



**Royal
Conservatoire
The Hague**

Curriculum Handbook
Master of Music in Sonology
Sonology
Instruments & Interfaces
Audio Communication & Sonology

Royal Conservatoire The Hague

2019-2020

The information contained in this Curriculum Handbook is, beyond errors and omissions, correct at the time of publication, but may be subject to change during the academic year. Therefore, always make sure you are referring to the latest version of this document which can be found on our website.

This is version 1.2, November 2019. *Adjustments made: Course description Overview Own Projects is changed.*

If you have any suggestions for improvement of this Curriculum Handbook, please send an email to curricula@koncon.nl. For questions about courses, you can get in touch with the contact person mentioned in the course description.

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ABOUT THIS PUBLICATION

“On the threshold of beauty science and art collaborate.” – Edgard Varèse

Sonology is the field of study involving experimentation with electroacoustic music, computer music and sound art. The pioneers of the age of electronic music include figures such as Edgard Varèse Pierre Schaeffer, Karlheinz Stockhausen and Iannis Xenakis: composers with an inquiring mind who dared to move off the beaten track. Instead of composing with sounds, as is generally the case in instrumental music, in sonology the sound itself is composed in such a way that it gives expression to musical form. This can take place on the basis of the physical principles of sound, on the basis of perception or on the basis of purely compositional ideas.

The explosive pace of advances in the field of (computer) technology and electronics is also creating new possibilities for music and composition. Sonologists investigate these possibilities and add new elements to the musical domain. We are not bound by conventions or stylistic dogmas, but stretch the limits of the genre. It is an important role that we play and one that is integral to the world of new music.

The Institute of Sonology is one of the conservatoire’s Creative Departments, with an extensive network of partners that includes the Groupe de Recherches Musicales (GRM) in Paris, the Netherlands Music Institute (NMI), the Studio for Electro-Instrumental Music (STEIM) in Amsterdam, Studio LOOS in The Hague, the Technische Universität Berlin and the Game of Life Foundation in The Hague.

As a student in the two-year Master of Music in Sonology (which is taught in English) you will carry out an independent research project. You can enrol for the master’s programme if you have obtained a Bachelor of Music in Sonology or an equivalent degree in another course. However, the master’s programme is not an extension of the bachelor’s programme. Many students in the Master of Music in Sonology programme hold a bachelor’s degree in subjects such as composition, computer science, musicology or philosophy or graduated as performing musicians.

One of the disciplines in the master of Music in Sonology is Instruments & Interfaces. This is offered in association with STEIM in Amsterdam. Since 2014, we also offer a Double Degree master’s programme in Audio Communication & Sonology in association with the Technische Universität Berlin. You can find more information about this Double Degree masters’ programme on <http://www.sonology.org/pages/audio-communication-and-sonology>.

During your master’s course you will write a thesis, which will document your project and place it in a wider context. This means that, in addition to your artistic activities, you will be writing extensively under the guidance of a mentor from the Institute of Sonology. We have produced a thesis style guide and you will be able to consult earlier studies. We also maintain a close relationship with our alumni, some of whom remain attached to the institute or continue their research as a PhD student elsewhere. Many graduates of the Sonology master’s programme pursue a career as a composer, an artist, a sound designer, a computer programmer, a teacher, or combinations of these. A relatively large proportion of graduated students go on to follow a PhD programme.

This Curriculum Handbook aims to provide you with all necessary information related to the curricula and courses of the master’s programme in Sonology. After Programme Objectives and a schematic overview of the curricula, you will find descriptions of all courses, including learning goals (called ‘objectives’). We would advise you to also read the Royal Conservatoire’s Study Guide, which includes the Education and Examination Regulations (EER).

PROGRAMME OBJECTIVES

KC Programme Objectives Master of Music in Sonology – based on the AEC Learning Outcomes 2017.

At the end of the Master of Music in Sonology programme, you:

A. Practical (skills-based) outcomes

- 2.A.1. Create and realise music, and/or research outputs in related areas, to a high professional level, expressing your own concepts, involving some combination of artistic, scientific and programming skills, and reflecting a well-developed and individual approach to the issues they involve.
- 2.A.3. Demonstrate breadth and/or depth of specialist knowledge in relation to your area of study.
- 2.A.4. Demonstrate ability to create, realise and express your own artistic concepts and/or researches, ensuring that any areas of relative weakness in relation to the necessary skills have been addressed.
- 2.A.5. Play a leading role in ensemble and/or other collaborative activity.
- 2.A.7. Evidence ability to develop, research and evaluate ideas, concepts and processes as appropriate within your discipline, genre, area of study, and/or own artistic practice.
- 2.A.8. Demonstrate excellent command in a range of communication modes associated with your practice and its presentation to both specialist and non-specialist audiences.
- 2.A.9. Exhibit competence in technological utilisation and application, especially as regards the technical setup for live performances involving many different live applications of electronic/digital technology.
- 2.A.10. Take responsibility for the engagement between context, audience and material, projecting your ideas fluently and with confidence in a wide variety of performance settings.
- 2.A.12. Engage with a significant level of critical self-reflection in relation to your own personal learning style, skills and strategies.
- 2.A.13. Evidence ability to translate theoretical knowledge into practical activities.

B. Theoretical (knowledge-based) outcomes

- 2.B.1. Demonstrate sophisticated knowledge of practices, languages, forms, materials, technologies and techniques in music relevant to your core and, as appropriate, related disciplines, and their associated texts, resources and concepts.
- 2.B.2. Exhibit comprehensive knowledge of repertoire and literature within your area of study.
- 2.B.3. Develop and extend your knowledge of the theoretical and historical contexts in which (principally electroacoustic) music is practiced and presented.
- 2.B.6. Exhibit sophisticated and embodied knowledge of improvisational patterns and processes, and the ability to apply these freely in a variety of contexts.
- 2.B.7. Evidence understanding of a range of sophisticated investigative techniques, enabling the application of selected approaches to develop, frame, research and evaluate ideas, concepts and processes as appropriate within your discipline, area of study and/or artistic practice.
- 2.B.8. Identify and utilise relevant literature and/or other resources as appropriate to inform your practice and development within your discipline and/or area of study.
- 2.B.9. Identify and employ sophisticated research, study, communication and presentation techniques to independently develop and deliver an extended and/or in-depth project which may combine artistic and research-related aspects.
- 2.B.10. Utilise specific technologies to enable the creation, dissemination and/or performance of music appropriate to your discipline, genre, area of study and/or artistic practice.
- 2.B.12. Demonstrate a thorough understanding of the role of the musician and/or researcher in contemporary society, researching, engaging with and reflecting upon specific relevant professional working environments and contexts.

C. Generic outcomes

2.C.1. Exhibit sophisticated skills in critical thinking and critical awareness.

2.C.2. Demonstrate independence in all aspects of learning, social interaction, and opportunity identification.

2.C.3. Exhibit confidence and competence in the use of a range of communication and social skills as appropriate to context.

2.C.4. Exhibit appropriate leadership, teamwork, negotiation and/or coordination skills, taking account of a variety of artistic and/or technological contexts.

2.C.5. Evidence ability to integrate knowledge drawn from a variety of contexts or perspectives.

2.C.6. Demonstrate independent thought supported by rational and evidence-based application of knowledge in undertaking tasks that may be:

- extended and complex
- in new or unfamiliar contexts
- based upon incomplete or limited information.

2.C.7. Recognise the interrelationship between theory and practice, and apply such knowledge to underpin and strengthen your own artistic development.

2.C.8. Demonstrate ability and willingness to communicate knowledge and ideas involving some combination of the written word, musical notation, fixed media composition, performance and/or other musical outputs (recordings, etc.).

2.C.9. Consistently analyse, interrogate, utilise, and respond creatively and appropriately to verbal and/or written feedback, ideas and impetus from others.

2.C.10. Initiate activities or projects, and work with others through interaction or collaboration.

2.C.11. Exhibit sophisticated and appropriate public presentation skills in all aspects of your practice and activity.

2.C.13. Engage with individuals and/or groups as appropriate and in relation to both your own, and a wider variety of, cultural contexts.

2.C.14. Engage and share information with specialist and non-specialist musicians and audiences across a broad spectrum of society, demonstrating awareness of individual and/or group reactions to such information and the ability to respond appropriately.

CURRICULUM OVERVIEWS

SONOLOGY

Institute of Sonology - Royal Conservatoire				
code	form	Sonology	Year 1	Year 2
		Master of Music in Sonology 2019-2020		
KC-M-SO-		Artistic Development and Research		
COZ	x	Composition/Performance/Research	31	35
RS	g	Sonology Research Seminar Participation	3	3
RSP	i	Sonology Research Seminar Presentation	6	6
		Subtotal	40	44
KC-M-SO-		Professional Preparation		
GLT	g	Sound Engineering in Electronic Music	5	5
EP	p	Overview Own Projects	2	2
		Subtotal	7	7
KC-M-SO-		Academic Skills		
COLQ	g	Colloquium Participation	2	2
CP	g	Colloquium Presentation	7	7
WS	i	Writing Skills	4	
		Subtotal	13	9
		Total per year	60	60
		Total		120

INSTRUMENTS AND INTERFACES

Institute of Sonology - Royal Conservatoire - STEIM				
code	form	Sonology - Instruments & Interfaces	Year 1	Year 2
		Master of Music in Sonology 2019-2020		
KC-M-		Artistic Development and Research		
ST-HOZ		Hardware/Performance/Research	26	30
SO-RS		Sonology Research Seminar Participation	3	3
SO-RSP		Sonology Research Seminar Presentation	6	6
		Subtotal	35	39
KC-M-		Professional Preparation		
SO-EP		Overview Own Projects	2	2
ST-RS		STEIM Research Seminar Participation	4	4
ST-RSP		STEIM Research Seminar Presentation	6	6
		Subtotal	12	12
KC-M-SO-		Academic Skills		
SO-COLQ		Colloquium Participation	2	2
SO-CP		Colloquium Presentation	7	7
SO-WS		Writing Skills	4	
		Subtotal	13	9
		Total per year	60	60
		Total		120

AUDIO COMMUNICATION & SONOLOGY

The curriculum overview of the Double Degree Masters' programme can be found on:

https://www.ak.tu-berlin.de/menue/lehre/double_degree_audio_communication_and_sonology/curriculum_overview/

The course descriptions of the second year (semester 3 & 4 of the Double Degree Masters' programme) can be found in this handbook:

KC-M-SO-COZ: Composition / Performance / Research on page 11

KC-M-SO-RS: Sonology Research Seminar Participation / Research Seminar Presentation on page 13, 14

KC-M-SO-COLQ: Colloquium on page 18, 19

COURSE DESCRIPTIONS SONOLOGY

ARTISTIC DEVELOPMENT

COMPOSITION/PERFORMANCE/RESEARCH

<i>KC-M-SO-COZ</i>	Composition/Performance/Research
Osiris course code:	KC-M-SO-COZ
Course content:	<p>As a student, you are offered an environment in which an individual research project is realised. This activity takes place under the supervision of a mentor, who challenges you to explore new, unknown and broader contexts in your work. In this way your project is developed and documented so that the results may be presented in concerts, conferences or publications on an international level. The new knowledge brought into being in the course of realising the research project must be relevant within the broader context of the field of electroacoustic music and sound art.</p> <p>The sonologist moves in the field of electroacoustic music and computer music, in both practical and theoretical directions. ‘Practical’ means that instead of composing <i>with</i> sounds, as is generally the case in instrumental music, in Sonology the sound itself is composed in such a way that it gives expression to musical form. This can take place on the basis of the physical principles of sound, on the basis of perception or on the basis of purely compositional ideas. ‘Theoretical’ means that research is carried out in this same area, resulting in written texts or computer programs.</p> <p>You have the opportunity to immerse yourself more deeply in an area related to your bachelor’s education, making use of your musical abilities, knowledge and insight. During the two-year programme, you work on a thesis in which the project is documented and placed in a broader context. The conclusions of the research and the fundamentals on which it is based should here be formulated so as to be clear to specialists in the discipline. This written work, as well as the student’s artistic work, is supervised by a member of the Sonology faculty (the mentor). The well-equipped studios of the Institute of Sonology provide students with the opportunity to produce and record their projects at a professional level. Sound playback in these studios varies between four and eight channels, as well as spatial sound projection using wave Wave Field Synthesis (WFS). There is a studio for live electronic music, and a historic studio principally equipped with analogue equipment. Apart from these facilities, students may make use of special equipment for working on location. The Electronics Workshop (EWP) offers the facility to design and build equipment for specific purposes.</p>
Objectives:	<p>At the end of this course, you:</p> <ul style="list-style-type: none"> ▪ are able to develop a research project and document this in such a way that the results may be presented in concerts, conferences or publications on an advanced and international level; ▪ are able to create new knowledge which shows relevance within the broader context of the field of electroacoustic music and sound art; ▪ are able to write a thesis in which the project is documented and placed in a broader context. ▪ are able to apply the aforementioned knowledge and abilities (in addition to individual activities) in areas such as: <ul style="list-style-type: none"> - participation in ensembles, such as the Sonology Electroacoustic Ensemble, an ensemble for improvised music in which instrumentalists from other musical domains are also active;

	<ul style="list-style-type: none"> - participation in the production team for professional Sonology concert presentations; - working with the experimental Wave Field Synthesis sound projection technique; - composing and performing works for combinations of electronics and traditional instruments, in collaboration with performers from other fields. <ul style="list-style-type: none"> ▪ have a clear awareness of current (international) developments in the arts in general, and electroacoustic music and sound art in particular, and are able to position yourself and your work in relation to those developments. ▪ can act as your own teacher as a reflective practitioner by being able to assess and evaluate the quality of your work, keep this quality up-to-date and develop it further by continuing to learn independently.
Programme objectives:	2.A.1, 2.A.4, 2.A.5, 2.A.7, 2.A.10, 2.A.12, 2.A.13 2.B.1, 2.B.2, 2.B.3, 2.B.6, 2.B.9, 2.B.10, 2.B.12 2.C.1, 2.C.2, 2.C.7, 2.C.8, 2.C.10, 2.C.16
Level:	Master I–II
Duration:	Average of one hour per two weeks
Prior qualifications/ prerequisites:	-
Teachers:	Richard Barrett, Justin Bennett, Raviv Ganchrow, Bjarni Gunnarsson, Johan van Kreijl, Peter Pabon, Gabriel Paiuk, Joel Ryan, Kees Tazelaar.
Credits:	Master I: 31 ECTS, master II: 35 ECTS
Literature:	To be agreed upon with the mentor(s)
Work form:	Individual lessons
Assessment:	<p>At the end of the first year of the master's programme, each student has an individual interview with a faculty committee, in which the progress of his/her research project, as well as sketches for the thesis, are discussed.</p> <p>At the end of the second year, the artistic results of the examination candidates are jointly presented during a three-to-five-day mini-festival which takes place either in the concert halls of the conservatoire or in an outside venue.</p> <p>The thesis is also an important part of the final presentation. It is handed in one month before the final presentation, and defended during a one-hour oral examination to a committee of faculty members and an international external examiner, taking place after the presentation of the student's artistic results or, in some cases, exclusively on the basis of the thesis. The conclusions of the research and the fundamentals on which it is based should here be formulated so as to be clear to specialists in the discipline.</p>
Grading system:	Master I: pass/fail, master II: numeric (as part of the final presentation)
Language:	English
Schedule, time:	To be agreed upon with mentor(s).
Venue:	A concert hall (final presentation) and one or more Sonology studios (meetings with the mentor(s))
Information:	Kees Tazelaar (k.tazelaar@koncon.nl), Richard Barrett (r.barrett@koncon.nl)

SONOLOGY RESEARCH SEMINAR PARTICIPATION

<i>M-SO-RS</i>	Sonology Research Seminar Participation
Osiris course code:	KC-M-SO-RS
Course content:	<p>All master's students, as well as four or five Sonology faculty members, take part in the Research Seminar, a two-hour meeting of which 20 take place throughout the academic year. Each student, in both their first and second year, gives a presentation of their work, followed by a discussion of around the same duration. The seminars are coordinated by faculty member Gabriel Paiuk, who contacts you two weeks in advance of your presentation. You are asked to provide an abstract and a supporting article, video and/or audio recording. All participants receive invitations for the seminars, with which the material provided by the presenter is distributed.</p> <p>The Research Seminar is open only to Sonology master's students, and its character is to a certain extent informal. The Research Seminar is an important moment for the evaluation of your progress, about which the teachers of the Master of Music in Sonology hold regular consultations. Apart from the content itself, they assess the extent to which you have been able to communicate the context of your subject, the research findings and conclusions to fellow specialists.</p>
Objectives:	<p>At the end of this course, you:</p> <ul style="list-style-type: none"> ▪ are able to formulate an aspect of your research project and the fundamentals on which it is based; ▪ are able to communicate the context of your subject, the research findings and conclusions to specialists in the field of electroacoustic music; ▪ are able to incorporate the outcome of feedback from others in the further development of your research activities; ▪ are able to discuss research subjects in the field of electroacoustic music on a professional level.
Programme objectives:	2.A.3, 2.C.3, 2.C.5, 2.C.6, 2.C.9, 2.C.13
Level:	Master I–II
Duration:	20 lessons per academic year
Prior qualifications/ prerequisites:	-
Teachers:	Richard Barrett, Raviv Ganchrow, Johan van Kreijl, Peter Pabon, Gabriel Paiuk, Kees Tazelaar
Credits:	Participation: 3 ECTS per academic year, Presentation: 6 ECTS per academic year
Literature:	To be agreed upon with the main subject teacher
Work form:	Group lesson
Assessment:	<p>Seminar participation: attendance.</p> <p>Seminar presentation: the teachers who attend the Research Seminar have a short discussion afterwards to decide whether the objectives are met.</p>
Grading system:	<p>Seminar participation: attendance sufficient/insufficient</p> <p>Seminar presentation: numeric</p>
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Gabriel Paiuk (g.paiuk@koncon.nl)

SONOLOGY RESEARCH SEMINAR PRESENTATION

<i>M-SO-RSP</i>	Sonology Research Seminar Presentation
Osiris course code:	KC-M-SO-RSP
Course content:	<p>All master's students, as well as four or five Sonology faculty members, take part in the Research Seminar, a two-hour meeting of which 20 take place throughout the academic year. Each student, in both their first and second year, gives a presentation of their work, followed by a discussion of around the same duration. The seminars are coordinated by faculty member Gabriel Paiuk, who contacts you two weeks in advance of your presentation. You are asked to provide an abstract and a supporting article, video and/or audio recording. All participants receive invitations for the seminars, with which the material provided by the presenter is distributed.</p> <p>The Research Seminar is open only to Sonology master's students, and its character is to a certain extent informal. The Research Seminar is an important moment for the evaluation of your progress, about which the teachers of the Master of Music in Sonology hold regular consultations. Apart from the content itself, they assess the extent to which you have been able to communicate the context of your subject, the research findings and conclusions to fellow specialists.</p>
Objectives:	<p>At the end of this course, you:</p> <ul style="list-style-type: none"> ▪ are able to formulate an aspect of your research project and the fundamentals on which it is based; ▪ are able to communicate the context of your subject, the research findings and conclusions to specialists in the field of electroacoustic music; ▪ are able to incorporate the outcome of feedback from others in the further development of your research activities; ▪ are able to discuss research subjects in the field of electroacoustic music on a professional level.
Programme objectives:	2.A.3, 2.C.3, 2.C.5, 2.C.6, 2.C.9, 2.C.13
Level:	Master I–II
Duration:	20 lessons per academic year
Prior qualifications/ prerequisites:	-
Teachers:	Richard Barrett, Raviv Ganchrow, Johan van Kreij, Peter Pabon, Gabriel Paiuk, Kees Tazelaar
Credits:	Participation: 3 ECTS per academic year, Presentation: 6 ECTS per academic year
Literature:	To be agreed upon with the main subject teacher
Work form:	Group lesson
Assessment:	<p>Seminar participation: attendance.</p> <p>Seminar presentation: the teachers who attend the Research Seminar have a short discussion afterwards to decide whether the objectives are met.</p>
Grading system:	<p>Seminar participation: attendance sufficient/insufficient</p> <p>Seminar presentation: numeric</p>
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Gabiël Paiuk (g.paiuk@koncon.nl)

PROFESSIONAL PREPARATION**SOUND ENGINEERING IN ELECTRONIC MUSIC 1**

<i>M-SO-GLT</i>	Sound Engineering in Electronic Music 1
Osiris course code:	KC-M-SO-GLT
Course content:	The programme covers the fundamental principles of sound design in theory and practice, subdivided into categories output (loudspeakers), input (microphones) and processing (mixer and peripheral equipment), as well as a frequency ear training course. Students are responsible for preparing and implementing the Sonology Discussion Concerts under the teacher's guidance, which take place five times a year. Each concert involves class preparation, preparation at home and two days of preparation in the concert hall including sound checks and rehearsals. There is a group evaluation after each concert. The students also organise the technical facilities for the mini festival with the final presentations.
Objectives:	At the end of this course, you: <ul style="list-style-type: none"> ▪ are able to independently design a simple multiple loudspeaker system, to position and direct this bearing in mind the musical material and the acoustical and architectural properties of the concert venue; ▪ are able to independently design a simple microphone setup, to position and direct this both for recording and amplification bearing in mind the musical material and the acoustical and architectural properties of the surroundings; ▪ are able to independently design a simple sound reinforcement system, to install and operate this including mixer and peripheral equipment, as well as signal flow and connection diagram, bearing in mind the musical material and the required application; ▪ are able to independently recognise frequency areas and formant areas to an accuracy of ± 1 octave, expressed in Hertz (Hz).
Programme Objectives:	2.A.9, 2.C.4,
Type of course:	Compulsory
Level:	Master I
Duration:	Weekly two-hour meeting
Prior qualifications/ prerequisites:	-
Teachers:	Paul Jeukendrup
Credits:	5 ECTS per academic year
Literature:	To be determined
Work form:	Group lesson, practicals
Assessment:	Written tests at the end of each semester involving 6 theory questions and 3 cases. The cases count three times as much as the theory questions in the assessment.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Paul Jeukendrup: P.Jeukendrup@koncon.nl

SOUND ENGINEERING IN ELECTRONIC MUSIC 2

<i>M-SO-GLT</i>	Sound Engineering with Electronic Music 2
Osiris course code:	KC-M-SO-GLT
Course content:	The first part of the course deals with the listening process and the work process combined with bringing about a balanced mix using the techniques learnt in the first course. The second part is about the preparatory path for performances with amplified sound including communication and technical lists. Students are responsible for preparing and implementing the Sonology Discussion Concerts under the teacher's guidance, which take place five times a year. Each concert involves class preparation, preparation at home and two days of preparation in the concert hall including sound checks and rehearsals. There is a group evaluation after each concert. The students also organise the technical facilities for the mini festival with the final presentations.
Objectives:	At the end of this course, you: <ul style="list-style-type: none"> ▪ are able to independently mix a multitrack recording to produce a musical result; ▪ are able to independently prepare a concert performance with amplification including compiling lists of materials, technical rider, patch lists, stage plans and time schedule.
Type of course:	Compulsory
Level:	Master II
Duration:	Weekly two-hour meeting
Prior qualifications/ prerequisites:	-
Teachers:	Paul Jeukendrup
Credits:	5 ECTS per academic year
Literature:	To be determined
Work form:	Group lesson, practicals
Assessment:	Written tests at the end of each semester involving 6 theory questions and 3 cases. The cases count three times as much as the theory questions in the assessment.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Paul Jeukendrup: P.Jeukendrup@koncon.nl

OVERVIEW OWN PROJECTS

<i>KC-M-SO-EP</i>	Overview Own Projects
Osiris course code:	KC-M-SO-EP
Course content:	You learn how to present a project to assorted funding bodies which require business proposals, planning, schedules, budgets, applications and CVs. Writing methods will be developed specifically in order to aim relevant information about your project to different readers and target audiences. You will create budgets that include realistic targets, phases and how to balance them between different funding sources. You will learn the importance of social media and web portfolios, in particular the use of keywords and meta-data as a way to maintain online visibility.
Objectives:	At the end of this course you: <ul style="list-style-type: none"> ▪ are able to explain your projects clearly to different audiences; ▪ can create a realistic, inclusive budget; ▪ can prepare a plan of execution based on consequence; ▪ are able to pitch clearly your projects core intentions; ▪ can create a web portfolio and manage social media.
Programme objectives:	2.A.3, 2.A.8, 2.A.12, 2.C.1, 2.C.3, 2.C.8, 2.C.9, 2.C.11, 2.C.14
Type of course:	Compulsory
Level:	Master I-II
Duration:	Five two-hour lessons per year
Prior qualifications/ prerequisites:	-
Teachers:	Henry Vega
Credits:	2 ECTS per year
Literature:	n/a
Work form:	Group lessons, In-class assignments
Assessment:	Decision for fulfillment of the requirements based on final grant application quality and presentation.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	
Information:	Henry Vega (sono@henryvega.net)

ACADEMIC SKILLS

COLLOQUIUM PARTICIPATION

<i>KC-M-SO-COLQ</i>	Colloquium Participation
Osiris course code:	KC-M-SO-COLQ
Course content:	Throughout the academic year, a two-hour weekly colloquium takes place. Ten of these take the form of presentations by faculty, alumni and guest speakers, and the rest are presentations by each student from the fourth year of the bachelor's programme and both first and second years of the master's programme. During each colloquium, two students present aspects of their research projects. The colloquia are attended by four or five Sonology faculty members, by students from the Sonology bachelor's and master's programmes, and by students from other departments of the conservatoire. The Colloquia are moderated by faculty member Bjarni Gunnarsson, who in the week preceding the colloquium distributes information about the upcoming presentations to all participating students. The moderator introduces the speakers at the beginning of the colloquium and leads the subsequent discussions. The colloquium presentation is an important moment for the evaluation of a student's progress, about which the teachers of the Master of Music in Sonology hold regular consultations.
Objectives:	At the end of this course, you: <ul style="list-style-type: none">▪ are able to formulate an aspect of your research and the fundamentals on which it is based;▪ are able to communicate the context of your subject, the research findings and conclusions, not just to fellow master's students but also to non-specialists;▪ are able to incorporate the outcome of feedback from others in the further development of your research activities;▪ are able to defend your viewpoints in the face of comments and questions from a specialist and non-specialist audience.
Programme objectives:	2.A.3, 2.A.8, 2.C.3, 2.C.6, 2.C.9, 2.C.11, 2.C.14
Level:	Master I–II
Duration:	Group lesson of two hours per week
Prior qualifications/ prerequisites:	-
Teachers:	Richard Barrett, Bjarni Gunnarsson, Johan van Kreij, Peter Pabon, Kees Tazelaar
Credits:	2 ECTS per academic year (participation), 7 ECTS per academic year (presentation)
Literature:	To be agreed upon with the mentor(s)
Work form:	Group lesson
Assessment:	Attendance (participation), the teachers who attended the colloquium have a short discussion afterwards to decide whether the objectives are met (presentation).
Grading system:	Master I – II: Colloquium Participation: pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

COLLOQUIUM PRESENTATION

<i>KC-M-SO-CP</i>	Colloquium Presentation
Osiris course code:	KC-M-SO-CP
Course content:	Throughout the academic year, a two-hour weekly colloquium takes place. Ten of these take the form of presentations by faculty, alumni and guest speakers, and the rest are presentations by each student from the fourth year of the bachelor's programme and both first and second years of the master's programme. During each colloquium, two students present aspects of their research projects. The colloquia are attended by four or five Sonology faculty members, by students from the Sonology bachelor's and master's programmes, and by students from other departments of the conservatoire. The Colloquia are moderated by faculty member Bjarni Gunnarsson, who in the week preceding the colloquium distributes information about the upcoming presentations to all participating students. The moderator introduces the speakers at the beginning of the colloquium and leads the subsequent discussions. The colloquium presentation is an important moment for the evaluation of a student's progress, about which the teachers of the Master of Music in Sonology hold regular consultations.
Objectives:	At the end of this course, you: <ul style="list-style-type: none"> ▪ are able to formulate an aspect of your research and the fundamentals on which it is based; ▪ are able to communicate the context of your subject, the research findings and conclusions, not just to fellow master's students but also to non-specialists; ▪ are able to incorporate the outcome of feedback from others in the further development of your research activities; ▪ are able to defend your viewpoints in the face of comments and questions from a specialist and non-specialist audience.
Programme objectives:	2.A.3, 2.A.8, 2.C.3, 2.C.6, 2.C.9, 2.C.11, 2.C.14
Level:	Master I–II
Duration:	Group lesson of two hours per week
Prior qualifications/ prerequisites:	-
Teachers:	Richard Barrett, Bjarni Gunnarsson, Johan van Kreij, Peter Pabon, Kees Tazelaar
Credits:	2 ECTS per academic year (participation), 7 ECTS per academic year (presentation)
Literature:	To be agreed upon with the mentor(s)
Work form:	Group lesson
Assessment:	Attendance (participation), the teachers who attended the colloquium have a short discussion afterwards to decide whether the objectives are met (presentation).
Grading system:	Master I – II: Colloquium Presentation: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

WRITING SKILLS

<i>M-SO-WS</i>	Writing Skills
Osiris course code:	KC-M-SO-WS
Course content:	You begin by gaining knowledge of (or reviewing) key fundamentals necessary for proper academic citation of a wealth of research sources. Practical exercises oriented towards developing this skill as well as writing about your own research directives are mandatory components for the course. Exercises will focus on developing and improving your written command of writing professional texts in English (i.e. reviews, critical responses to texts, programme notes, grant proposals, article-abstracts, various online writings, and technical descriptions relevant to your work). Instructor feedback will be provided on an individual basis, thereby helping to address and accommodate a wide range of challenges. Responding to a variety of texts or lectures, related to technical or aesthetic aspects of Sonology, will also play a significant role in the course. You will also have the opportunity to refine your presentation skills by giving coherent and well-structured presentations about your work. These presentations will involve a significant component of writing, however, special attention of spoken errors made by non-native speakers of English will also be reviewed.
Objectives:	At the end of this course, you: <ul style="list-style-type: none"> ▪ are able to write independently about your work within the context of electronic music production; ▪ are able to apply formal citations style (Chicago style) to written texts you are developing in connection to your thesis (master's or bachelor's level); ▪ are better able to prepare for formal presentations as well as able to write texts such as grant proposals, biographies, programme notes, reviews and other written texts related to your work.
Programme objectives:	2.B.7, 2.B.8, 2.C.5, 2.C.11
Level:	Master I
Duration:	120 minute group lesson per week, during 2 semesters
Prior qualifications/ prerequisites:	–
Teachers:	Graham Flett
Credits:	4 ECTS
Literature:	Course kit and in-class presentations
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and a selection from their responses to assignments given throughout the year. 80% attendance is required.
Grading system:	Final result: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Graham Flett (flettg@koncon.nl)

COURSE DESCRIPTIONS INSTRUMENT AND INTERFACES

* For the course descriptions of Colloquium Participation and Presentation, Sonology Research Participation and Presentation, and Writing Skills, see the course descriptions under 'Sonology'.

ARTISTIC DEVELOPMENT*

HARDWARE/PERFORMANCE/RESEARCH (INSTRUMENTS & INTERFACES)

<i>KC-M-ST-HOZ</i>	Hardware/Performance/Research (Instruments & Interfaces)
Osiris course code:	KC-M-ST-HOZ
Course content:	<p>Sonology and STEIM have already collaborated for decades on the development of software and hardware for communication between performers and electronic musical instruments. The term 'interface' applies here to the context of live electronic music, but also to other forms of artistic activity which depend on interaction between technology and the user, for example in sound art installations for museums and galleries, studios for electronic music production, software for spatial sound projection and so on. This master's programme is oriented towards the realisation of individual projects, though not excluding the possibility of collaborative projects. The programme is open to (collaborative) projects wherein both technical and performative aspects are shared. These activities take place under the supervision of a mentor, who challenges the student to explore new, unknown and broader contexts in their work. In this way the project is developed and documented so that the results may be presented in concerts, conferences or publications on an international level. The new knowledge brought into being in the course of realising the research project must be relevant within the broader context of the field of electroacoustic music and sound art. The structure of the STEIM component of this master's programme mirrors a typical STEIM instrument-building process. As such the elements and concern are structurally similar between the first and the second year. It is however important to note that while each year will yield an individual instrument design from each student, the focus of year one is on 'exploration' and 'tool gathering', while the second year requires students to make a strong commitment and immerse themselves in a particular instrument's design and realisation.</p>
Objectives:	<p>At the end of this course, you are able to:</p> <ul style="list-style-type: none"> ▪ develop a research project and document this in such a way that the results may be presented in concerts, conferences or publications on an advanced and international level. ▪ create new knowledge which shows relevance within the broader context of the field of electroacoustic music and sound art. ▪ write a thesis in which the project is documented and placed in a broader context. The conclusions of the research and the fundamentals on which it is based should here be formulated so as to be clear to specialists in the discipline. ▪ apply the aforementioned knowledge and abilities (in addition to individual activities) in areas such as: <ul style="list-style-type: none"> ○ Performance: use of interfaces approached from the perspective of playing and/or improvising. Here the emphasis is on making instruments or interfaces for specific uses, such as live performance, installations or mobile applications. ○ Instrumental: the use of sensors to design a playable instrument. Here the emphasis is on the conception, design and realisation of such an instrument on

	<p>the basis of visualisations and/or sensors together with the appropriate playing techniques.</p> <ul style="list-style-type: none"> ○ Protocol: <ul style="list-style-type: none"> the design of hardware for communication. Here the emphasis is more on the technical aspect of producing instruments and interfaces: hardware, sensors, software and the communication between different components on a technical level.
Programme Objectives:	2.A.1, 2.A.4, 2.A.5, 2.A.7, 2.A.10, 2.A.12, 2.A.13 2.B.1, 2.B.2, 2.B.3, 2.B.6, 2.B.9, 2.B.10, 2.B.12 2.C.1, 2.C.2, 2.C.7, 2.C.8, 2.C.10, 2.C.16
Type of course:	Compulsory
Level:	Master I-II
Duration:	1 hour per 2 weeks
Prior qualifications/ prerequisites:	-
Teachers:	Frank Baldé, Richard Barrett, Justin Bennett, Lex van den Broek, Johan van Kreij, Dick Rijken, Joel Ryan.
Credits:	Master I: 26 ECTS; Master II: 30 ECTS
Literature:	To be agreed upon with the Main Subject teacher.
Work form:	Individual lessons
Assessment:	At the end of the first year of the master's programme an evaluation takes place on the basis of a presentation attended by STEIM and Sonology staff members. At the end of the second year, examination for the degree is conducted on the basis of a public presentation of the realised project, a written thesis which documents the project and places it in context, and an oral examination. The thesis is handed in one month before the final presentation, and defended during a one-hour oral examination to a committee of faculty members and an international external examiner.
Grading system:	Master I presentation: pass/fail Master II final presentation: numeric
Language:	English
Schedule, time:	To be agreed upon with the mentor(s).
Venue	A concert hall and one or more Sonology studios, the STEIM studio.
Information:	Richard Barrett: R.Barrett@koncon.nl, Joel Ryan: J.Ryan@koncon.nl

SONOLOGY RESEARCH SEMINAR PARTICIPATION

See course description 'Sonology Research Seminar Participation' under 'Course Descriptions Sonology – 'Artistic Development'.

SONOLOGY RESEARCH SEMINAR PRESENTATION

See course description 'Sonology Research Seminar Presentation' under 'Course Descriptions Sonology – 'Artistic Development'.

PROFESSIONAL PREPARATION

OVERVIEW OWN PROJECTS (INSTRUMENTS & INTERFACES)

See course description 'Overview Own Projects' under 'Course Descriptions Sonology – 'Professional Preparation'.

STEIM RESEARCH SEMINAR PARTICIPATION (INSTRUMENTS AND INTERFACES)

<i>KC-M-ST-RS</i>	STEIM Research Seminar Participation (Instruments and Interfaces)
Osiris course code:	KC-M-ST-RS
Course content:	<p>Students will take part in STEIM's 'research group', a weekly meeting where STEIM's researchers, together with guests and students work on current or innovative research subjects in the area of instruments and interfaces. Master's students may become full members of the research group, actively participating conceptually and practically in the development of future instruments and interfaces. The seminars deal with a number of subjects, which may be described as follows:</p> <p><u>Introduction to the mechanics of embodied music making and instruments:</u> here the students are exposed to basic electronics, sculptural processes and methods of embodied conceptual thinking. This process functions as a method of opening up an initial discussion on experience/instrument design, and how STEIM's methods can be applied to such a process.</p> <p><u>Conceptual Design:</u> next, a conceptual design phase begins in which students present a 'declaration of interest'. This allows the students to rework their initial proposal in the light of embodied music making. The presentation marks the point where the students commit themselves to dedicating their time to a particular area of interest.</p> <p><u>Experiments and Analysis:</u> each instrument idea requires a different kind of experimental approach. These sessions are centred on making the initial experiments faithful to the spirit of each project. The group functions as a sounding board to this, and the sessions are attended by a variety of STEIM staff to allow many voices and suggestions to surface. The experimental process is an opportunity for each student to research their ideas and use the personal experience of this process to achieve originality in their developing project.</p> <p><u>Process Design:</u> in building instruments we imply a virtual structure onto a physical object. However, we are only interested in the range of data that is experienced as music. Therefore the manipulation is not of the parameters of physics but rather the spectrum between touch and hearing. Musical considerations must underpin our spectrum of input, mapping and notions of play.</p> <p><u>Hardware Studio / Software Studio:</u> within the studio context each student works autonomously on the hardware and software aspects of their project. The process is largely self-directed but extensively supported by the STEIM staff.</p> <p><u>Live performance:</u> Live performance has always functioned at STEIM as prime focus. It is the test bed for every instrument design, where the unexpected enters into your plans and you are forced to reconsider everything from your premises to the gauge of wire in your cables.</p>
Objectives:	<p>At the end of this course, you are able to:</p> <ul style="list-style-type: none"> ▪ formulate an aspect of the research and the fundamentals on which it is based. ▪ communicate the context of your subject, the research findings and conclusions to specialists in the field of electroacoustic music. ▪ incorporate the outcome of feedback from others in the further development of your research activities. ▪ discuss research subjects in the field of electroacoustic music on a professional level.
Programme Objectives:	2.A.3, 2.C.3, 2.C.5, 2.C.6, 2.C.9, 2.C.13
Type of course:	Compulsory

Level:	Master I-II
Duration:	2 hours per week, 20 lessons per academic year
Prior qualifications/ prerequisites:	-
Teachers:	Various staff members and guests of STEIM.
Credits:	STEIM Research Seminar Participation: Master I: 4 ECTS Master II: 4 ECTS STEIM Research Seminar Presentation: Master I: 6 ECTS Master II: 6 ECTS
Literature:	To be agreed upon with STEIM's staff.
Work form:	Group lessons
Assessment:	Attendance (participation), the teachers who attended the research seminar have a short discussion afterwards to decide whether the objectives are met (presentation).
Grading system:	Attendance: pass/fail Presentation: pass/fail
Language:	English
Schedule, time:	Friday (weekly)
Venue	STEIM Studio (Amsterdam)
Information:	Joel Ryan: J.Ryan@koncon.nl

STEIM RESEARCH SEMINAR PRESENTATION (INSTRUMENTS AND INTERFACES)

<i>KC-M-ST-RS</i>	STEIM Research Seminar Presentation (Instruments and Interfaces)
Osiris course code:	KC-M-ST-RSP
Course content:	<p>Students will take part in STEIM’s ‘research group’, a weekly meeting where STEIM’s researchers, together with guests and students work on current or innovative research subjects in the area of instruments and interfaces. Master’s students may become full members of the research group, actively participating conceptually and practically in the development of future instruments and interfaces. The seminars deal with a number of subjects, which may be described as follows:</p> <p><u>Introduction to the mechanics of embodied music making and instruments</u>: here the students are exposed to basic electronics, sculptural processes and methods of embodied conceptual thinking. This process functions as a method of opening up an initial discussion on experience/instrument design, and how STEIM’s methods can be applied to such a process.</p> <p><u>Conceptual Design</u>: next, a conceptual design phase begins in which students present a ‘declaration of interest’. This allows the students to rework their initial proposal in the light of embodied music making. The presentation marks the point where the students commit themselves to dedicating their time to a particular area of interest.</p> <p><u>Experiments and Analysis</u>: each instrument idea requires a different kind of experimental approach. These sessions are centred on making the initial experiments faithful to the spirit of each project. The group functions as a sounding board to this, and the sessions are attended by a variety of STEIM staff to allow many voices and suggestions to surface. The experimental process is an opportunity for each student to research their ideas and use the personal experience of this process to achieve originality in their developing project.</p> <p><u>Process Design</u>: in building instruments we imply a virtual structure onto a physical object. However, we are only interested in the range of data that is experienced as music. Therefore the manipulation is not of the parameters of physics but rather the spectrum between touch and hearing. Musical considerations must underpin our spectrum of input, mapping and notions of play.</p> <p><u>Hardware Studio / Software Studio</u>: within the studio context each student works autonomously on the hardware and software aspects of their project. The process is largely self-directed but extensively supported by the STEIM staff.</p> <p><u>Live performance</u>: Live performance has always functioned at STEIM as prime focus. It is the test bed for every instrument design, where the unexpected enters into your plans and you are forced to reconsider everything from your premises to the gauge of wire in your cables.</p>
Objectives:	<p>At the end of this course, you are able to:</p> <ul style="list-style-type: none"> ▪ formulate an aspect of the research and the fundamentals on which it is based. ▪ communicate the context of your subject, the research findings and conclusions to specialists in the field of electroacoustic music. ▪ incorporate the outcome of feedback from others in the further development of your research activities. ▪ discuss research subjects in the field of electroacoustic music on a professional level.
Programme Objectives:	2.A.3, 2.C.3, 2.C.5, 2.C.6, 2.C.9, 2.C.13

Type of course:	Compulsory
Level:	Master I-II
Duration:	2 hours per week
Prior qualifications/ prerequisites:	-
Teachers:	Various staff members and guests of STEIM.
Credits:	STEIM Research Seminar Participation: Master I: 4 ECTS Master II: 4 ECTS STEIM Research Seminar Presentation: Master I: 6 ECTS Master II: 6 ECTS
Literature:	To be agreed upon with STEIM's staff.
Work form:	Group lessons
Assessment:	Attendance (participation), the teachers who attended the research seminar have a short discussion afterwards to decide whether the objectives are met (presentation).
Grading system:	Attendance: pass/fail Presentation: pass/fail
Language:	English
Schedule, time:	Friday (weekly)
Venue	STEIM Studio (Amsterdam)
Information:	Joel Ryan: J.Ryan@koncon.nl

APPENDIX 1: ASSESSMENT CRITERIA MASTER IN SONOLOGY

	Composition and/or performance skills	Digital and analogue studio skills	Computer programming and/ or hardware skills	Sound projection skills	Ability to discuss techniques and ideas	Originality and relevance of the research	Writing skills
9 - 10	Rare musicianship for this level.	Excellent translation of technical procedures into musical results.	Highly advanced computer programming and/or hardware construction skills.	Exceptional abilities in sound projection of electronic music.	Exceptionally convincing thesis defence.	Exceptional research ability as shown in the thesis.	Exceptional writing ability as shown in the thesis.
7,5 - 8,5	Musicianship skills of a consistently good level.	Good translation of technical procedures into musical results.	Above average computer programming and/or hardware construction skills.	Good abilities in sound projection of electronic music.	Convincing thesis defence.	Good research ability as shown in the thesis.	Good writing ability as shown in the thesis.
5,5 - 7	If not always consistent, a reasonable general level.	Adequate translation of technical procedures into musical results.	Acceptable level of computer programming and/or hardware construction skills.	Adequate abilities in sound projection of electronic music.	Adequate if not always convincing thesis defence.	Adequate research ability as shown in the thesis.	Adequate writing ability as shown in the thesis.
0 - 5	The work and the performance do not reveal sound musicianship skills.	Inadequate translation of technical procedures into musical results.	Computer programming and/or hardware construction skills weak or absent.	Inadequate abilities in sound projection of electronic music.	Inadequate or no response to questions in the thesis defence.	Insufficient amount and/or quality of research as shown in the thesis.	Insufficient amount and/or quality of writing as shown in the thesis.