Royal
Conservatoire
The Hague

Curriculum Handbook

Bachelor of Music in 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 at our website.

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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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INTRODUCTION

The sonologist moves in the field of electroacoustic music, computer music and sound art. 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 Institute of Sonology was housed in Utrecht until 1986 and then moved to the Royal Conservatoire in The Hague. In addition to the one-year course in sonology that was launched in 1967, there is now also a four-year bachelor's and a two-year master's degree programme.

The Institute of Sonology adopts a clear stance in terms of the use of technology in music: technology is not merely an adjunct to the existing music practice, but should be used primarily to explore new forms of composition and public presentation of music and art. At the same time, sonology is not bound by any stylistic dogmas.
The traditional areas covered in sonology such as studio composition, computer programming, sound research, digital signal processing, algorithmic composition and the theory of electronic music are still strongly represented in the syllabus, but relatively new subjects such as live electronics, improvisation, sound art, field recording and the spatial aspects of sound have become at least as important.

Students have access to five production studios equipped with high-quality multichannel sound systems. One also contains a Wave Field Synthesis system for spatial sound projection, and another is one of the most extensive voltage-controlled (analogue) studios currently in operation.

Sonology avails itself of the conservatoire's two excellent concert halls for its regular concert presentations, featuring works by students, faculty members, guest artists and classics from the electroacoustic music repertoire, as well as performances by the Sonology Electroacoustic Ensemble, an improvisation group that combines acoustic and electronic instruments with live sound processing. Every year the students perform the results of the final exams at a small festival in June.

A bachelor's degree in Sonology opens the way to a career as an independent electronic musician and/or in the field of multimedia, computer programming, sound design, live electronic music, hardware design, sound engineering and education.

In recent years, guest lectures, master classes and workshops have been given by Trevor Wishart, Daniel Teruggi, Nic Collins, Alvin Lucier, Stefan Weinzierl, Gottfried Michael Koenig, Konrad Boehmer, Arne Deforce, Francisco Lopez, Kaija Saariaho, Larry Polansky, Barry Truax, Matthew Ostrowski, Folkmar Hein, Sarah Nicolls, Richard Cavell, Douglas Kahn, Peter Evans, Evan Parker, Richard Scott and Hillel Schwartz, Cathy van Eck, Sara Pinheiro, Stefan Weinzierl, Horacio Vaggione, among many others.

In this document you will find the programme objectives, details about the sonology bachelor's curriculum and course descriptions. We recommend you to read this document, the study guide and the Education and Examination Regulations (EER) carefully.

PROGRAMME OBJECTIVES BACHELOR SONOLOGY

Description programme objectives	*corresponding course codes*
PRACTICAL (SKILLS-BASED) OUTCOMES	
• At the completion of their studies, students are expected to have gained a wide range of skills relevant to making music using computers and other electronic means (but not limited to these).	RMM, MZC, P&M, S&ST, AT, LEM
• At the completion of their studies, students are expected to be able to work in both digital and analogue studio environments.	ISD, MZC, SO-GLT
• At the completion of their studies, students are expected to be able to use computer programming using various programming languages.	RMM, P&M, S&ST, PHM
• At the completion of their studies, students are expected to be able to carry out sound engineering for the production and public presentation of electronic and electroacoustic music.	SO-GLT
• At the completion of their studies, students are expected to be able to improvise in performance situations, both as musicians and as sound engineers.	LEM, SO-GLT
• At the completion of their studies, students are expected to be able to use practical electronic skills for the construction of devices such as hardware controller interfaces.	MCW, SO-MP
• At the completion of their studies, students are expected to have gained experience in the logistics and stage management of public concerts.	LEM, SO-GLT
• At the completion of their studies, students have an overview of new learning theories and environments related to sonology.	ED-SO
These skills will have been developed in diverse practical contexts including the composition of fixed-media electronic music using various techniques and concepts, performing live electronic music in an improvisational context, and working on the technical aspects of concert presentations of their own work and that of fellow students and guest composers and/or performers. Also important in this context are co-productions with students from other departments of the conservatoire.	
• At the completion of their studies, students are able to work in various collaborative contexts, combining self-motivation with teamwork.	ED-SO1, ED-SO2, SO-GLT, AT, LEM
• At the completion of their studies, students are expected to have developed systematic self-criticism techniques during the process of composition, in the matching of	MZC, P&M, MCW, KI, APEM, COZ

technical means to musical ideas, and in live performance situations.	
• At the completion of their studies, students are expected to have developed the discipline of practising and rehearsing.	LEM, COZ
• At the completion of their studies, students are expected to be able to present their work in public concerts, and to present and discuss their techniques and ideas confidently and articulately to diverse audiences.	LEM, COZ, CP
Theoretical (knowledge-based) outcomes	
Students will have acquired a broad knowledge of:	
• The repertoire of contemporary music composition and especially music using electronics from the mid-20th century up to the present day.	K&R, SO-NAMT, TH-MG, HCMP
• The compositional and technical procedures involved in this music, the diversity of styles and aesthetics embodied in it, and the terms and concepts used in describing and discussing it.	MZC, P&M, LEM, M&T, APEM, SO-AML
• Relevant concepts from outside music, for example computer programming, mathematics, acoustics and psychoacoustics, sound and its (architectural) environment, art theory and philosophy. An appreciation of possible interactions between scientific and aesthetic ideas is particularly stressed.	RMM, P&M, S&ST, M&T, PHM, APEM, K&R, SO-NAMT
• The professional potential of the skills and knowledge acquired during their studies, not only in the field of musical composition but also in the many other related fields and possibilities to which former Sonology students have brought their expertise.	COZ, ED-SO1, ED-SO2
• Listening critically to electroacoustic music and comprehending its structures and, where appropriate, its formative processes and aesthetic intentions.	MZC, COM, SO-COLQ
Generic outcomes	
• At the completion of their studies, students are expected to be able to work independently on their compositions and/or works of sound art, and carry out any technical research appropriate to their realisation.	RMM, MZC, P&M, MCW, Kl, AT, COZ
• They will be able to assess the compositional process both while it is progressing and when it is completed, and to describe and discuss the entire process including its relation to historical precedents.	COZ, CP, SO-WS

• They will have learned the necessity to plan their work independently, and follow their plan while retaining the flexibility to respond creatively to new ideas as well as problems which might emerge along the way.	COZ
• They will be in a position to present the results in the form of a portfolio of creative and/or research work, a concert and/or sound installation presentation, and a thesis which describes and contextualises this work.	PF, AT, Kl, LEM, COZ, SO-AML, SO-WS
• They will also have developed the necessary writing skills to express clearly the concepts encountered in their studies, which of course would be transferable also to other subject areas and situations.	SO-WS
• They will have gained experience of teaching in workshop-based and other contexts, and in general of being able to communicate and explain relevant issues in an engaging and concise manner.	ED-SO1, ED-SO2

CURRICULUM OVERVIEW

code	form	Sonology	Year 1	Year 2	Year 3	Year 4
		Bachelor of Music in Sonology 2019-2020				
KC-AL-		**Artistic Development**				
SO-EWS1,2		Exchange Workshops 1+2	4			
MZC	g	Composing in the Analogue Studio	8		4	
KI	g	Sound Installations		4		
AT	g	Aural Tectonics			4	
M&T	q	Music and Time			3	
COM	g	Composition Workshop				4
APEM	q	Aesthetics and Performance in Electronic Music				3
K&R	q	Sound and Space				8
		Preparation for Individual Projects	2			
COZ	i	Specialisation: Composition/Performance/Research	6	12	13	26
		Subtotal	**20**	**16**	**24**	**41**
		Technological Skills and Knowledge				
S&ST	q	Signals and Systems	6	6		
RMM	q	Real-time Processes with Max/MSP	7			
P&M	g	Programming and Music	8	7		
PHM1	q	Analysis / Re-synthesis			6	
PHM2		Physical Models				6
SO-MP		Introduction to Electronics	3			
ISD	q	Digital Studio Introduction	3			
MCW	g	Musical Controllers Workshop		7		
		Subtotal	**27**	**20**	**6**	**6**
KC-AS-		**Musicianship Skills**				
SO-AML1, 2		Music Theory	4	4		
SO-AML3, 4		Applied Music Theory			4	2
LEM	q	Live Electronic Music			6	
SO-HCMP		History of Contemporary Music Composition		2		
		Subtotal	**4**	**6**	**10**	**2**
KC-AS-		**Academic Skills**				
SO-WS		Writing Skills			4	
SO-COLQ	g	Colloquium Participation	2	2	2	2
CP	i	Colloquium Presentation				3
SO-NAMT		New Arts and Music Theories	3			
		Subtotal	**5**	**2**	**6**	**5**
KC-		**Professional Preparation**				
FYF	g	First Year Festival	2			
PF	g/i	Tutoring and Portfolio	2	2	2	
		Communication Skills for Creative Artists			2	
SO-GLT		Sound Engineering in Electronic Music		4	4	
		Educational Skills 1		4		
		Subtotal	**4**	**10**	**8**	**0**
		Minor/Electives				
		Minor or Electives		6	6	6
		Subtotal		**6**	**6**	**6**
		Total per year	**60**	**60**	**60**	**60**
		Total				**240**

COURSE DESCRIPTIONS

ARTISTIC DEVELOPMENT

EXCHANGE WORKSHOPS

SO-EWS	**Exchange Workshops 1+2**
Osiris course code:	KC-SO-EWS1,2
Course content:	The creative departments organise annual Exchange Workshops, covering different topics related to composition, sonology, media arts and ArtScience. The workshops are led by guest teachers.
Objectives:	At the end of this course, the student: ▪ has gained insight into the artistic ideas and working methods of the creative departments; ▪ has developed skills and knowledge about the working field.
Type of course:	Compulsory for bachelor's I, elective for bachelor's II to IV and master's students
Level:	Bachelor and Master
Duration:	5 or 10 days of 5 hours (depending on the type of workshop)
Prior qualifications/ prerequisites:	–
Teachers:	Guest teachers
Credits:	2 or 4 ECTS per workshop. Exchange Workshop 1 = 2 ECTS, Exchange Workshop 2 = 2 ECTS
Literature:	–
Work form:	workshop
Assessment:	Compulsory attendance: 80%. Depending on workshop: possibility of an assignment.
Grading system:	Varies per workshop
Language:	English
Schedule, time, venue:	See the workshop description document
Information:	Erika Bordon (e.bordon@koncon.nl)

COMPOSING IN THE ANALOGUE STUDIO 1

SO-MZC	**Composing in the Analogue Studio 1**
Osiris course code:	KC-SO-MZC
Course content:	You start with working on an assignment around analogue sound transformation. Sequences of recorded sounds become input for transformations such as transposition, inversion, layering, filtering, reverberation, echo, amplitude-modulation, ring-modulation and combinations of these. The results of the experiments are combined in a small composition. For the second assignment, the sequences of recorded sounds are replaced with the three main electronic music ingredients of the Cologne studio in the 1950's: sine waves, noises and impulses. Techniques are explained in relation to historical examples, for instance of Karlheinz Stockhausen (*Studie II*, *Kontakte*), Gottfried Michael Koenig (*Klangfiguren II*, *Terminus*) and György Ligeti (*Pièce électronique no.3*, *Artikulation*).
Objectives:	At the end of this course, you: ▪ are able to work independently in an analogue studio for electronic music production; ▪ are able to apply analogue sound transformations both to electronically generated sounds and microphone recordings; ▪ are able to document and communicate procedures in an analogue studio for electronic music production.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	2 semesters, 120 minutes per week (group lessons) plus 180 minutes per week (individual studio sessions), 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Kees Tazelaar
Credits:	8 ECTS
Literature:	Studio manual, patching examples provided during the lessons
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and two large-scale assignments (see course content).
Grading system:	Assignment 1: numeric (50%) Assignment 2: numeric (50%)
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Kees Tazelaar (k.tazelaar@koncon.nl)

COMPOSING IN THE ANALOGUE STUDIO 2

SO-MZC	**Composing in the Analogue Studio 2**
Osiris course code:	KC-SO-MZC
Course content:	The growing complexity of electronic music production led to automation techniques such as voltage control. As a result, the attention of composers working in an analogue studio shifted: where at first they would design an abstract score that was 'filled in' with a montage of electronic sound material, they now designed a configuration of which the result was not only a sound but at the same time a structure that 'unfolds' in time. In this course, you explore the possibilities of Sonology's modular voltage control system while working on an assignment.
Objectives:	At the end of this course, you: ▪ are able to work independently with a modular voltage control system for electronic music production; ▪ are able to plan, execute, document and communicate complex configurations of equipment for electronic music production; ▪ are able to translate abstract ideas about musical structure into technical realisations.
Type of course:	Compulsory
Level:	Bachelor III
Duration:	2nd semester, 120 minutes per week (group lessons) and 180 minutes per week (individual studio sessions), 15 weeks
Prior qualifications/ prerequisites:	Composing in the Analogue Studio 1
Teachers:	Kees Tazelaar
Credits:	4 ECTS
Literature:	Studio manual, patching examples provided during the lessons
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and an electronic music composition based on voltage control techniques.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Kees Tazelaar (k.tazelaar@koncon.nl)

SOUND INSTALLATIONS

SO-KI	**Sound Installations**
Osiris course code:	KC-SO-KI
Course content:	In a sound installation the mobility and freedom of the listener requires approaches to temporal and spatial structures that are different to those of concert music. Through a series of lectures and practical workshops, you look at many examples from music, visual art, sound sculpture, (interactive) media art and audio-walks. You are encouraged to experiment with mechanical, acoustic and electronic techniques for producing sound as well as different strategies for sound spatialisation. You develop and present a group project.
Objectives:	At the end of this course, you: ▪ are able to conceive, plan and realise a spatial sound work; ▪ are able to work with generative, sensitive or interactive sonic structures; ▪ are able to create and realise pieces in locations other than the traditional concert hall.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Justin Bennett
Credits:	4 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	Practical assignments concluding with a presentation. 80% attendance is required.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Justin Bennett (j.bennett@koncon.nl)

AURAL TECTONICS

SO-AT	**Aural Tectonics**
Osiris course code:	KC-SO-AT
Course content:	Every location and the related modes of listening already constitute a sonic context. Aural Tectonics explores the site-specificity and context-dependency of sound by fostering a critical awareness of and attitude towards environmental ambiance. Founded in a practice-based approach, the course develops site-dependent strategies for listening, recording, mapping, synthesis and intervention over a range of spatial typologies, from outdoor public space to electroacoustic environments. The course is structured around a sequence of intensive projects promoting the development of locational modes of listening and personal approaches towards contextual ambiance.
Objectives:	At the end of this course, you: ▪ have gained hands-on experience with experimental recording and sound editing techniques; ▪ have experience with practice-based approaches for exploring sonic locale; ▪ have developed technical as well as theoretical means for addressing the site-specificity of sound; ▪ have a critical awareness of the registers of hearing and listening attention in every-day situations.
Type of course:	Compulsory
Level:	Bachelor III
Duration:	two-week workshop after the fall or spring holidays; 10 days of 5 hours
Prior qualifications/ prerequisites:	–
Teachers:	Raviv Ganchrow
Credits:	4 ECTS
Literature:	t.b.a.
Work form:	Workshop
Assessment:	The students must hand in several exercises involving experimental sound recording methods (intended to explore unconventional recording setups of sounds in the every-day environment); audio-editing techniques (as methods to explore auditory contexts); and strategies for sound spatialisation (that should expose innovative spatial ontologies of sound). The course concludes with a final project towards which the exercises build up. Students are also expected to present their pieces to their peers and lead lively discussions about their findings.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Raviv Ganchrow (r.ganchrow@koncon.nl)

MUSIC AND TIME

SO-M&T	**Music and Time**
Osiris course code:	KC-SO-M&T
Course content:	The use of digital and analogue electronics has presumably changed our relation to time in music, and the relation of technique to content is a puzzling one. As electronic musicians we therefore have to examine some basic questions: can we learn to perceive time in a different way; can we imagine a sound we have never heard before; is time in music the same as time in nature; how does our perception of time relate to time measured by a physical process; is counting the same as measuring duration? During the course, ideas drawn from traditional music, natural processes, mathematics and cognitive science will be examined as inspiration for a new theory of time and representation in music.
Objectives:	At the end of this course, you: ▪ are able to reflect on the changing perception of time in music as a result of the use of technology; ▪ have knowledge of number theory, adaptive systems, generative grammar, linear and non-linear dynamics and the phenomenology of time perception.
Type of course:	Compulsory, also available as an elective
Level:	Bachelor III
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Joel Ryan
Credits:	3 ECTS
Literature:	Texts from Cognitive Science, Mathematics, Philosophy of Science & Literature, which will be provided during the lessons.
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and a written report, in which the relation between their own work and the changing perception of time in music is discussed. 80% attendance is required.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Joel Ryan (j.ryan@koncon.nl)

COMPOSITION WORKSHOP

SO-COM	**Composition Workshop**
Osiris course code:	KC-SO-COM
Course content:	The point of departure for this workshop is the method of composition employed by Gottfried Michael Koenig (*1926) for his electronic composition *Terminus* (1962). The key to this method is that there is no pre-determined plan for the time structure of the composition, but that the position of the sound structures in time arises from the way these sound structures are derived from basic material by means of sound transformations. The sounds are therefore not *in* a form, but the form is created *by* the sound transformations. You choose your own basic sound materials and the methods you will use – analogue or digital – to transform the material. Every week the results are listened to and discussed during the lessons.
Objectives:	At the end of this course, you: ▪ are able to translate a vertical 'out of time' realisation plan for sound transformations into a horizontal musical structure; ▪ are able to develop criteria for the selection of sound materials and their transformations in advance of a specific musical form; ▪ are able to discuss and document a compositional process based on sound transformations; ▪ are able to realise a composition while taking the previous objectives into account.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	1st semester, 120 minutes per week, 15 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Kees Tazelaar
Credits:	4 ECTS
Literature:	–
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and an electronic composition based on sound transformations.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Kees Tazelaar (k.tazelaar@koncon.nl)

AESTHETICS AND PERFORMANCE IN ELECTRONIC MUSIC

SO-APEM	**Aesthetics and Performance in Electronic Music**
Osiris course code:	KC-SO-APEM
Course content:	Electronic music was perhaps the only music to have emerged without a performance practice. Although this is no longer the case, basic issues remain in dispute such as whether it is in fact possible to make music without reference to the act of performance. The paradigm of music creation has been under strain since the invention of recording; this paradigm has nowadays fallen apart and, as a result, it is not always possible to make a clear distinction between concepts like author, score, copy, and interpretation. We therefore need to ask whether we need totally new concepts, or is the break with the past greatly exaggerated; what is the concrete connection between electronic and modern western art music. Is the purpose of music to give pleasure? Is listening a solitary activity?
Objectives:	At the end of this course, you: ▪ have an overview of the ideas and sciences that contribute to the culture of electronic music; ▪ are able to evaluate and reflect on the aesthetics and performance of electronic and modern art music; ▪ are able to present your personal view to peers.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Joel Ryan
Credits:	3 ECTS
Literature:	Texts from Aesthetics, Anthropology, Cognitive Science, Physics, Mathematics, Philosophy of Science & Literature, which will be provided during the lessons.
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and a written report, in which the relation between their own work and the position of electronic music performance in modern art music in general is discussed.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Joel Ryan (j.ryan@koncon.nl)

SOUND AND SPACE

SO-K&R	**Sound and Space**
Osiris course code:	KC-SO-K&R
Course content:	Sound and Space is a seminar exploring interconnections between modes of sonic attention and concepts of space. The seminar is grouped around the themes of *echo*, *resonance* and *oscillation*, providing a cross-disciplinary reading of developments in spatial composition, sound art, audio technologies and architectural acoustics. The course covers examples from a broad range of sources serving to highlight distinctive correlations between epistemologies of sound and ontologies of space and place.
Objectives:	At the end of this course, you: ▪ have developed an awareness of the historicity of hearing; ▪ have an overview of historical paradigms of spatial sound and their contextual underpinnings; ▪ have acquired an ability to think through sonic contextuality and develop tools to critically engage contemporary discourses of sound and hearing.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	2 semesters, 150 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	-
Teachers:	Raviv Ganchrow
Credits:	8 ECTS
Literature:	Reading lists and weekly hand-outs will be provided during the lessons
Work form:	Group lesson
Assessment:	The student is required to submit a paper, which explores a specific context of spatial sound. The paper will address and elaborate upon the spatial ontologies of sound in that given context, and should display an analytical approach to the subject matter, employ clear argumentation, and express novel approaches to the historicity of hearing. Judgment will be based on the originality of the subject matter, the clarity of the insights as well as the awareness of the potential contribution to aural cultures.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Raviv Ganchrow (r.ganchrow@koncon.nl)

PREPARATION FOR INDIVIDUAL PROJECTS

KC-	**Preparation for Individual Projects**
Osiris course code:	KC-
Course content:	At the end of each year, you are expected to present the results of your individual project (see Specialisation Composition/Performance/Research). This course has been developed to better prepare you for what is expected (e.g. content, format), and to make sure that your individual project is integrated in your weekly work schedule from the beginning of the academic year.
Objectives:	At the end of this course, you: ▪ have a clear idea what is expected regarding the individual Specialisation Composition/Performance/Research project; ▪ are prepared to present the results from this project to the committee at the 1–2 bachelor's exam; ▪ are able to discuss the progress of the individual project with your teachers and fellow students.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	10 two-hour sessions
Prior qualifications/ prerequisites:	none
Teachers:	Ji Youn Kang and Sonology Research Associates
Credits:	2 ECTS
Literature:	
Work form:	group lessons
Assessment:	short presentation
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Kees Tazelaar (k.tazelaar@koncon.nl)

SPECIALISATION COMPOSITION/PERFORMANCE/RESEARCH

SO-COZ	**Specialisation Composition/Performance/Research**
Osiris course code:	KC-SO-COZ
Course content:	In addition to the group lessons, you work on an individual project, under the guidance of a mentor with whom you have regular meetings. The project can consist of personal compositions, sound experiments, sound design, sound installations, personally built electronic musical instruments, (partially) self-written computer programs or a report of a study. In the fourth year the project is presented to and discussed with the other students during the Sonology Colloquium. During the fourth year, you also write a thesis, the subject of which may be connected with the project but need not be. The results of the project and the thesis are presented and evaluated during the end-of-year and final presentations.
Objectives:	At the end of this course, you: ▪ are able to work independently on your own creative and research projects; ▪ have developed a precise sense of self-assessment and criticism relative to these projects; ▪ are able to incorporate these reflections into the further development of your work; ▪ are able to describe the artistic context and the content of the individual project in a written thesis.
Type of course:	Compulsory
Level:	Bachelor I–IV
Duration:	approximately 1 meeting of 1 hour with a mentor per month
Prior qualifications/ prerequisites:	The student should finish each year of this course before being allowed to enter the next.
Teachers:	Richard Barrett, Justin Bennett, Bjarni Gunnarsson, Johan van Kreij, Peter Pabon, Gabriel Paiuk, Kees Tazelaar
Credits:	6 – 12 – 13 – 26 ECTS per academic year
Literature:	–
Work form:	Individual meetings
Assessment:	Independent creativity, originality and discipline, as demonstrated during a presentation at the end of the first, second and third year. At the end of the fourth year there is a 30-minute final concert presentation. The music and a written thesis, in which the context and development of the project are documented, are discussed with a committee during a 45-minute interview.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	Individual appointments
Information:	Kees Tazelaar (k.tazelaar@koncon.nl)

TECHNOLOGICAL SKILLS AND KNOWLEDGE

SIGNALS AND SYSTEMS 1

SO-S&ST	**Signals and Systems 1**
Osiris course code:	KC-SO-S&ST
Course content:	These classes are designed to provide a solid background for dealing practically with the physical and mathematical representations of sound signals and sound processing systems. The course treats standard topics like the decibel, sampling, fundamental periodicity and the build-up of acoustical wave fields. The second semester is dedicated to Fourier Analysis.
Objectives:	At the end of this course, you: ▪ are able to describe the basic properties of a sound signal; ▪ have an in-depth understanding of the Fourier Transform and are able to apply it.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	2 semesters, 150 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Peter Pabon
Credits:	6 ECTS
Literature:	Chapters 1, 2 and 4 from: Stan Tempelaars, *Signal Processing: Speech and Music*, (Lisse: Swets and Zetilinger, 1996). Additional PDF's will be distributed by email.
Work form:	Group lesson
Assessment:	There is a practical assignment and a written test at the end of the course
Grading system:	Written test: numeric Practical assignment: pass/fail Both tests have to be passed.
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Peter Pabon (pabon@koncon.nl)

SIGNALS AND SYSTEMS 2

SO-S&ST	**Signals and Systems 2**
Osiris course code:	KC-SO-S&ST
Course content:	These classes are designed to provide a solid background for dealing practically with the physical and mathematical representations of sound signals and sound processing systems. In part 2, attention shifts to system characterisation and the concepts of filtering, convolution, impulse response measurement, nonlinear systems and modulation techniques.
Objectives:	At the end of this course, you: ▪ are able to deal practically with the physical and mathematical representations of sound signals and sound processing systems; ▪ are able to conceptualise the relationships between various signal-processing models.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2 semesters, 135 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Signals and Systems 1
Teachers:	Peter Pabon
Credits:	6 ECTS
Literature:	Chapters 3, 5, 6, 7 and 8 from: Stan Tempelaars, *Signal Processing: Speech and Music*, (Lisse: Swets and Zetilinger, 1996). Additional PDF's will be distributed by email.
Work form:	Group lesson.
Assessment:	There is an impulse response assignment and a written test at the end of the course.
Grading system:	Impulse response assignment: pass/fail Written test: numeric Both tests have to be passed.
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Peter Pabon (pabon@koncon.nl)

REAL-TIME PROCESSES WITH MAX/MSP

SO-RMM	**Real-Time Processes with Max/MSP**
Osiris course code:	KC-SO-RMM
Course content:	Max is a programming tool that is relatively easy to learn, and it is especially suitable for creating and exploring real-time generative processes and the interaction with them. In Max, such processes can be defined as data streams or as audio generating structures. The aim is to research musicality in the interaction, and to define personal approaches and methods. The course starts with a brief introduction to the basics of Max.
Objectives:	At the end of this course, you: ▪ can design and program musical processes and master the basics of signal processing in Max/MSP; ▪ can make abstractions of musical ideas and are able to implement them practically in real-time.
Type of course:	Compulsory, also available as an elective
Level:	Bachelor I
Duration:	2 semesters, 120 minutes per week, 24 weeks
Prior qualifications/ prerequisites:	Digital Studio Introduction course
Teachers:	Johan van Kreij
Credits:	7 ECTS
Literature:	Online documentation of Max/MSP
Work form:	Group lesson
Assessment:	Active participation and regular small assignments. A final composition assignment based on the use of Max/MSP.
Grading system:	Final composition assignment: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Johan van Kreij (jvkr@koncon.nl)

PROGRAMMING AND MUSIC 1

SO-P&M	**Programming and Music 1**
Osiris course code:	KC-SO-P&M
Course content:	This course covers programming fundamentals, algorithmic composition and programming sound. Initially, programming fundamentals are studied using the programming language SuperCollider (sclang). This leads to algorithmic composition, its history, main concepts and concrete examples using the SC patterns library. Finally, the programming of sound will be discussed and topics will be implemented using SuperCollider ugens and their synthesis server.
Objectives:	At the end of this course, you: ▪ know and are able to practice the basics of programming in SuperCollider and can use programming for musical situations; ▪ have basic knowledge of algorithmic composition and its context; ▪ can implement and design sounds using algorithmic thinking and programming ideas.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Bjarni Gunnarsson
Credits:	8 ECTS
Literature:	The course material is featured on the course's website with new lectures and references to additional readings every week.
Work form:	Group lesson
Assessment:	Three practical assignments and one compositional study must be handed in. The assignments involve writing computer programs for different problems related to music and sound. Documentation must be included explaining the chosen solutions and their motivations. The assignments and the compositional study each value 25% of the final grade.
Grading system:	Final result: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

PROGRAMMING AND MUSIC 2

SO-P&M	**Programming and Music 2**
Osiris course code:	KC-SO-P&M
Course content:	Advanced programming in SuperCollider. The discussion focuses on building complex applications for use in a musical context. There will be practical work as well as lectures on application-building and large systems. Musical networks and dynamic systems will be discussed as well as how to deploy generative code in customised software. The final part will deal with programming audio in C and how low-level units can be created. An on-going theme is how to combine these technologies, which is reflected in the construction of a final, large-scale project.
Objectives:	At the end of this course, you: ▪ can design large applications for musical purposes; ▪ are able to apply complex generative systems such as networks, cellular automata and chaos theory; ▪ can develop low-level audio programs in C.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Programming and Music 1
Teachers:	Bjarni Gunnarsson
Credits:	7 ECTS
Literature:	The course material is featured on the course's website with new lectures and references to additional readings every week.
Work form:	Group lesson
Assessment:	Six assignments must be completed. Each one deals with a period of 4–6 weeks. The assignments involve the implementation of computer programs and realizing musical ideas. The sixth assignment deals with the C programming language. Each assignment must be accompanied by documentation. The first five assignments each value 15% of the final grade, the last assignment counts for 25%.
Grading system:	Final result: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

ANALYSIS/RE-SYNTHESIS

SO-PHM1	**Analysis/Re-synthesis**
Osiris course code:	KC-SO-PHM1
Course content:	The central topic of this course is the liaison that perception has with the spectral and physical representations of a sound. A sound can be analysed and exactly resynthesized from its spectrum with the so-called Fourier Model, which presents a series of interesting and characteristic processing options. When detached from their strict mathematical ordering the standard analysis and synthesis schemes yield alternative and very practical processing models that allow manipulations in both time and frequency domain simultaneously. Models that follow this approach, like the instantaneous frequency model, and the band-limited oscillator will be studied in more detail.
Objectives:	At the end of this course, you: ▪ are able to analyse, process and re-synthesize a sound by using a spectral abstraction; ▪ are able to implement various analysis models that allow for the recognition of specific sound qualities; ▪ are able to translate and combine analysis results into a higher-order abstraction. ▪ are able to identify the similarities and specific differences between the synthesis models presented.
Type of course:	Compulsory, also available as an elective
Level:	Bachelor III
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Signals and Systems 1 and 2
Teachers:	Peter Pabon
Credits:	6 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	A practical assignment that involves the implementation of a self-chosen analysis/re-synthesis chain and a demonstration/evaluation of its application.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Peter Pabon (pabon@koncon.nl)

PHYSICAL MODELS

SO-PHM2	**Physical Models**
Osiris course code:	KC-SO-PHM2
Course content:	The sound qualities that come out of the Fourier-based models (the main topic of this course in the previous year) do not necessarily represent the familiar physicality that perception expects from acoustical sounds. The predisposition of perception to listen for those acoustical markers that define a sound-production mechanism triggered an interest in a different synthesis technique, called Physical Modelling. Here, vibrating masses coupled together by springs that undergo frictional forces are the modelled abstractions, which can be implemented in real-time too. At a different time scale, the same perceptual predisposition will make us hook gestural interpretations to the modulations observed in a signal. In this way, a slow physical control model is added to the physical modelling of the vibration mechanism. This control model has a spatial or mechanical interpretation in an imaginary world.
Objectives:	At the end of this course, you: ▪ are able to analyse, process and re-synthesize a sound by using an advanced spectral abstraction; ▪ are able to work practically with Physical Models; ▪ are able to implement a Physical Model in various software environments.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Signals and Systems 1 and 2, Analysis/Re-synthesis
Teachers:	Peter Pabon
Credits:	6 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	A practical assignment on the development of a large-scale physical model and a demonstration of its interactive control.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Peter Pabon (pabon@koncon.nl)

INTRODUCTION TO ELECTRONICS

SO-MP	**Introduction to Electronics**
Osiris course code:	KC-SO-MP
Course content:	This is a workshop-style course, during you work on three practical electronic measurements as an introduction to basic electronics. You will encounter terms like current, voltage, phase, frequency, amplitude, gain and different waveforms (i.e. sinewave, squarewave, sawtooth). You will learn about the basics of assembling your own circuit and the use of an oscilloscope, multi-meter and function generator. You will work together in small groups during three sessions.
Objectives:	At the end of this course, you: ▪ are able to interpret basic electronic circuits; ▪ are able to reproduce and create simple electronic devices; ▪ can interface sensors and actuators with existing computer systems; ▪ understand what is essential with the implementation of electronics: safety, stability and clear documentation.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	6 lessons of 90 minutes each
Prior qualifications/ prerequisites:	–
Teachers:	Lex van den Broek
Credits:	3 ECTS
Literature:	–
Work form:	Practicals
Assessment:	The student has to write 2 measurement reports and has to build his/her own small electronic device or instrument.
Grading system:	Final result: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Lex van den Broek (lex@koncon.nl)

DIGITAL STUDIO INTRODUCTION

SO-ISD	**Digital Studio Introduction**
Osiris course code:	KC-SO-ISD
Course content:	The basic tools for contemporary electroacoustic music production are a computer, a digital mixing desk and multiple loudspeakers. This course provides an introduction to working with a digital mixing desk and a number of standard sound production computer programs. Typical practices in a digital studio are explained, such as music production, recording and live performance.
Objectives:	At the end of this course, you: ▪ have working knowledge of the components in a digital studio setup; ▪ are able to work in a digital studio independently.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	120 minutes per week during 6 weeks at the beginning of the academic year
Prior qualifications/ prerequisites:	–
Teachers:	Johan van Kreij
Credits:	3 ECTS
Literature:	Online documentation
Work form:	Group lesson
Assessment:	Active participation and regular small assignments.
Grading system:	A final pass/fail based on the assessment.
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Johan van Kreij (jvkr@koncon.nl)

MUSIC CONTROLLERS WORKSHOP: DESIGN AND REALISATION

SO-MCW	**Musical Controllers Workshop: Design and Realisation**
Osiris course code:	KC-SO-MCW
Course content:	This course describes various ways of working with sensors and how signals from such sensors can be interpreted and used. It also covers insights into the necessary electronic components and the software related to musical control. A number of conversion methods (from sensor output into digital representation) are introduced, as well as the applicable data communication protocols. Before a computer-sensor setup can be taken on stage, some ideas about performative aspects will be developed. The final product of this workshop is a piece of hardware, which is designed to control musical parameters of a computer program.
Objectives:	At the end of this course, you: ▪ can design and realise a basic musical controller or electronic instrument; ▪ know what types of sensors are available and how they are used; ▪ can outline strategies for bridging physical gestures and musical control signals.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Johan van Kreij
Credits:	7 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and a project realisation with documentation.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Johan van Kreij (jvkr@koncon.nl)

MUSICIANSHIP SKILLS

MUSIC THEORY 1+2

SO-AML1 / SO-AML2	**Music Theory 1+2**
Osiris course code:	KC-SO-AML1 / KC-SO-AML2
Course content:	This two-year music theory course is specifically designed for Sonology students. It deals with various aspects of basic music theory, such as the fundamentals of diatonic harmony, analysis and form. A particular characteristic of the course is that theory is always put into practice, so that you immediately apply the material you are dealing with. This can for example be done through listening, singing and composing. You can bring music examples of your own interest, which are used as study or discussion material.
Objectives:	At the end of this course, you: ▪ have knowledge of elementary music theory, which allows you to work together with instrumental musicians; ▪ have the basic tools and skills to further develop your music theory knowledge independently.
Type of course:	Compulsory
Level:	Bachelor I–II
Duration:	105 minutes per week, 30 weeks per academic year
Prior qualifications/ prerequisites:	The student should finish Music Theory 1 before being allowed to enter Music Theory 2.
Teachers:	Santo Militello
Credits:	4 ECTS per academic year
Literature:	Hand-outs from teacher, repertoire brought by students
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions. 80% attendance is required.
Grading system:	Attendance sufficient/insufficient
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Santo Militello (militellos@koncon.nl)

APPLIED MUSIC THEORY 1

SO-AML	**Applied Music Theory 1**
Osiris course code:	KC-SO-AML3
Course content:	The course focuses on bridging the concepts and content of instrumental music and those from the field of computer/electronic music. The understanding of traditional music and homogenisation of the diverse musical backgrounds of each student is encouraged through analysis, composition, ear training and music theory. Compositional concepts from composers as diverse as Guillaume de Machaut, Arnold Schoenberg, Igor Stravinsky, Anton Webern and Alvin Lucier (among others) will be discussed. The main goal is to become familiar with notated music and to learn not only to comprehend that language but also to perform it. In this way, and through the interaction with instrumentalists from other departments, the performance of works for instruments and electronics will be encouraged.
Objectives:	At the end of this course, you: ▪ have acquired a closer relation to instrumental music, its notation and construction; ▪ can apply diverse approaches of musical analysis; ▪ have developed skills to assist in the performance of mixed-media works.
Type of course:	Compulsory
Level:	Bachelor III
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Music Theory 1 and 2
Teachers:	Trevor Grahl
Credits:	4 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions, the realisation of 3 compositional assignments and the performance of an existing work in a public presentation.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Trevor Grahl (t.grahl@koncon.nl)

APPLIED MUSIC THEORY 2

SO-AML	**Applied Music Theory 2**
Osiris course code:	KC-SO-AML4
Course content:	The main goal of this course is to expose and familiarise you with diverse approaches to the structuring of a music/sound composition, taking as a fundamental basis the analysis of significant landmarks of 20th-century music. The intended outcome of this analytical work is to arrive at an awareness of the essential link between procedures, components and compositional strategies, and a resulting musical form. This awareness is as well fostered through your own practice, within which you are guided towards the realisation of a musical work that articulates micro and macro levels of organisation. Works and strategies of composers like Anton Webern, György Ligeti, Helmut Lachenmann, Salvatore Sciarrino or Mathias Spahlinger, among others, are dealt with. The dialogue and interaction between the worlds of instrumental music and electronic sound production are encouraged and explored.
Objectives:	At the end of this course, you: ▪ are able to compose of a piece for mixed media, comprising simultaneous acoustic and electronic sources; ▪ understand how the articulation of a musical form affects the listener´s perception and are able to organise the components involved within a composition accordingly; ▪ have incorporated analytical tools to understand the internal organisation of a non-tonal work.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	1st semester, 120 minutes per week, 15 weeks
Prior qualifications/ prerequisites:	Music Theory 1 and 2, Applied Music Theory 1
Teachers:	Gabriel Paiuk
Credits:	2 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	Students are assessed on the basis of their active contribution to the group sessions and the composition and realisation of a work for mixed media. 80% attendance is required.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Gabriel Paiuk (paiukg@koncon.nl)

LIVE ELECTRONIC MUSIC

SO-LEM	**Live Electronic Music**
Osiris course code:	KC-SO-LEM
Course content:	The aim of this course is to put improvisation with electronic musicians and traditional instrumentalists into practice. Various kinds of improvisation are analysed, and the ways that electronic processes have influenced thoughts about improvisation are discussed. At some point, the group will be split up into smaller improvising groups. A final presentation will be organised in the form of a concert at the end of the course.
Objectives:	At the end of this course, you: ▪ know the patterns that underlie improvisation, specifically those of the genre that makes use of electronic means; ▪ are able to improvise through electronic means, or by combining instrumental improvisation with electronics; ▪ are able to organise a concert presentation within a team setting.
Type of course:	Compulsory, also available as an elective
Level:	Bachelor III
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Johan van Kreij
Credits:	6 ECTS
Literature:	Reading and listening material will be provided
Work form:	Group lesson
Assessment:	During the second semester, students work on group assignments, leading to a public final presentation at a venue outside of the conservatoire.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Johan van Kreij (jvkr@koncon.nl)

HISTORY OF CONTEMPORARY MUSIC COMPOSITION

SO-HCMP	**History of Contemporary Music Composition**
Osiris course code:	KC-SO-HCMP
Course content:	This course gives you an opportunity to explore in detail many of the main currents and counter-currents of thought and practice in composed music since the Second World War. We will discuss the aesthetics, the compositional techniques and the career histories of many of the most influential artists who came to prominence in these decades. The ways in which western compositional traditions have enriched themselves through encounters with other art forms, non-traditional notations, and with jazz, various forms of popular music, electronic music and the music of other traditions, will be important themes throughout. We will look at the writing and the scores of a range of significant creative musicians from the late 1940s to the present and listen closely to recordings of their work.
Objectives:	At the end of this course, you: ▪ have an overview of the main currents in music from the late 1940s to the present; ▪ have studied the scores and recordings of representative post WO II repertoire; ▪ are able to communicate about this with various audiences at various levels.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2nd semester, 15 weeks, 120 minutes per week
Prior qualifications/ prerequisites:	Music Theory 1 and 2, Applied Music Theory 1 and 2
Teachers:	Gabriel Paiuk and guests
Credits:	2 ECTS
Literature:	t.b.c.
Work form:	Group lesson
Assessment:	At the end of the semester, you need to write a critical essay based on resources provided by the teacher. 80% attendance is required
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Gabriel Paiuk (paiukg@koncon.nl)

ACADEMIC SKILLS

WRITING SKILLS

SO-WS	**Writing Skills**
Osiris course code:	KC-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 their 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: ▪ are able to work 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 (masters or bachelor's level); ▪ are better able to prepare for formal presentations as well as able to write texts such as grants, biographies, programme notes, reviews and other written texts related to your work.
Type of course:	Compulsory (elective for bachelor III or IV composition students)
Level:	Bachelor IIII
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.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Graham Flett (flettg@koncon.nl)

SONOLOGY COLLOQUIUM PARTICIPATION

SO-COLQ	**Sonology Colloquium Participation**
Osiris course code:	KC-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 Bachelor of Music in Sonology hold regular consultations.
Objectives:	At the end of this course, you: ▪ have an overview of a broad range of current developments in electroacoustic music composition, computer programming and sound art; ▪ are able to reflect and discuss topics in the field of electroacoustic music and sound art with peers.
Type of course:	Compulsory
Level:	Bachelor I–IV
Duration:	2 semesters, 120 minutes per week
Prior qualifications/ prerequisites:	The student should finish each year of this course before being allowed to enter the next.
Teachers:	Richard Barrett, Bjarni Gunnarsson, Johan van Kreij, Peter Pabon, Kees Tazelaar
Credits:	2 ECTS per academic year
Literature:	
Work form:	Group lesson
Assessment:	Active participation in discussions and 80% attendance is required.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

SONOLOGY COLLOQUIUM PRESENTATION

SO-CP	**Sonology Colloquium Presentation**
Osiris course code:	KC-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 Bachelor of Music in Sonology hold regular consultations.
Objectives:	At the end of this course, you: ▪ are able to give a coherent public presentation of your work and ideas; ▪ are able to answer questions and discuss matters arising from the presentation with peers.
Type of course:	Compulsory
Level:	Bachelor IV
Duration:	1 hour
Prior qualifications/ prerequisites:	The student should finish each year of this course before being allowed to enter the next.
Teachers:	Richard Barrett, Bjarni Gunnarsson, Johan van Kreij, Peter Pabon, Kees Tazelaar
Credits:	3 ECTS
Literature:	–
Work form:	Group lesson
Assessment:	Content and quality of the presentation and participation in the discussion.
Grading system:	Numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Bjarni Gunnarsson (gunnarssonb@koncon.nl)

MUSICIANSHIP SKILLSNEW ARTS AND MUSIC THEORIES

SO-NAMT	**New Arts and Music Theories**
Osiris course code:	SO-NAMT
Course content:	This course is offered to all first-year bachelor's students of ArtScience, Composition and Sonology. It is aimed to nurture an awareness of the possibilities of reciprocal expansion that exist between the domains of theory and artistic practice. The course tackles areas of enquiry that traverse both the substrate of artistic practice and theoretical research, articulated in thematic segments throughout the year. These segments comprise questions on the nature of: Language, Materiality, Media and Technology, Sensation and Affect, Ecology, Culture and the Collective. These thematic axes promote the familiarisation of the students with recent as well as historical theoretical tools, through an exposure to texts and artistic practices sourced in different traditions and knowledge disciplines. The course includes the participation of a substantial number of guest teachers coming from diverse areas and institutions across the Netherlands (and beyond) including Musicology, Art History, Media Theory, Performance Studies, Cultural Critique as well as art practitioners. The course aims to foster the receptiveness of students for open-ended and transdisciplinary explorations in which the role of histories and models of thought become inherent in the artistic process.
Objectives:	At the end of this course, you: ▪ have knowledge and the ability to discuss a wide range of approaches that inform contemporary thought within and in relation to artistic practice.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	120 minutes per week during two semesters, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	David Dramm, Eric Kluitenberg, Gabriel Paiuk and guests
Credits:	3 ECTS
Literature:	t.b.a.
Work form:	Group lesson
Assessment:	The student has to produce a brief essay (ca. 1200 words) on a topic of choice, showing the intention to develop an investigative a critical stance.
Grading system:	Essay: pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Gabriel Paiuk (paiukg@koncon.nl)

PROFESSIONAL PREPARATION

FIRST YEAR FESTIVAL

AL-FYF	**First Year Festival (FYF)**
Osiris course code:	KC-AL-FYF
Course Content:	The First Year Festival (FYF) has two main goals: 1. It helps you build a broad network of fellow students; 2. Making a smooth start at the Royal Conservatoire. The First Year Festival introduces new students to the Royal Conservatoire and its practical, educational, creative, social and artistic possibilities. During a full week of music making, attending lectures, cooperating and exploring future educational opportunities, the festival engages you right from the start. The festival consists of daily rehearsals with the First Year Choir, as well as many workshops, lectures, meetings and performances.
Objectives:	At the end of this course, you: ▪ know your way around the Royal Conservatoire; ▪ have started to build your network of fellow students from all departments; ▪ are well-informed about your study programme; ▪ have gained greater awareness of what is required to be a successful student; ▪ know how to protect your ears; ▪ have gained insight into how the Royal Conservatoire could contribute to reaching your goals as a professional musician.
Type of course:	Compulsory
Level:	Bachelor I
Duration:	One week full-time
Teachers:	A large variety of teachers from the Royal Conservatoire and from the professional field related to your future practice.
Credits:	2 ECTS
Work forms:	Plenary sessions, workshops, group lessons
Assessment:	A minimum of 80% attendance
Sort of grading:	Attendance sufficient/insufficient
Language:	English
Schedule:	t.b.a.
Time:	Monday to Friday during the first week of the academic year
Venue:	Royal Conservatoire, The Hague
Information:	Festival brochure and http://intranet.koncon.nl/firstyears
Contact:	festival@koncon.nl

TUTORING AND PORTOFOLIO

AL-PF	**Tutoring and Portfolio**
Osiris course code:	KC-AL-PF
Course content:	First-year students entering the Royal Conservatoire are assigned a tutor. You remain with a tutor for the first three years of the bachelor's course. The tutor's role is to help you to reflect on your study and to monitor your progress. This is accomplished in two ways: § By conducting consultations with students individually or in small groups. § By supervising the development of a personal portfolio and discussing it during individual meetings. You are required to keep a personal record of your study progress from the first year until the end of the programme. This portfolio helps you to steer your personal and artistical development. It may contain materials relating to the various activities you undertake and any items you produce during the programme, which can range from a recording or an analysis of a performance, to a report for an elective subject or a personal evaluation of how your studies are progressing. It is important to choose a form that suits you so that the portfolio is something that you can identify with and are happy to work on. In other words, the portfolio should not be regarded as an additional burden, but as a study aid that could eventually serve as a professional calling card. For students in the performance and Art of Sound departments, the portfolio lays the groundwork for Preparation for Professional Practice, a course in the fourth year. More information can be found on intranet.
Objectives:	At the end of this course, you: ▪ are able to reflect on your study progress and communicate about it with others; ▪ are able to reflect on your personal and artistic growth by verbalizing it, in communication with others and through creating a professional portfolio; ▪ are able to reflect on your role, task and position in the profession as well as in society, and can contribute to it.
Type of course:	Compulsory
Level:	Bachelor I–III
Duration:	Group meetings: to be decided by the tutor Private meetings: by appointment
Prior qualifications/ prerequisites:	You need to finish each year of this course before being allowed to enter the next.
Teachers:	Art of Sound: Bert Kraaijpoel Composition: Gabriel Paiuk Conducting: Manon Heijne, Ana Sanchez, Julia Stegeman Early Music: Daniël Brüggen, Susan Williams, Pete Saunders Jazz: Carolien Drewes, Manon Heijne, Jarmo Hogendijk, (Yvonne Smeets) Theory of Music: Manon Heijne Vocal Studies Classsical Music: Carolien Drewes, Manon Heijne, Ana Sanchez, Julia Stegeman Vocal Studies Early Music: Daniel Brüggen, Pete Saunders

	Sonology: Gabriel Paiuk Classical wood winds: Ana Sanchez, Carolien Drewes, Pietia van Proosdij Classical brass: Ana Sanchez Classical strings: Carolien Drewes, Noa Frenkel, Roger Regter Classical percussion: Julia Stegeman Classical keyboard: Julia Stegeman Classical plucked instruments: Julia Stegeman, Pietia van Proosdij Organ: Roger Regter
Credits:	2 ECTS per academic year
Literature:	The 'Document studievoortgang en portfolio' (NL) and 'Document study progress and portfolio' (EN) can be found on intranet.
Work form:	Group and individual meetings
Assessment:	Every year the tutor will assess the progress of the assigned students on the basis of the following criteria: • Evidence that the student has monitored and improved his personal development in a professional, autonomous and critical manner. • The student has demonstrated this in the portfolio and the individual meetings with his tutor. If your participation in the course and the development of your portfolio are regarded as sufficient, you will receive two credit points. NB It is not the quality of the portfolio itself, but the way in which you have used it as a 'reflective tool' that is assessed.
Grading system:	Pass/fail
Language:	English or Dutch
Schedule:	During the first year the tutors will organise a number of group sessions. Both you and your tutor can take the initiative for a meeting. Consultations with the tutor are confidential, but the tutor will inform the Head of Department in the event of study delays.
Time:	Two group meetings and two 2 appointments with your tutor (one in November/December and one in April)
Venue:	Royal Conservatoire
Information:	Paul Deneer – tutoring coordinator (p.deneer@koncon.nl)

COMMUNICATION SKILLS FOR CREATIVE ARTISTS

ED-CDCS	**Communication Skills for Creative Artists**
Osiris course code:	KC-ED-CDCS
Course content:	This module introduces you to basic principles of presenting yourself in an educational context. More specifically, you are introduced to the basics of leading group work. You will also will explore various ways to communicate about your own practice as creative musicians in different educational contexts. You are expected to engage convincingly in all the following activities: - circle exercises as warm-ups, to train musical skills and to generate musical material; - improvisation as a group, generic activity; developing your own musical voice within the group; organically building on the ideas of peer group members; - group composition skills; conceiving and creating ideas within a collaborative environment; - the psychology of leadership; the different levels of facilitating and guiding within a team; leading and being lead.
Objectives:	At the end of this course, you: ▪ are able to demonstrate an understanding of and a capacity for music-based activity in a variety of ensemble performance contexts and in facilitating creative group work, both within exclusively musical contexts and in various cross-arts, intercultural and community situations; ▪ have experienced various aspects of leadership in relation to the facilitation of ensemble and/or group participation in specialist and non-specialist environments and are able to put these into practice; ▪ through the use of your imagination, intuition and emotional understanding, are able to demonstrate an ability to make decisions in a variety of contexts and situations; ▪ are able to demonstrate effective communication and social skills for introducing any music, including your own, to various audiences; ▪ are able to demonstrate both referential and experiential ways of communicating about (your own) music with various audiences; ▪ are able to demonstrate an ability to engage with a variety of musical styles and genres.
Type of course:	Compulsory
Level:	Bachelor III
Duration:	Weekly lessons of two hours, 2nd semester, 15 weeks
Prior qualifications/ prerequisites:	-
Teachers:	Renee Jonker
Credits:	2 ECTS
Literature:	Animarts, *The Art of Animateur: An investigation into the skills and insights* Booth E. *The Music Teaching Artist's Bible.* Oxford University Press New York (ISBN 978-0-19-536839-0) (2009) Renshaw P. *In Tune* (to be published soon)
Work form:	Laboratory, field study, tutorial, individual study

Assessment:	Based on peer-review of the student's presentations during the course of the programme, the student has to write a self-reflective report.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	Studio Tarwekamp – for further details, see ASIMUT schedule
Information:	Renee Jonker (r.jonker@koncon.nl).

SOUND ENGINEERING IN ELECTRONIC MUSIC 1

SO-GLT	**Sound Engineering in Electronic Music 1**
Osiris course code:	KC-SO-GLT
Course content:	The programme covers the fundamental principles of sound design in theory and practice, subdivided into the 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, which take place five times a year, under the teacher's guidance. This includes the preparations for sound amplified performances, communication and technical lists. Each concert involves group 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: ▪ are able to realise a simple sound reinforcement design, based on artistic requirements, acoustical and architectural circumstances and technical possibilities. ▪ are able to take care of the technical realization of a small-scale concert with compositions for both acoustic and electronic instruments.
Type of course:	Compulsory
Level:	Bachelor II
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	–
Teachers:	Paul Jeukendrup
Credits:	4 ECTS
Literature:	
Work form:	Group lesson
Assessment:	Two written tests, weight 50% each; both tests must be concluded with a positive result.
Grading system:	Test 1: numeric Test 2: numeric
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Paul Jeukendrup (p.jeukendrup@koncon.nl)

SOUND ENGINEERING IN ELECTRONIC MUSIC 2

SO-GLT	**Sound Engineering in Electronic Music 2**
Osiris course code:	KC-SO-GLT
Course content:	The programme includes a basic training in listening skills, performed in large groups and a basic training in mixing, performed in small groups (2 or 3 students). The listening skills training prepares for the mixing training and focuses on hearing and recognising frequency bands with a resolution of 1 octave according to the ISO 266 preferred frequencies. The mixing training concentrates on an analysis of the process of decision-making during mixing, whereby all decisions are based on a basic musical analysis of the musical material. The process of mixing is subdivided in the 4 work-processes 'level balance', 'spectral balance', 'dynamics' and 'spatial properties', with the emphasis on the first two work-processes.
Objectives:	At the end of this course, you: ▪ are able to identify frequency bands (gain + 12 dB, Q = 2) in the audible spectrum with an accuracy of ± 1 octave; ▪ are able to perform a basic mix from a simple multi-track recording, based on the relation between the musical material and the sounding result.
Type of course:	Compulsory
Level:	Bachelor III
Duration:	2 semesters, 120 minutes per week, 30 weeks
Prior qualifications/ prerequisites:	Sound Engineering in Electronic Music 1
Teachers:	Paul Jeukendrup
Credits:	4 ECTS
Literature:	
Work form:	Group lesson
Assessment:	A practical assignment.
Grading system:	Pass/fail
Language:	English
Schedule, time, venue:	See ASIMUT schedule
Information:	Paul Jeukendrup (p.jeukendrup@koncon.nl)

EDUCATIONAL SKILLS 1

ED-SOEV	**Educational Skills 1**
Osiris course code:	KC-ED-COEV KC-ED-SOEV
Course content:	In this course, you learn about the professional field you are going to enter (or have perhaps already entered). Educational services, music schools, projects and any activity where music is required can be covered. You will also gain insight into how to study independently, how you have been taught and how this has influenced your music making, as well as your current status in terms of composing and studying.
Objectives:	At the end of this course, you: ▪ can reflect on your studying; ▪ have insight into teaching streams you have encountered; ▪ have an overview of the professional field of music education.
Competences and roles*:	You have discussed the following competences and roles of teachers in the field of music education: 5.1 Teachers continuously reflect in and on their teaching and their personal philosophy and vision for music education in order to improve their practice. 5.2 Teachers identify, respond and adapt to developments within the profession and take responsibility for identifying and meeting their own professional development needs. 6.1 Teachers have an awareness of their own fits into the broader musical and educational contexts of the school, community and society, and acts as advocates for music education. *Adapted from the handbook *'Instrumental and vocal teacher education: European Perspectives' by the Polifonia Working Group for Instrumental and Vocal Music Teacher Training (INVITE)*
Type of course:	Compulsory
Level:	Bachelor II
Duration:	Weekly lessons, 28 contact hours, 1st semester
Prior qualifications/ prerequisites:	-
Teachers:	Composition: Maja Matic Sonology: Irene Ruiperez Canales
Credits:	4 ECTS
Literature:	
Work form:	Group lesson
Assessment:	Compulsory attendance: 80%. Assignments given in the lessons should be delivered to the teacher before the end of the module.
Grading system:	Pass/fail
Language:	English or Dutch
Schedule, time, venue:	See ASIMUT schedule
Information:	Julia Stegeman (j.stegeman@koncon.nl) & Marijke van den Bergen (m.vdbergen@koncon.nl)

MINORS AND ELECTIVES

For the course descriptions of all minors and electives, please see the **Curriculum Handbook Bachelor Minors and Electives** on www.koncon.nl/electives.

APPENDIX 1: ASSESSMENT CRITERIA BACHELOR 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.