

Assessment

pass/fail or on a scale of 0 to 5 (as agreed with the supervising teacher)

Prerequisites

To be agreed with the supervising teacher

Completion and feedback

As per the work plan approved by the supervising teacher

Reporting

Teaching and learning methods

Independent work or group work as per the work plan approved by the supervising teacher, 27 h per 1 cr; guidance and studio time as per the project plan.

Timing

Tuition given every year

Recommended year of completion

Master's 1st to 2nd year

Unit overview

This project is a unit including a written portion and a practical portion as agreed with the supervising teacher appointed by the head of the department. The topic of the project must have to do with the student's main subject. The aim is to engage in an analytically oriented, controlled and supervised project that fulfils predetermined goals in terms of skills and knowledge acquired. Literature projects, seminars, literature examinations and minor research projects may also be accepted as a completion of this unit.

Module: VENUE AMPLIFICATION

S-MT15 Basics of venue amplification (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a command of the common principles and means of modern venue amplification for concerts
- be familiar with the various skill areas of amplification and with the special technical features of amplification for various styles of music

Assessment

pass/fail

Prerequisites

Music technology tools studies

Completion and feedback

Active class attendance (80%)

Completing assignments on schedule

Professional conduct

Oral feedback

Teaching and learning methods

Lectures, maximum 45 h
 Group exercises for various styles of music
 Independent or supervised work at actual concerts
 Analysis and reporting on concerts from the perspective of amplification

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st year

Target group

Students whose main subject is Music Technology

Level I

Tuition language

Finnish / English

Coordinating teacher

Niko Laasonen

Unit overview

The unit is an introduction to modern amplification systems:

- designing and setting up simple amplification systems
- mixing at a concert
- reviewing common work practices

S-MT16 Venue amplification, training (2–4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to work as a technical assistant at a concert
- be able to work as the senior technician at a concert with a technically and artistically simple setup

Assessment

pass/fail

Prerequisites

Basics of venue amplification

Completion and feedback

Oral feedback

Teaching and learning methods

Assignments

Group tuition for planning

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 2nd year

Target group

Students whose main subject is Music Technology

Level II

Tuition language

Finnish / English

Coordinating teacher

Niko Laasonen

Unit overview

The purpose of this unit is to apply in practice the skills learned in the unit S-MT15.

S-MT17 Venue amplification, advanced (4 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to act independently as the senior sound engineer at a technically and artistically complex concert
- have improved his/her competence regarding the technical and aesthetic requirements of a particular music style

Assessment

pass/fail

Prerequisites

Venue amplification, training

Completion and feedback

Design and delivery of an amplification system for a concert on schedule

Analysis and reporting on concerts from the perspective of amplification

Oral feedback

Teaching and learning methods

Assignments, independently completed and individually supervised

Group tuition, maximum 45 h

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 3rd year

Target group

Students whose main subject is Music Technology

Level III**Tuition language**

Finnish / English

Coordinating teacher

Niko Laasonen

Unit overview

The unit is an introduction to the aesthetic requirements placed on the technical execution of amplification systems in concert for various styles of music.

Students may specialise in one of the following areas:

- Technical and aesthetic requirements of a particular style of music
- Complex amplification systems
- Demanding professional projects

Module: MEDIA AND SOUND ART**S-MT18 Media and sound art 1 (4–8 cr)****Learning outcomes**

A student who has completed the unit is expected to:

- understand the various species of media and sound art and how they relate to one another
- recognise the technologies and practices employed in this field
- be familiar with the basic concepts of media and sound art
- be aware of the historical development of the genre

Assessment

pass/fail

Completion and feedback

Active class attendance (80%)

Completing assignments by the deadline given

Professional conduct

Participation in group work

Oral feedback

Teaching and learning methods

Lessons, maximum 52 h

Small group tuition, lectures, visits to sound and media art exhibitions and events, reviewing literature and having literature discussions, small-scale research projects, reports and performance exercises, organising information with concept maps.

Independent work in reading literature and preparing presentations, minimum 47 h; also, developing and presenting a small-scale project, maximum 107 h

Timing

Tuition given every other year in the spring semester

Recommended year of completion

Bachelor's 1st year

Level I

Tuition language:

Finnish / English

according to the needs of the group

Target group

Also suitable for other students at the University at any point in their studies.

Coordinating teacher

Marianne Decoster-Taivalkoski

Unit overview

The purpose of the unit is to introduce students to the history, basic concepts, technologies and practices of media and sound art.

S-MT19 Media and sound art 2 (8–11 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with work practices in media and sound art projects
- understand the processes involved in launching and executing media and sound art projects
- be familiar with the general logic of project work
- be able to self-evaluate his/her competence

Assessment

pass/fail

Prerequisites

Prior completion of *Media and sound art 1* is recommended but not required.

Completion and feedback

Active class attendance (80%)
 Completing assignments by the deadline given
 Professional conduct
 Participation in group work
 Oral feedback

Teaching and learning methods

Small group tuition, maximum 120 h
 Techniques and practices in the genre addressed in workshops, small group tuition, independent work, small-scale research projects, exercises, reviewing literature, having literature discussions and conducting media analyses

Timing

Tuition given every other year in the autumn and spring semesters

Recommended year of completion

Bachelor's 2nd year

Target group

Also suitable for other students at the University at any point in their studies.

Tuition language

Finnish / English

Level II**Coordinating teacher**

Marianne Decoster-Taivalkoski

S-MT20 Media and sound art, advanced studies (8 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- have a command of the work practices and stages involved in media and sound art projects
- be able to develop his/her own personal creative processes
- be able to describe his/her artistic choices in words and to self-evaluate them
- be able to take a research approach to his/her work
- be capable of self-guidance
- have practical skills in critical listening and sound analysis in the field of media and sound art
- have established the basics of his/her personal artistic discourse and be able to place his/her goals in a wider artistic context in the field of media and sound art
- be able critically to appraise his/her own work and the work of other professionals in the field of media and sound art
- be able to listen to, interpret and understand the needs and arguments of various persons in the working group and to take these into account in his/her work

Assessment

pass/fail

Prerequisites

Students are required to have a command of basic audio technology and programming.

Completion and feedback

Active class attendance (80%)
 Completing assignments by the deadline given
 Professional conduct

Participation in group work

Oral feedback

Teaching and learning methods

Lessons, maximum 104 h

Group work in a multiform media and sound art project, discussions, reflections, written assignments

Timing

Tuition given every other year in the autumn and spring semesters

Recommended year of completion

Bachelor's 3rd year onwards

Target group

The unit is intended for students in Music Technology, sound design in performing arts and Sound in New Media, and also for advanced students in sound art.

Tuition language

Finnish / English

Level III–IV

Unit ts5m may include workshops from unit tp49.

Coordinating teacher

Marianne Decoster-Taivalkoski

S-MT21 Research group on expression through sonic and body movement (4–8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to define, describe and augment his/her artist identity
- have an understanding of the field of research on expression through sonic and body movement
- be aware of ethical practices in arts research conducted as group work
- have made a contribution related to his/her art form to the practical research project
- be able to integrative the views and inputs of other group members into his/her own thinking in a constructive way
- have a command of the process of test arrangements drawn up collaboratively
- have improved his/her improvisation skills in inter-art activities

Assessment

pass/fail

Completion and feedback

Active class attendance (80%)

Completing assignments by the deadline given

Active participation in group work

Oral feedback

Teaching and learning methods

Group work, lab work methods, maximum 52 h

Group discussion and information processing during sessions, independent work and writing an article, 40–94 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 1st year onwards, also suited for doctoral students

Target group

For anyone at the University of the Arts Helsinki interested in expressive movement and arts research

Coordinating teacher

Marianne Decoster-Taivalkoski

Unit overview

The purpose of this research group, which is recommendable for students from a wide range of backgrounds, is to execute a research project in experimental arts research at weekly meetings. The object of the research is the relationship of sonic and body movement expression: the impulses passed between them and the reflections, changes, tensions, resistance and partnership that emerge between them, particularly when performing in the same space at the same time. Students are encouraged to identify, describe and augment their artist identity and thereby provide input for the research. The meetings include group improvisation, reflection and discussion, and planning of experiments around the research questions brought up by the group. By repeating these actions, the group builds up a body of knowledge that is documented in notebooks, learning diaries, articles, sketches, drawings, performances and other ways thought up by the group members.

Module: ELECTROACOUSTIC MUSIC**S-MT22 Preparatory course in electroacoustic music (8 cr)****Learning outcomes**

A student who has completed the unit is expected to:

- recognise and identify various genres of electroacoustic music
- have a command of the basics of electroacoustic music composition: sound processing, sound synthesis, sound spatialisation and mixing for electroacoustic music
- be familiar with and have experience of using the basic studio tools for electroacoustic music: sequencers, microphones, speakers, synthesisers
- have developed their listening skills for working with diverse sound materials
- have experimented with and used field recording techniques.

Assessment

Pass/fail

Prerequisites

Experience with the use of personal computers. Basic knowledge of music theory is preferred but not mandatory.

Completion and feedback

Active participation in the classes and discussion

Reading and monitoring of learning materials

Completion of assignments given by the teacher

Completion of the composition assignments

Students are given oral feedback at the end of the unit.

Coordinating teacher

Alejandro Olarte

Sami Klemola

Tuition language

English

Target group

Music Technology students
 Composition-oriented students
 Sound Art students
 Sound design students
 University of the Arts students
 JOO students
 Open University students

Unit overview

The unit is divided into two semesters. During the first semester, students are introduced to the electroacoustic music genre and learn to use the basic tools needed for composing an electroacoustic music piece for fixed media. During the second semester, the focus will be on mixed music and students will compose a sketch for a solo instrument and tape (fixed media or pre-recorded material). This semester has a practical approach: during the sessions students gain practical experience in using various tools in exercises given by the teachers. Students are also required to do independent work.

Teaching and learning methods

Lectures and group instruction, 107 h
 Reading, homework and studio work, maximum 107 h

Recommended year of completion

Bachelor's 1st year, Master's 1st year
 1st year Music Technology Students

Timing

Tuition given every year

Level I

S-MT23 Composition and theory of acousmatic music (4–6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- understand the basic concepts of acousmatic music (sound composition, sound organization, composing for fix media, multichannel composition)
- be able to recognise and characterise the acousmatic sub-genre of electroacoustic music through listening and analysis of repertoire
- be able to discuss the history and theoretical background of acousmatic music
- be able to operate electroacoustic music studio tools for sound processing, sound recording and synthesis, multichannel sound spatialisation
- have composed a piece in the acousmatic genre

Assessment

pass/fail

Prerequisites

Introduction to electroacoustic music.

Completion and feedback

Active participation in the classes and discussion
 Reading and monitoring of learning materials
 Completion of assignments given by the teacher

Completion of the composition assignment

Students are given individual oral feedback after completing their composition.

Coordinating teacher

Alejandro Montes de Oca

Tuition language

English

Target group

Music technology students

Composition oriented students

Sound Art students

Sound design students

University of the Arts students

Joo students

Open University students

Unit overview

In the course of one semester, students acquire the necessary knowledge for composing an acousmatic music work. Special focus is given to the studio techniques required for acousmatic composition: sound processing, sound analysis and sound spatialisation. Dedicated listening and analysis sessions introduce the repertoire, history and theories of the sub-genre. Students compose one multichannel and one stereo piece for fixed media. Students are required to do independent work in the studio.

Teaching and learning methods

Lectures and group instruction, 53 h

Reading, homework and studio work, maximum 107 h

Recommended year of completion

Bachelor's 2nd to 3rd year, Master's 1st year

2nd and 3rd year Music Technology Students

Timing

Tuition given every year

Level III

S-MT24 Electroacoustic music workshops (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- a. have an expanded and in-depth knowledge of electroacoustic repertoire
- b. have learned to produce material using sound synthesis
- c. have acquired command of a wide range of sound processing and mixing tools
- d. have created a circuit for live processing of an instrument and have demonstrated it
- e. have a command of basic techniques in the amplification and performance of electroacoustic music

Assessment

On a scale of 0 to 5

Prerequisites

Preparatory course in electroacoustic music

Completion and feedback

Learning outcomes 'a', 'c' and 'e':

- 1) Active class attendance and participation in the teaching and discussion
- 2) Monitoring of the use of teaching materials, possibly a listening examination

Learning outcomes 'b' and 'd':

3) Completing assignments

Oral feedback

Coordinating teacher

Sami Klemola

Tuition language

Finnish

Target group

Music Technology students

Composition oriented students

Sound Art students

Unit overview

The unit is a composition workshop whose purpose is to create a piece for an electroacoustic ensemble (defunensemble).

Teaching and working methods

Lectures and group tuition, maximum 32 h

Reading, homework and studio assignments, maximum 75 h

Recommended year of completion

Bachelor's 3rd year, Master's 1st year

S-MT25 Electroacoustic music seminar (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a wider understanding of the electroacoustic music context
- be able to discuss, explain and integrate a strong understanding of the subject chosen for his/her presentations, covering various aspects of the electroacoustic music field

Assessment

pass/fail

Prerequisites

Some previous familiarity or experience with electroacoustic music is preferred, but not essential.

Completion and feedback

Class attendance (80%)

Presentation

Professional conduct

Participation in group work

Students are given oral feedback.

Coordinating teacher

Josué Moreno

Andrew Bentley

Language

English

Target group

This course is intended for any university student with an interest in electroacoustic music.

Unit overview

The Electroacoustic Music Seminar provides a friendly forum for feedback and discussion, in which students present either their own electroacoustic work, or give presentations on electroacoustic music topics which interest them. 'Electroacoustic' here is understood in the broadest possible terms, extending to sound design, other forms of electronic music, etc. The course will also include

sessions on topics associated with electroacoustic culture and practice, including techniques, composers, specific works, visits to galleries and installations, visiting composers, etc.

Keywords: composition, installation, studio technics, sound designer, signal processing, music and narration, forum

Teaching and learning methods

The unit consists of bi-weekly 2-hour sessions for one academic year.

The forum is largely self-directing and arises from the student's own interests and projects. However, students may decide to:

- read articles and book chapters and discuss them in the sessions
- familiarise themselves with the work of the other participants and give them feedback during the sessions
- prepare a presentation about a topic of their choice, or about their own projects, either completed or work in progress

Attending concerts and events, and talks by invited lecturers, form part of the unit activities depending on the events calendar in the city.

Small group tuition, 40 h

Recommended year of completion

Any

Level I–II

S-MT26 Electroacoustic sound diffusion (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the design principles of primary existing loudspeaker orchestras;
- be familiar with the primary aesthetic considerations;
- be familiar with the essential elements of diffusion performance technique;
- have a basic fluency in diffusion performance.

Assessment

Pass/fail

Prerequisites

Introduction to electroacoustic music or equivalent experience with electroacoustic music.

Completion and feedback

Active class attendance (90%)

Active participation in the workshop and concert

Preparation of the performance of at least one electroacoustic piece

Students are given individual oral feedback after completing the unit and the concert.

Coordinating teacher

Dom Schlienger

Andrew Bentley

Tuition language

English

Target group

Music Technology students

Composition-oriented students

Sound Art students

Sound design students

Open University students

Unit overview

This unit explores the concepts, methods and techniques of sound diffusion as a performance practice. Using a multichannel array of loudspeakers and mixing desks, the unit provides an opportunity to experiment and become acquainted with performance techniques of electroacoustic and acousmatic music. It is also a laboratory for developing critical views on surrounding listening environments and for being introduced to electroacoustic music repertoire.

Teaching and learning methods

Lectures and group instruction for 4 hours

Reading, homework and preparation work up to 53 hours

Listening sessions on the system

Group instruction and individual instruction

Performance techniques workshop

Individual practicing time

Concert or public demonstration

Recommended year of completion

Bachelor's 1st to 3rd year, Master's 1st year

Other students with some background and experience with electroacoustic music

Level III**S-MT52 Electroacoustic composition (4–6 cr)****Learning outcomes**

A student who has completed the unit is expected to:

- have a command of the technical basics and modes of expression in electroacoustic composition
- have gained experience in creating acousmatic ('tape') music and live electronic music

Assessment

Examination board assessment on a scale of 0 to 5

Prerequisites

Electroacoustic music

Completion and feedback

Active class attendance

Submitting assignments for inspection

Submitting an exercise and composition portfolio of at least 2 works (depending on the credit score) for assessment

Oral feedback

Coordinating teacher

Alejandro Montes de Oca

Sami Klemola

Tuition language

Finnish / English

Target group

Music Technology students

Composition-oriented students

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS). The unit may be completed in several parts.

Teaching and learning methods

Individual tuition, maximum 24 h per academic year

Completing the assignments given

Recommended year of completion

Bachelor's 3rd year

Level III

Module: BUILDING EXPERIMENTAL INSTRUMENTS FOR SOUND ART AND PERFORMANCE

S-MT27 Electric music performance studio (6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to study, discuss and comprehend the principles for electronic sound generation through the study of electronic instruments.
- have investigated the repertoire of electroacoustic and experimental music in a historical and aesthetic perspective.
- have experimented with and analysed the performance of analog and digital instruments

Assessment

On a scale of 0 to 5 or pass/fail

Prerequisites

Basic level of audio technology, music performance, composition and music theory. Previous contact with sound art or experimental music. Interest in electroacoustic music.

Completion and feedback

Active class attendance (70%)

Professional conduct

Participation in group work

Participation in final concert (30%)

Students are given oral feedback at the end of the unit.

Coordinating teacher

Alejandro Olarte

Tuition language

English

Target group

Music Technology students

Performance-oriented students

Sound Art students

Sound Design students

University of the Arts students

JOO students

Open University students

Unit overview

The unit is an introduction to the use of electroacoustic means in a musical performing context.

Participants explore and systematically study a set of instruments, works and concepts relevant to the genre. These include instruments and devices such as radios, tape recorders, piezo disks, turntables, mixing desks, effect processors, synthesisers and midi controllers. The unit includes

studying the work of composers and performers such as Alvin Lucier, David Tudor, Stockhausen, John Cage, Iannis Xenakis, Nakamura. In practical sessions, participants experiment, handle and become acquainted with the performance of electroacoustic devices and the musical language associated with them. Participants are required to develop and present a performance project involving the concepts and instruments studied during the unit.

Teaching and learning methods

The unit includes group workshops, practical sessions, individual projects, presentations, reading, listening and researching the repertoire and concepts. A final concert demonstration is held at the end of the unit.

Recommended year of completion

Bachelor's 1st to 2nd year, Master's

Level I

S-MT28 Electroacoustic improvisation (1 cr per period of 27 h)

The unit is given as six periods over one academic year. Students may only sign up for one period. Each period consists of 21 h of sessions over two days and 6 h of individual work.

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the theory and practice of electronic improvisation
- have experimented with various approaches to performing analog, digital, electronic, electroacoustic instruments in a collective or individual set through exercise assignments
- have designed, developed, delivered and interpreted a performing environment including an electronic dimension
- have discussed and investigated the aspects and possibilities of electroacoustic instruments

Assessment

On a scale of 0 to 5 or pass/fail

Prerequisites

Basic understanding of audio technology with software and hardware, sequencers (DAW: Ableton Live, Max, Supercollider), synthesizers, sound processors, mics. Experience in playing amplified instruments.

Solid experience in music performance, basic competence in composition and music theory. Previous contact with experimental performance practices.

Completion and feedback

Active class attendance (90%)

Professional conduct

Participation in group work

Students are given oral feedback at the end of the unit.

Coordinating teacher

Alejandro Olarte

Tuition language

English

Target group

Music Technology students

Performance-oriented students

Sound Art students

JOO students

Open University students

Unit overview

This intensive set of workshops is a laboratory for experimenting with and studying the musical potential of electronic, analog, digital and acoustic instruments in the context of electroacoustic music performance.

The practical sessions are focused on playing and improvising music in a band, small groups and solo settings. The contents are organised as a ground play to explore the theory and practice of electronic improvisation and to assess the vocabulary of electroacoustic music performance.

The unit is intended for performance-oriented Bachelor's-level or Master's-level students in any discipline who are interested in electroacoustic music performance.

Teaching and learning methods

The unit includes practical sessions in improvisation, individual projects around solo performance or group guided improvisations, presentations, recordings and listening sessions.

Recommended year of completion

Bachelor's 2nd to 3rd year, Master's

Level III**S-MT29 SuperCollider (6 cr)****Learning outcomes**

A student who has completed the unit is expected to:

- understand the architecture and signal flow in the language
- be able to create, modify, analyse and play networks of unit generators
- be able to build digital synthesisers
- have explored various control paradigms for performance purposes
- have studied the implementations of sound synthesis techniques
- have investigated live coding practices and other implementations of the language

Assessment

On a scale of 0 to 5 or pass/fail

Prerequisites

The unit requires previous experience with computer music and programming.

Completion and feedback

Active class attendance (70%)

Professional conduct

Participation in group work

Completion of assignments by the deadline

Final presentation (30%)

Students are given oral feedback at the end of the course.

Coordinating teacher

Alejandro Olarte

Tuition language

English

Target group

Music Technology students

Performance-oriented students

Composition-oriented students

Sound Art students

University of the Arts students

JOO students

Open University students

Unit overview

The unit explores the syntax and possibilities of code base programming. SuperCollider is an open source object-oriented programming environment for real-time audio processing. It is one of the finest and most versatile environments for signal processing and especially for creating music applications of all kinds, such as complete compositions, interactive performances, installations, performance instruments and research tools for digital audio.

Teaching and learning methods

The unit includes group workshops, practical sessions, individual projects, presentations, reading, listening and research on the technics and concepts.

Recommended year of completion

Bachelor's 1st to 2nd year, Master's

Level III

S-MT30 Programming with Max (8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the Max program
- be able to apply the principles and introduced techniques and strategies to their own artistic work

Assessment

pass/fail

Prerequisites

Some previous familiarity or experience with computer programming is preferred.

Completion and feedback

Active class attendance (80%)

Assignments given by the teacher

Independent work

Final project

Students are given oral feedback.

Coordinating teacher

Sami Klemola

Kalev Tiits

Josué Moreno

Alejandro Montes de Oca

Tuition language

English

Target group

The course is appropriate for students from all schools of the University of the Arts, and students from Aalto University with interest in this program.

Unit overview

This course is an introduction to the Max program. The Max program can be used in electroacoustic or electronic composition, sound syntheses, real-time control of sound or video art, and other applications of music and visual or media art.

Teaching and learning methods

Familiarity with study material

Extensive programming assignments.

Lectures, 70 h

Recommended year of completion

3rd year

Level I

Keywords

Algorithmic, generative, composer, installation, sound designer, signal processing

S-MT67 Physical IT (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a command of the IT used in sound art and of the concepts and applications of inter-activity
- be able to apply his/her knowledge in his/her own artistic or technological project

Assessment

pass/fail

Completion and feedback

Completing a project

Oral feedback given by the teacher and peer group

Teaching and learning methods

Tuition provided in connection with students' specialisation studies

Lectures and practice sessions, maximum 60 h

Independent work and group work on the physical IT project

Discussions and reflection

Timing

Tuition given on an as-needed basis according to demand

Recommended year of completion

Bachelor's 3rd year onwards

Target group

Students of Music Technology and of Sound in New Media

Coordinating teacher

Alejandro Olarte

Marianne Decoster-Taivalkoski

Kalev Tiits

S-MT56 Synthesizers (7–21 cr)

Learning outcomes

A student who has completed the unit is expected to:

- understand various synthesiser architectures
- be able to use those architectures as a component in his/her playing technique and musical expression
- be able to prepare repertoire for performance

The scope and technical level of the repertoire to be played depend on the credit score determined for the unit. The unit involves practical application of information on various synthesis and control technologies. Students are instructed in voice and ensemble programming and in general

instrument management in programming and performance situations. The unit may also be completed using synthesisers not equipped with a keyboard.

Assessment

Examination board assessment on a scale of 0 to 5

Prerequisites

Electroacoustic music 1

Completion and feedback

Performance examination

Oral and written feedback

Teaching and learning methods

Individual tuition, maximum 24 h per academic year

Rehearsing repertoire

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

No specific target group

Coordinating teacher

Kalev Tiits

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS).

S-MT53 Performance using electronic equipment (4–6 cr)

Learning outcomes

The purpose of the unit is for students to be able to deliver an artistically and technologically confident performance using the selected equipment, as a soloist and/or in an ensemble. The equipment may be hooked up to one or more acoustic instruments in the performance. Artistic development of a personal repertoire may form part of the studies.

Assessment

Examination board assessment on a scale of 0 to 5

Prerequisites

Electroacoustic music or Live electronics atelier

Completion and feedback

Performance or recording

Oral feedback

Coordinating teacher

Alejandro Olarte

Kalev Tiits

Tuition language

English / Finnish

Target group

Music Technology students

Performance-oriented students

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS).

Teaching and learning methods

Individual tuition, maximum 24 h per academic year

Rehearsing repertoire

Recommended year of completion

Bachelor's 1st to 2nd year, Master's 1st to 2nd year

Level II

Module: MUSIC AND TECHNOLOGY: CREATIVE TOOLS, METHODS AND DEVELOPMENT

S-MT33 Basics of digital signal processing (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- know how to analyse the frequency response of a simple filter and to design same
- be familiar with the signal processing methods used in recording studios, including their theoretical basis

Assessment

On a scale of 1 to 5

Prerequisites

Revision of upper secondary school mathematics included in the *Tools studies* unit, or equivalent competence.

Completion and feedback

Written final examination followed by a feedback discussion

Teaching and learning methods

Small group tuition, maximum 39 h

Calculation exercises, 20 h

Assignments

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st year spring

Target group

Students whose main subject is Music Technology, and any other interested persons who have sufficient baseline mathematical skills. This unit may be offered through the Open University. Open University students may be given a skills test or background survey if required to ascertain their skill level.

Coordinating teacher

Kalev Tiits

Unit overview

The purpose of the unit is to explore the theory of digital signal processing through lectures and practical exercises. Students are introduced to the signals sampling theorem, the Fourier theorem, the convolution theorem and the combinatorics of basic signal processing operations.

The tuition language is Finnish.

S-MT34 Application of digital signal processing (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the programming language used in the unit and with the basics of computer science

Assessment

On a scale of 1 to 5

Prerequisites

Basics of digital signal processing

Completion and feedback

Programming exercise

Oral feedback either individually or in peer group discussion, at the teacher's discretion

Teaching and learning methods

Group tuition, maximum 39 h

Independent or group work on assignments

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 2nd year

Target group

Students whose main subject is Music Technology, and any other interested persons who have sufficient baseline mathematical skills. This unit may be offered through the Open University. Open University students may be given a skills test or background survey if required to ascertain their skill level.

Coordinating teacher

Kalev Tiits

Unit overview

The purpose of the unit is to apply the theory of digital signal processing to the programming of a musical sound processing algorithm.

S-MT31 Basics of analog signal processing (3 cr)

Learning outcomes

A student who has completed the unit is expected to:

- know the basics of electrical safety and grounding from a sound engineer's perspective
- be able to estimate which maintenance tasks are possible and safe for himself/herself to perform
- be able to read flow charts and circuit diagrams and to apply their content to circuit board design and component placement
- have a basic command of electronics so as to be able to perform simple assembly and maintenance tasks
- be familiar with the operating principles of the most common passive and active electronic components
- be familiar with the basics of low-frequency amplifiers and of passive and active filters

Assessment

pass/fail

Completion and feedback

Active class attendance

Completing the assignments given or taking a final examination

Oral feedback

Teaching and learning methods

Group tuition, maximum 52 h

Exercises completed in a group or independently (under the teacher's supervision), and assignments given by the teacher, total 26 h

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st year

Target group

Students whose main subject is Music Technology, and any other interested persons who have sufficient baseline technology competence.

Coordinating teacher

Kalev Tiits

Level I

S-MT32 Application of analog signal processing (3 cr)

Learning outcomes

A student who has completed the unit is expected to:

- know how to build a simple electronic audio device and understand its operating principles
- be able to apply the skills acquired to music technology tools in general

Assessment

pass/fail

Prerequisites

Basics of analog signal processing

Completion and feedback

Completing the assignments given, or presenting an equivalent work specimen to the teacher

Oral feedback given by the teacher in connection with tuition

Teaching and learning methods

Small group tuition, maximum 52 h

Lectures, 4–7 h

Assignment to assemble an electronic device under the teacher's supervision

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st year spring

Target group

Students whose main subject is Music Technology, and any other interested persons who have sufficient baseline technology competence.

Coordinating teacher

Kalev Tiits

Unit overview

Students are expected to explore in more depth the topics covered in the basic unit and to apply them in practice in a supervised assembly project the purpose of which is to build a pre-amplifier

using semiconductor or vacuum tube technology, an equaliser, a compressor, or other simple audio device as approved by the teacher.

Experience gained in working with basic analog technology components help students to understand the structure and function of tools used in creative work in other music technology units.

Level II

S-MT35 Computer-assisted composition (8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with various programming platforms that can be used as assistive means in composing
- have learned how to apply computer-assisted composition techniques in his/her artistic work

Assessment

On a scale of 0 to 5

Completion and feedback

Active class attendance

Completing assignments given

Unit project

Oral feedback given by the teacher

Teaching and learning methods

Lectures, maximum 35 h

Reading study materials, extensive coding assignments, coding exercises, total 45 h

Reading literature in the field

Timing

Tuition given every year

Recommended year of completion

Bachelor's 2nd year

Target group

Students whose main subject is Music Technology, composition students, applied programming students, musicologists

Coordinating teacher

Josue Moreno

Unit overview

The unit is an introduction to software (e.g. OpenMusic, PWGL, Audiosculpt) and to concepts of computer-assisted composition and includes analysis of works created with various approaches to computer-assisted composition. Students are also required to create a composition using the techniques learned.

Module: APPLIED MUSIC

S-MT36 Lecture series on film music and cinematic narrative (6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have knowledge of cinematic narrative and sound narrative in film
- be familiar with the tradition of film music and its expressive potential

Tuition language

English

Assessment

pass/fail

Completion and feedback

Learning diary

Written feedback by the teacher; peer review

Teaching and learning methods

The unit is an introduction to cinematic narrative, sound narrative and the tradition and current practice of film music through lectures, watching films and analysis. Lectures once per week for one academic year

Teaching hours 46 h per semester, total 92 h

Assignments given by the teacher, 60 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year

Target group

Students at the Sibelius Academy with any major subject. The unit is suitable for JOO students.

Coordinating teacher

Päivi Takala

S-MT37 Film music composition and production workshop (8–11 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be familiar with the process of producing film music
- be able to write and produce demo music
- understand the importance of music to the overall narrative of a film
- be familiar with the basics of film score recording in a studio with a symphony orchestra

Tuition language

Finnish / English

Assessment

pass/fail

Prerequisites

Lecture series on film music and cinematic narrative either before or in parallel with this unit

Composition studies or practical and verifiable experience of composition

Command of a sequencer program

Completion and feedback

Individual feedback from the teacher on assignments

Peer review

Basis for assessment:

- Active class attendance
- Completing composition and analysis assignments

Teaching and learning methods

The unit is an introduction to the practices of writing and producing film music through lectures,

watching films, analysis and practical exercises.

Tuition hours, 60 h

Assignments given by the teacher, 150 h

Timing

Tuition given every year, autumn semester

Recommended year of completion

Bachelor's 3rd year onwards

Target group

Coordinating teacher

Päivi Takala

S-MT38 Workshop for directors, sound designers and composers (3 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to work on the production team of a film, communicating on both artistic ideas and production practicalities with the rest of the team
- be able to produce demo music material on schedule and to receive feedback from the director and sound designer

Assessment

pass/fail

Prerequisites

Lecture series on film music and cinematic narrative

Film music composition and production workshop

Completion and feedback

Individual feedback from the teacher on assignments

Peer review

Teaching and learning methods

The workshop explores the process of producing film music and sound design through exercises, discussions and examples.

Tuition hours, 50 h

Assignments given by the teacher, 35 h

Timing

Tuition given every year

Recommended year of completion

Master's 1st to 2nd year

Target group

Coordinating teacher

Päivi Takala

S-MT40 Game music: theory and working environments (8–12 cr)

Coordinating teacher

Sandra Mahlamäki

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the work environments and production processes of game music and game sound design
- be able to write and produce game music

- be familiar with the terminology and history of the game industry
- have a command of the basics of dynamic, adaptive and generative music production

Level II

Tuition language

Finnish / English

Unit overview

The purpose of the unit is to introduce students to the key concepts, historical and theoretical basis and work environments of game music and game sound design. Students are introduced to IT from the perspective of a game sound technician or game musician.

Topics covered include sound design, content production and implementation in games, sound processing and version management in game projects, and the principal types of game sound applications.

Assessment

On a scale of 0 to 5

Prerequisites

Recording and sound production 2 or equivalent skills

Completion and feedback

Active class attendance

Completing the assignments given

Completion requires constant attendance and the completing of all given assignments

The teacher gives feedback on assignments; peer review through group discussions

Credit score

8–12 cr

Teaching and learning methods

Group tuition, 60 + 60 h, total 120 h per semester

Independent or group work on assignments, 40 h

Assignments given by the teacher, 40 h

Recommended year of completion

3rd year

Coordinating teacher

Päivi Takala

S-MT39 Film score recording and sound production (3–8 cr)

Learning outcomes

Students take this unit in the role of a composer, a recording engineer and sound producer, or a conductor.

A student who has completed the unit is expected to:

- understand the big picture and special characteristics of the recording of film music and film sound production: editing the score and parts for recording sessions, preparing for a recording session (possibly including visual synchronisation or a click track), managing a recording session, conducting film music, score post-processing, mixing
- understand the importance of teamwork in achieving a successful end result

Assessment

pass/fail

Prerequisites

Composers are required to have sufficient skills in writing score-based music. *Lecture series on film music and cinematic narrative* and *Film music composition and production workshop* are also required.

Conductors are required to have sufficient skills for studio work.

Recording engineers and sound producer are required to have sufficient studies in audio technology and recording.

Completion and feedback

Completion requires constant attendance and the completing of all given assignments

Peer review through group discussions

Teaching and learning methods

Working with a maximum of 5 scores, each about 5 min. The scores may be film music or game music.

Work in a workshop setting

Independent work

Assignments

Individual tuition, 5–10 h

Group tuition, 30–50 h

Assignments given by the teacher, 30–140 h

Timing

Tuition given every other year

Recommended year of completion

Master's 1st to 2nd year

Target group

Coordinating teacher

Päivi Takala

S-MT41 Game music: composition and game narrative (6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the history and genres of video games
- understand the types of game narrative and the levels of game immersion
- be able to analyse and evaluate musical needs in games
- be able to write game music by applying his/her theoretical knowledge

Assessment

On a scale of 0 to 5

Prerequisites

Recording and sound production 1 or equivalent basic skills in recording, sound production and music production

Theory of music 2 or equivalent theory and harmony studies based on folk music or jazz

Completion and feedback

Active class attendance

Completing the assignments given

Feedback given by the teacher on assignments, peer review

Teaching and learning methods

Group tuition, maximum 60 h

Assignments given by the teacher, 100 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 2nd year onwards

Target group**Coordinating teacher**

Päivi Takala

S-MT42 Game music recording workshop (3–6 cr)**Level III****Tuition language**

Finnish / English

Unit overview

Students take this unit in the role of a composer, a recording engineer or a sound producer. The purpose is to understand and execute the recording, orchestration, production and post-production of an orchestra-based and sample-based composition for adaptive media, i.e. games.

Timing and teaching methods

Students are selected from among those who sign up in the autumn semester. Composers selected are to prepare one or more compositions for production independently. The compositions to be recorded are selected from among these. Composition length should be 2–8 min.

After the compositions are finished, working groups are selected, recording projects planned, and scores and orchestrations reviewed with experts.

Recording sessions are held at a suitable venue with a practice orchestra and conductors in the spring semester.

Sampled instruments, overdubbing and mixing are done in post-production by working groups.

Assessment

pass/fail

Prerequisites

Prerequisites for composers:

Game music: theory and working environments

Applicable studies in music theory and composition

Prerequisites for sound engineers or sound producers:

Recording of classical music 1

Recording and sound production 1

Completion and feedback

Students are to log the hours spent and are to participate in peer review in working groups and in group discussions.

Active class attendance and completing the assignments given

Teaching and learning methods

Group tuition, 52 h in the autumn and 52 h in the spring

Assignments completed in group work or independently, 60 h in the autumn and 60 h in the spring

Recommended year of completion

4th year

Coordinating teacher

Sandra Mahlamäki

S-MT87 Game music VR environment (3 cr)

Coordinating teacher

Sandra Mahlamäki

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the work environments and production processes of Virtual Reality game design
- be able to write and produce game music for VR games

Level III

Recommended year of completion

4th year

Tuition language

Finnish / English

Unit overview

The purpose of the unit is for students to gain a command of the VR (Virtual Reality) game design environment and to be able to produce 3D music and 3D sound for VR platforms. The topics covered include 3D sound design, content production and implementation in VR games.

Prerequisites

Game music: theory and working environments or equivalent skills

Assessment

On a scale of 0 to 5

Teaching and learning methods

Group tuition, 30 h

Independent or group work on assignments, 25 h

Assignments given by the teacher, 25 h

Completion and feedback

Active class attendance

Completing the assignments given

Credit score

3 cr

S-MT43 Game repertoire unit (3 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the principal genres of video games and with the aesthetic and technical characteristics of the music typically used in them

Assessment

pass/fail

Completion and feedback

Active class attendance

Independent study of teaching materials

Feedback given by the teacher on assignments, peer review

Teaching and learning methods

Lectures

Independent study of teaching materials before the lectures

Tuition hours, 24 h

Assignments given by the teacher, 50 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 1st year

Target group

Coordinating teacher

Päivi Takala

Unit overview

The unit is an introduction to types of game music in various game genres and from various periods.

Module: MUSIC TECHNOLOGY PEDAGOGY

S-MT44 Music technology pedagogy 1 (10 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a basic familiarity with pedagogy, the role of a teacher and the job description of a teacher
- have a command of the skills, knowledge and artistic capability required for teaching music technology at upper secondary schools, at music institutes or in adult education
- have a command of basic knowledge in music technology: safety, tools, etc.
- be able to produce and evaluate teaching material for his/her teaching
- have the competence to work as a teacher at lower-level music institutes
- have the capability to progress to *Music technology pedagogy 2*

Prerequisites

Applicable studies in the 100 cr Bachelor's degree, e.g. safety, acoustics, music technology tools studies, basic tools

S-MT45 Music technology teaching materials and literature (1 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with teaching materials and literature in his/her field
- be able to use literature in preparing teaching materials

Assessment

pass/fail

Completion and feedback

Written assignments, oral discussions in the group, peer review

Teaching and learning methods

Lectures, 2 h

Completing written assignments

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Coordinating teacher

Otto Romanowski

S-MT46 Command and pedagogical use of basic tools (2 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be familiar with the most commonly used notation and recording software packages
- be familiar with various operating systems and mobile platforms
- have the competence to teach the basics of applications and environments

Assessment

pass/fail

Completion and feedback

Written assignments, technical demonstration, oral review of outcomes in the group

Teaching and learning methods

Lectures, 4 h

Review of notation tools

Independent work

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Coordinating teacher

Otto Romanowski

S-MT47 Producing teaching materials and introduction to teaching environments (2 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be familiar with production tools for teaching materials
- be familiar with tools and methods for distance learning
- be able to produce teaching materials for the practicum

Assessment

pass/fail

Completion and feedback

Technical demonstration, oral review of outcomes in the group

Teaching and learning methods

Lectures, 4 h

Review of media compilation tools

Review of distance learning tools and practical experiments

Independent work

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Target group**Coordinating teacher**

Otto Romanowski

S-MT48 Orientation practicum (teaching practice) (5 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to design a teaching session on a limited topic in music technology
- be able to deliver teaching on the selected topic in a group session
- be able to justify the decisions he/she has made in teaching
- be able to communicate and to interact flexibly with learners
- have the capability to evaluate his/her own teaching and the teaching of others, and also the learning outcomes of learners
- be able to reflect in writing on his/her own teaching and the teaching of others

Prerequisites

Introduction to pedagogy

Music technology teaching materials and literature

Command and pedagogical use of basic tools

Producing teaching materials and introduction to teaching environments

Assessment

pass/fail

Completion and feedback

Written lesson plans, teaching demonstrations for the student's own group and for external groups

Peer review and oral feedback from the supervising teacher

Teaching and learning methods

Group tuition, 29 h

Preparing lesson plans

Giving practice lessons in the group and for external groups

Independent work

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year onwards

Coordinating teacher

Otto Romanowski

S-MT49 Music technology pedagogy 2 (10 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- have a command of the skills, knowledge and artistic capability required for teaching music technology at a higher education music institution
- understand the artistic roles covered in teaching (composer, musician, producer)
- be able to use tools and methods associated with music education technology and its component areas

- be familiar with copyright law and contract law, have the social skills required for functioning in a variety of environments and situations, and be able to manage projects
- be able to design courses and training programmes in his/her subject and to prepare teaching materials for various learning environments (various media and platforms)
- be able to work independently as a teacher and to evaluate his/her own teaching critically
- have the capability of managing extensive projects jointly with other operators (functions, concerts, events, multimedia works)
- have the capability to place his/her teaching and activities in the context of other teaching and goals at the educational institution
- have the capability to progress to a teacher's pedagogical studies

Prerequisites

Introduction to pedagogy

Music technology pedagogy 1

Teaching and learning methods

Lectures and seminars

Designing teaching and producing materials

Observation of teaching of others

Small group work and portfolio compilation

Independent work

Teaching practice (practicum), 5 cr

S-MT50 Design and delivery of music technology courses (5 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be widely and diversely familiar with teaching materials and literature in his/her field
- have a command of multimedia production tools for creating teaching materials (e.g. website, videos and attachments)
- have a command of various teaching technologies (contact teaching, classroom teaching, studio teaching, distance learning, online learning)
- be able to apply his/her skills and knowledge in preparing teaching materials

Assessment

pass/fail

Completion and feedback

Materials in digital format. Peer review and oral feedback from the supervising teacher

Teaching and learning methods

Group tuition, 26 h

Review of literature and teaching materials

Planning extensive course programmes

Design, production and delivery of teaching materials for the student's teaching practice

Public presentation and evaluation of the student's teaching materials

Independent work

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year or Master's 1st year

Target group

Coordinating teacher

Otto Romanowski

S-MT51 Orientation practicum 2 (5 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to design a teaching session on a limited topic in music technology
- be able to deliver teaching on the selected topic in a group session
- be able to justify the decisions he/she has made in teaching
- be able to communicate and to interact flexibly with learners
- have the capability to evaluate his/her own teaching and the teaching of others, and also the learning outcomes of learners
- be able to reflect in writing on his/her own teaching and the teaching of others

Assessment

pass/fail

Prerequisites

Music technology pedagogy 1

Completion and feedback

Teaching and learning methods

Group tuition, 26 h

Teaching practice and observation of teaching

Small group work

Portfolio work

Independent work

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year, Master's 1st to 2nd year

Target group

Coordinating teacher

Otto Romanowski

Module: MAIN SUBJECT SUPPORTING STUDIES

S-MT58 Music technology tools studies (10 cr)

Basic-level unit, a prerequisite for the following units:

Recording and sound production 1

Basics of venue amplification

Learning outcomes

A student who has completed the unit is expected to:

- have a command of the basics of usage for the most common types of tools (microphones, mixing consoles, sound workstations) so that he/she can perform his/her tasks safely with a view to keeping the equipment in good working order according to their purpose
- be acquainted with IT from the perspective of a music technology professional

Assessment

pass/fail

Completion and feedback

Active class attendance
 Completing the assignments given
 Written feedback

Teaching and learning methods

Group tuition, maximum 120 h
 Group work on assignments, 30 h
 Independent work on assignments, 50 h
 Assignments given by the teacher, 67 h

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 1st year

Target group

New students whose main subject is Music Technology

Level I

Tuition language

Finnish / English

Coordinating teacher

Andrew Bentley

Unit overview

The purpose of this unit is to provide students with basic skills that are needed for other Music Technology units. Students are introduced to the operating principles of the most important tools used in music technology and instructed in how to use them in practice. Students are taught how to safely use the studios and equipment that they will need in their studies.

Completing this unit is a prerequisite for the following units:

Recording and sound production 1

Basics of venue amplification

S-MT72 Technical aural skills (4 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have the competence to perform tasks as an audio professional requiring analytical listening
- have improved his/her ability to understand and analyse various technical and aesthetic parameters in sound material and also his/her ability to identify faults
- is capable of employing the technological means at hand to edit sound material so as to approach the desired end result

Assessment

pass/fail

Completion and feedback

Active class attendance with exercises
 Assignments and projects submitted for assessment
 Final examination

Teaching and learning methods

Small group tuition, maximum 30 h
 Completing assignments

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 2nd year onwards

Unit overview

The unit involves examining sound materials from aesthetic, technical and physical points of view. With the skills acquired, students are capable of employing the technological means at hand to edit sound material so as to approach the desired end result.

S-MT71 Theoretical basics of music technology (3 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- have learned concepts of music theory that have emerged in the technological era
- be familiar with structures of music that may be approached through technology, and with how to understand and process them with software and equipment

Assessment

pass/fail

Completion and feedback

Active class attendance

Completing assignments given

Oral feedback given by the teacher

Teaching and learning methods

Group tuition, maximum 39 h

Independent work, 35 h

Review of materials

Reading assignments

Completing assignments given by the teacher

Timing

Tuition given every other year

Recommended year of completion

Bachelor's 2nd year onwards

Target group

Students at the Sibelius Academy whose main subject is Music Technology, and anyone else interested in the subject. This unit is suitable for the offering of the Open Campus.

Coordinating teacher

Kalev Tiits

Unit overview

Selection from the following subject areas: processing of melody, harmony, rhythm, metre, timbre parameters and textures through numerical, mathematical and programming means; exploration of formal parameters of music emerging in the modern era, such as serialism, group theory, stochastics, and concepts and methods arising from spectral analysis and formal grammars; analytical tools and methods; introduction to music cognition and the cognitive sciences; exploration of composition techniques and methods and score writing practices in the modern era.

S-MT59 Music acoustics (6 cr)

Learning outcomes

A student who has completed the unit is expected to:

- know the general basic concepts of acoustics
- understand the basics of instrument acoustics
- understand the basics of electronic acoustics
- know the basics of psychoacoustics
- know the basics of venue and studio acoustics

Assessment

pass/fail

Coordinating teacher

Miikka Huttunen

Tuition language

Finnish

Completion and feedback

Active class attendance (75%)

Homework

Final examination

Teaching and learning methods

Group tuition, 78 h

Homework, 82 h

Recommended year of completion

1st year

Target group

Students at the University of the Arts Helsinki, at Aalto University and at other universities

Keywords

Acoustics, psychoacoustics, instrument physics, studio design, concert hall, recording studio

S-MT88 Bachelor's proficiency demonstration workshop

(support unit for the *Bachelor's proficiency demonstration*, for which the total score is 10 cr)

(no credit award for this unit, which is included in the proficiency demonstration)

The purpose of the *Bachelor's proficiency demonstration workshop* is for the student to select and delimit the subject of his/her Bachelor's thesis and to practise writing academic text in order to prepare for writing the written portion of the proficiency demonstration. The student is given tuition by teachers and feedback from the student group. Each student in the workshop group writes on a separate subject, and the texts thus written are discussed in the group. Students are then to continue writing independently, and the next workshop discusses new texts. The unit encourages students to become more self-governing and has them discuss their thoughts with an opponent. The content of the unit is adapted to the needs of the students in each case.

Another teacher may supervise the production portion of the Bachelor's proficiency demonstration; this production may be a project that the student is working on or has already completed in another unit.

Assessment

pass/fail

Completion and feedback

Active class attendance

Returning assignments on schedule (including submitting the Bachelor's proficiency demonstration for inspection on schedule)

Oral and/or written feedback

Teaching and learning methods

Small group tuition, maximum 15 h

Independent work, reading and writing; acting as opponent to another student

Tuition language

Finnish / English

Level –

Recommended year of completion

Bachelor's 2nd and 3rd year

Timing

Tuition given every year

Target group

Bachelor's-level students whose main subject is Music Technology

Coordinating teacher

Päivi Takala

Marianne Decoster-Taivalkoski

S-MT61 Master's thesis seminar 1 (6–8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be familiar with the opportunities, demands, learning techniques and study environment of Master's-level studies
- be familiar with various types of writing and their typical structures
- have evaluated the current level of his/her writing skills
- be familiar with the basics of project management
- have learned how to select and delimit a research topic
- know how to design a research plan
- have learned information searching methods and source criticism
- have acquired working methods and attitudes that foster mature studying

Assessment

Assessment by the teacher, pass/fail

Completion and feedback

Active class attendance

Assignments given by the teacher

Compulsory reading: Juha T Hakala: *Opinnäyte luovasti*; or Juha T Hakala: *Creative Thesis Writing*

Oral feedback given by the teacher in connection with tuition

Teaching and learning methods

Small group tuition, maximum 52 h

Individual tuition as needed

Independent work, particularly reading and analysis of writing

Timing

Tuition given every year

Recommended year of completion

Master's 1st year

Target group

Master's-level students in Music Technology

Coordinating teacher

Kalev Tiits

S-MT62 Master's thesis seminar 2 (6–8 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have learned how to design and deliver a thesis or other proficiency demonstration through exploring the following topics:
 - o selection of a method suitable for the research topic and applying it in practice
 - o methods, practice and reporting consistent with academic work and a scientific approach, and systematic work habits
 - o processing and documenting of source materials
 - o peer review of thesis content and project reports, and giving and processing feedback
 - o writing content for the thesis

Assessment

pass/fail

Completion and feedback

Active class attendance

Completing assignments given

Oral feedback given by the teacher in connection with tuition

Teaching and learning methods

Small group tuition, maximum 52 h

Individual tuition as needed

Regular reporting on progress of the research or thesis and its documentation. The work includes writing part of the thesis content in an appropriate informative or academic style, and presenting the resulting text to the group according to a schedule agreed with the teacher; also, peer review and discussions.

Timing

Tuition given every year

Recommended year of completion

Master's 2nd year

Target group

Master's-level students in Music Technology

Coordinating teacher

Kalev Tiits

S-MT63 Introduction to the electronic music studio at the Music Centre (1 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have learned how to switch on the studio equipment
- know the purpose of the principal devices
- be able to make digital and analog routings for basic functions
- have learned how the computers in the studio work and become sufficiently familiar with the software used to perform basic functions
- have learned about the working practices mandated at the studio, electrical safety and

hearing protection

Assessment

The teacher assesses the student's participation and conducts an examination, pass/fail

Completion and feedback

Students may be granted user rights to the studio after completing *Electroacoustic music* in their preparatory studies. This introduction may also be completed in another way, as separately notified.

Timing

Tuition given every year

Recommended year of completion

Any time any student begins a unit that requires the use of the electronic music studio

Target group

Beginner users of the electronic music studio

Coordinating teacher

Alejandro Olarte

Andrew Bentley

S-MT64 Introduction to the control rooms in the studio block at the Music Centre (1 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a command of the signal paths and connections in the recording studios in the studio block
- know how to make simple multi-track recordings in recording studios and performance rooms

Assessment

pass/fail

Teaching and learning methods

Introduction to be arranged as separately announced

Timing

Tuition given every year

Recommended year of completion

Target group

Coordinating teacher

S-MT65 Introduction to the minor control rooms at the Music Centre (1 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have a command of the signal paths and connections in the minor control rooms (Jazz, Folk Music, Music Education)
- be able to make simple multi-track recordings in the minor control rooms

Assessment

pass/fail

Prerequisites

Students must have completed studies in sound technology or studio technology, or practical

experience of studio work. Students may be admitted to the introduction on the basis of a skills test.

If a student fails the skills test, that student must complete the unit *Studio technology and sound production 1, secondary subject*, which also grants the student access rights to the minor control rooms.

Completion and feedback

Teaching and learning methods

Timing

Tuition given every year

Recommended year of completion

Target group

Coordinating teacher

S-MT66 Introduction to venue amplification at the Music Centre (1 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have learned how to switch on amplification equipment and hook up microphones, DI boxes, stage monitor speakers, various accessories, etc.
- have learned the operating principles of venue PA systems
- be thoroughly familiar with a mixing desk and know its functions
- have learned about the working practices at venues (including wireless devices), electrical safety and hearing protection

Assessment

The teacher assesses the student's participation and conducts an examination, pass/fail

Completion and feedback

Teaching and learning methods

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

Coordinating teacher

S-MT13 IPSAT – Introduction to principles of Spatial Audio Technology (2 cr per semester)

Advanced studies unit

Learning outcomes:

A student who has completed the unit is expected to:

- have an understanding of spatial hearing and multimodal perception
- have an understanding of the principles of spatial audio technologies
- have an understanding of their implication on musical practices
- have experience of psychophysical experiments
- know how to integrate these insights into their artistic work

Assessment

pass/fail

Prerequisites

An understanding of basic physics is an advantage.

Completion and feedback

The students' individual contributions and engagement with the subject are commented on and suggestions for further study on the subject given.

Teaching and learning methods

The sessions consist of 2 x 45 min theory followed by 1 x 45 min experiments, or sometimes experiments first and theory/discussion after.

Timing

Tuition given every other year

Recommended year of completion

Master's 1st to 2nd year

Target group

Students whose main subject is Music Technology

Composition-oriented students

Sound artists

JOO students

Coordinating teacher

Dom Schlienger

Unit overview**Block I Sound Perception (sessions 1–5)**

- perception (based on Alain Berthoz)
- basics of psychophysical experiments
- psychoacoustic metering
- spatial hearing (Sound source localisation, Blauert, Moore)
- spatial acoustics (Blessr, Salter)

Block II Sound Reproduction (sessions 6–10)

- From Mono to stereo
- Binaural (HRTF)
- Vector based Amplitude Panning
- Ambisonics
- Wave Front Synthesis

Block III Implications on Practice (11–12/15)

- Spatial paradigms
- Cultural context
- History

Module: GENERAL STUDIES**S-MT80 Workshop (1–3 cr per completion)****Learning outcomes**

A student who has completed the unit is expected to:

- be conversant with a specialist topic as presented by an expert
- have a deeper understanding of research or certain professional activities, etc.

- have improved his/her capabilities for communication and analysis

Recommended year of completion

From the 2nd year

Assessment

pass/fail

Assessment by the teacher or by the host teacher

Completion and feedback

Learning outcomes 'a' and 'b':

Active class attendance

Possibly completing course assignments

Possibly reporting

Learning outcome 'c':

Asking the lecturer questions

Participating in discussions

Oral feedback

Teaching and learning methods

Customised, in some cases unique, lectures and/or small group tuition

Classroom exercises

Debriefing or demonstration

Individual or group work

Reading background material, taking notes

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

Coordinating teacher

To be appointed by the head of the department as required

Unit overview

Students may complete a workshop multiple times.

S-MT76 Specialisation studies 1 (1–12 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have improved his/her in-depth knowledge of a particular area of music technology through the periodically changing offering of units in the subject

The focus is on current work methods and professional practices in the field.

Assessment

pass/fail, with a statement from the instructor

Prerequisites

At least 8 cr in the following units:

Recording and sound production 1, Electroacoustic music 1, Media and sound art 1, Music technology tools studies (all completed)

and at least 8 cr in the following units:

Recording and sound production 2, Electroacoustic music 2, Media and sound art 2 (may be completed in parallel)

or equivalent skills, at the discretion of the coordinating teacher.

Completion and feedback

Active class attendance

Subject-specific assignments

Oral feedback

Teaching and learning methods

Individual tuition, maximum 2 h per 1 cr, 2–24 h

Group sessions, maximum 32–80 h

Practical work experience, exercises, reporting

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year

Target group**Coordinating teacher**

To be appointed by the head of the department as required

Unit overview

The content and work methods in the unit are variable.

S-MT79 Specialisation studies 2 (1–60 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- have improved his/her in-depth knowledge of a particular area of music technology through the periodically changing offering of units in the subject

The focus is on current work methods and professional practices in the field.

Assessment

pass/fail

Prerequisites

Specialisation studies 1

Completion and feedback

Active class attendance

Subject-specific assignments

Statement given by the instructor

Teaching and learning methods

Individual tuition, maximum 2 h per 1 cr, maximum 30 h per academic year

Practical work experience, exercises, reporting

Timing

Tuition given every year

Recommended year of completion

Master's 1st to 2nd year

Target group**Coordinating teacher**

To be appointed by the head of the department as required

Unit overview

The content and work methods in the unit are variable.

S-MT54 Music performance studies (5–25 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have acquired basic competence on a musical instrument
- have reviewed various musical styles and repertoire associated with them
- understand the basic techniques on the instrument from the perspective of a music technology professional

Assessment

The teacher assesses the unit as pass/fail or on a scale of 0 to 5 (as agreed with the teacher).

Completion and feedback

Active class attendance

Performance examination or performance demonstration

In case of a performance examination, it must comply with the current level performance examination requirements for the instrument in question.

Teaching and learning methods

The student and instrument teacher draw up a plan at the start of the unit describing the repertoire to be reviewed and how the unit is to be completed. Approval for the plan must be sought from the head of the student's department. Teaching in the unit must progress as per the plan approved by the head of the department. The granting of study rights is at the discretion of the head of the department which is responsible for tuition in the instrument in question. This unit may include completions on multiple instruments.

Individual tuition, maximum 20 or 24 h, depending on the scope of the unit as agreed

Rehearsing repertoire

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

Students whose main subject is Music Technology

Tuition language

Finnish / English

Level I–V

Coordinating teacher

The study planning working group will arrange for a suitable teacher according to the student's needs.

Unit overview

Students may take this unit for a maximum of 5 cr each in four academic years or for a maximum of 7 cr each in three academic years.

Tuition may be granted for one additional academic year if it is related to the student's specialisation studies.

The scope and technical level of the repertoire to be played depend on the credit score determined for the unit. The head of the department must approve the scope of the unit in the student's individual study plan.

S-MT57 Composition (7–21 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have learned the basics of composition technique in a variety of genres
- have experience of composing music
- be conversant with taking the demands of the performing ensemble and the music into account

Assessment

Examination board assessment on a scale of 0 to 5

Prerequisites

Music theory studies (minimum 5 cr)

Completion and feedback

Active class attendance

Completing the assignments given

Submitting the agreed composition portfolio for assessment

Oral feedback

Teaching and learning methods

Individual tuition, maximum 24 h per academic year (maximum 4 h per 1 cr)

Completing the assignments given

Keeping a composition portfolio

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

Students in Music Technology, students in music performance, other students of the Sibelius Academy interested in composition

Timing

Finnish / English

Level –

Coordinating teacher

To be appointed by the head of the department as required

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS). The unit may be completed in several parts.

S-MT77 Research exercise (5 cr)

Learning outcomes

A student who has completed the unit is expected to:

- have evolved a research approach to his/her work
- be conversant with academic writing in a technical/scientific or arts research subject

Assessment

pass/fail

Completion and feedback

Active class attendance

Completing the exercise

Written report

Oral feedback

Teaching and learning methods

Individual or small group tuition, 7 h

Independent work, 127 h, of which reporting about 40 h

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year

Target group

Coordinating teacher

Kalev Tiits

S-MT81 Portfolio (3–10 cr)

Learning outcomes

A student who has completed the unit is expected to:

- be able to present the work he/she has done in the course of his/her studies in a representative portfolio
- be able to give an oral presentation of his/her portfolio

Assessment

Assessment by the teacher on a scale of 0 to 5, based on the student's active attendance and the contents of the portfolio

Completion and feedback

Students are required to document their studies and artistic work by compiling and maintaining a portfolio

Oral and/or written feedback

Teaching and learning methods

Portfolio design with the supervisor, 2 h

Compiling the portfolio independently

Presenting the portfolio to the supervisor on a regular basis (minimum twice per year)

Timing

Tuition given every year

Recommended year of completion

No recommendation

Target group

Students whose main subject is Music Technology

Coordinating teacher

To be appointed by the head of the department according to the student's needs

S-MT74 Project (1–20 cr)

Music Technology used to have a separate description for project studies, but currently the unit description in the Faculty's common studies is applied: *Project* (1–20 cr, 27–534 h). In Music Technology, such projects may be artistically oriented, knowledge-based or skills-based, but they may

also be literature reviews, in which case students are required to take examinations or write essays. Literature projects are typically narrow in scope. In recording production projects and other projects that call for studio time, students are required to present a detailed plan, including a calculation on the studio hours needed if requested. Projects are always to be supervised by a teacher.

S-MT78 Production exercise (1–20 cr per completion)

Learning outcomes

A student who has completed the unit is expected to:

- have improved his/her professional competence
- be able to work independently or as a member of a working group
- have improved his/her capability for designing, delivering and documenting projects

Assessment

pass/fail

Prerequisites

The teacher evaluates the student's capacity for executing his/her plan

Completion and feedback

Learning outcomes 'a' and 'b':

Participating in the production exercise

Learning outcome 'c':

Report

Statement given by the instructor

Teaching and learning methods

Students are required to design the production exercise in writing, through discussions on goals and working methods with the supervisor and the instructor. Having taken part actively in the exercise, students are required to document and report on the project as agreed. If the production exercise is connected to MuteFest, students are required to attend MuteFest production meetings.

Timing

Tuition given every year

Recommended year of completion

Bachelor's 3rd year, Master's 1st to 2nd year, or Bachelor's 2nd year at MuteFest

Target group

Coordinating teacher

To be appointed by the head of the department as required

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS).

The student may complete multiple production exercises. A production exercise may be included in MuteFest, involving the design and delivery of an individual event at the festival or a part thereof, whether independently or as a member of a working group, under teacher supervision.

S-MToK Proficiency demonstration, music technology (Bachelor of Music) (10 cr)

The proficiency demonstration consists of two units:

S-MT68 Project (Bachelor of Music)

ksk- Maturity essay

Assessment

Overall assessment of the proficiency demonstration as pass/fail.

Completion is awarded by the head of department.

S-MT68 Project (Bachelor of Music) (10 cr)

With a proficiency demonstration, the student shows that he/she has acquired the capabilities required in the learning outcomes specified for his/her main subject and is able to apply his/her learning creatively and to further improve his/her skills.

Learning outcomes

A student who has completed the unit is expected to:

- have learned how to apply the things learned in his/her main subject studies to his/her independent work
- know how to place his/her work in a broader context and how to evaluate his/her own work and that of his/her colleagues constructively
- be able to build and reflect on his/her artistic discourse and to present his/her work in linguistically faultless form
- have learned time management in independent work

Assessment

On a scale of 0 to 5, based on statements from two or three inspectors

Prerequisites

At least 60 cr of studies in the student's main subject

Completion and feedback

Project design, delivery and reporting as approved by the supervisor

Assessment by an examination board with 2 or 3 members, appointed by the head of the department, on a scale of 0 to 5

The examination board submits its statement to the student, the head of the department and the supervisor.

Completion is awarded by the head of department.

Teaching and learning methods

Individual tuition or coaching, 10 h / Group tuition (Bachelor's thesis workshop sessions), 32 h

Independent work, 228 h

The student is required to select a small-scale project or topic related to technology, artistic performance or information searching and then to design the work stages and timetable, deliver the project in practice and report on it in writing.

Timing

Tuition given every year

Recommended year of completion

Bachelor's 2nd to 3rd year

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Coordinating teacher

Supervisor appointed by the head of the department

S-MToM Proficiency demonstration, music technology (Master of Music) (20–40 cr)

With a proficiency demonstration, the student shows that he/she has acquired the capabilities required in the learning outcomes specified for his/her main subject and is able to apply his/her learning creatively and to further improve his/her skills. The student also has the capability to progress to further studies.

The proficiency demonstration consists of two units:

S-MT69 Master's thesis; or

S-MT70 Major project; and

Maturity essay

Assessment

Overall assessment of the proficiency demonstration as pass/fail. Completion is awarded by the head of department.

S-MT69 Master's thesis (20 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to handle a broad topic in the field of music technology and to approach his/her topic from a research angle
- be able to apply the scientific method to the topic of his/her choice

Assessment

On a scale of 0 to 5

Prerequisites

The student must have begun *Master's thesis seminar 1* before beginning the thesis, and must complete *Master's thesis seminar 2* while writing the bulk of the thesis.

Completion and feedback

The student must write a Master's thesis that demonstrates control of the subject area, is written in a clear and logical way and shows that the student has the capability to progress to postgraduate studies. The Master's thesis is to be submitted to the study administration in four (4) bound copies. A separate summary must be written, detailing the research question, materials, research methods and principal results. An extra copy of the summary must be submitted.

Inspectors appointed by the head of the department (2–3) evaluate the thesis and return a written statement on it to the student, the head of the department and the supervisor. Completion is awarded by the head of department.

Teaching and learning methods

Individual tuition / coaching, 20 h or as allocated by the head of the department

Independent work, 528 h

Timing

Tuition given every year

Recommended year of completion

Master's 2nd year + 1 semester

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Coordinating teacher

Kalev Tiits

Päivi Takala

S-MT70 Major project (20–40 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- know how to delimit and design a major project, including its pre-production, budgeting, production and evaluation, and also how to frame an artistic problem if the purpose of the project is to resolve an artistic problem
- be able to distribute project tasks in a feasible way, place them on a timeline and work as a team member in case of a group production
- be able to describe his/her creative processes
- be able to describe, explain and justify his/her work to experts in the same field, to experts in other fields and to the public at large
- be able to describe the identity, strengths and development points of his/her artistic, scholarly or academic identity
- understand the connections between areas of expertise in music and technology

The project demonstrates the student's control of the process of creative work and his/her originality and innovation, and the report describes the contribution made by the project to the relevant field and to the community. The written portion of the project must present the results and analysis of them and evaluate them vis-à-vis the project goals. Artistic merit and reflection are important.

Assessment

On a scale of 0 to 5, based on statements from two or three inspectors

Completion and feedback

Design and delivery of a project

The project topic is to be decided and the plan for the resources needed and the timetable drawn up at the *Master's thesis seminar*. These must be agreed in writing between the student, the supervisor and the head of the department.

Research paper

The research paper and project materials are to be submitted for inspection in four (4) bound copies with appendices. A separate summary must be written, detailing the project concept and research question, the topic, the production methods and the principal results. An extra copy of the summary must be submitted. Inspectors appointed by the head of the department (2–3) evaluate the project and report and return a written statement on it to the student, the head of the department and the supervisor. Completion is awarded by the head of department.

Teaching and learning methods

Individual tuition / coaching, 12-24 h, depending on the scope of the project or as allocated by the head of the department

Students are required to take *Master's thesis seminar 1–2* at the same time

Independent work, 528–1056 h

Timing

Tuition given every year

Recommended year of completion

Master's 2nd year + 1 semester

Target group

Students at the Sibelius Academy whose main subject is Music Technology

Coordinating teacher

Kalev Tiits

Päivi Takala

S-MT55 Musical assistant (7–21 cr)**Learning outcomes**

A student who has completed the unit is expected to:

- be able to work as a team member on a music or research project
- understand his/her duties thoroughly and design and deliver his/her contribution independently and reliably
- be able to keep up with work in the project group in technical, artistic and social terms
- be able to practise his/her skills in diverse ways

Assessment

The teacher and one colleague assess the unit on a scale of 0 to 5.

Completion and feedback

Completing assignments on schedule

Oral and written feedback

Teaching and learning methods

The unit may include working as a composer's assistant on an electroacoustic composition project in a studio, designing and configuring digital and analog devices for live electronics performances, or troubleshooting technology-based improvisation problems as a technical and artistic assistant.

Individual tuition, maximum 4 h per 1 cr, 7–84 h

Independent work on projects, 103–477 h

Timing

Tuition given every year or as possible

Recommended year of completion

No recommendation

Timing

Finnish / English

Level –**Target group**

Self-governing Music Technology students

Coordinating teacher

To be appointed by the head of the department as required

Unit overview

The scope of this unit is to be determined in the student's individual study plan (HOPS). The unit may be completed in several parts.

MIHIN KOHTAAN TÄMÄ OPINTOJAKSO KUULUU?**S-MT14 Experimental recording techniques (2 cr)****Learning outcomes**

A student who has completed the unit is expected to:

- have experimented with materials and equipment to find creative solutions for audio recordings
- develop their own set of techniques to create and manipulate sounds during the recording process
- have improved their analytic and qualitative judgment skills through comparative listening
- be familiar with methods of experimental research

Assessment

On a scale of 0 to 5 / pass/fail

Prerequisites

Tools and techniques or equivalent skills

Completion and feedback

Students are given oral feedback at the end of the unit.

Unit assessment is weighted: attendance 80% and final presentation 20%.

Coordinating teacher

Miikka Huttunen

Marianne Decoster-Taivalkoski

Andrew Bentley

Alejandro Olarte

Tuition language

English

Target group

Music Technology students

Sound Art students

Sound Design students

Unit overview

In this workshop participants, will explore, experiment and analyse alternative approaches to sound recording technics. Students will develop through qualitative judgments the experimental attitude to create and manipulate sound qualities during the recording process.

The unit is intended to bridge artistic and engineering practices by extending the scope of recording techniques available at the studios while simultaneously adopting a research attitude towards the discipline of audio recording.

Contents

The workshop is a hands-on workshop where many materials and a variety of equipment will be available for experimentation opening up a research attitude and developing original ideas. Some suggestions to start with:

- loudspeakers as microphones
- moving microphones
- hydrophones
- direct electric signal recording
- springs, metal sheets and resonators
- close ups and over amplification
- recording the human body
- carbon, graphite and other chemicals
- film technics for audio tape
- field recording

Teaching and learning methods

Workshop sessions, reading, listening sessions.
Preparing and executing experiments.
Individual work and research.

Recommended year of completion

Bachelor's 1st to 2nd year, Master's

Level

Preparatory / beginner