AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAMME IN SOUND AND MUSIC COMPUTING, 2014, COPENHAGEN

MASTER OF SCIENCE (MSC) IN ENGINEERING
COPENHAGEN

Link to this studyline

Link(s) to other versions of the same line:

Curriculum for the Master's Programme in Sound and Music Computing, 2017, Copenhagen

TABLE OF CONTENTS

§ 1: PREFACE

Pursuant to Act 367 of March 25, 2013 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's programme in Medialogy is stipulated. The programme also follows the Framework Provisions and the Examination Policies and Procedures for the Faculties of Engineering and Science.

§ 2: BASIS IN MINISTERIAL ORDERS

The Master's program is organised in accordance with the Ministry of Science, Innovation and Higher Education's Order no. 1520 of December 16, 2013 on Bachelor's and Master's Programs at Universities (the Ministerial Order of the Study Programs) and Ministerial Order no. 670 of June 19, 2014 on University Examinations (the Examination Order). Further reference is made to the Admission Order and the Grading Scale Order.

§ 3: CAMPUS

The programme is offered in Copenhagen.

§ 4: FACULTY AFFILIATION

The Master's programme falls under Faculty of Engineering and Science, Aalborg University.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under Study Board of Media Technology

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the external examiners corps on Nationwide engineering examiners/Electronics, IT and Energy (Electromagnetic direction)

§ 7: ADMISSION REQUIREMENTS

Applicants with a legal right of admission (retskrav)

None

Applicants without legal right of admission

- Bachelor of Science in Computer Science, Aalborg University
- Bachelor of Science in Electronic Engineering and IT, Aalborg University
- Bachelor of Science in Software, Aalborg University
- Bachelor of Science in Engineering Psychology, Aalborg University
- Bachelor of Science in Internet Technologies and Computer Engineering, Aalborg University
- Bachelor of Science in Electrical Engineering, Technical University of Denmark
- Bachelor of Science in Network Technology and IT, Technical University of Denmark
- Bachelor of Science in Mathematics and Technology, Technical University of Denmark
- Bachelor of Science in Software Technology, Technical University of Denmark
- Bachelor of Science in Engineering (Mechatronics), University of Southern Denmark
- Bachelor of Engineering in Information Technology, Aahus University
- Bachelor of Engineering in Electronic Engineering, Aarhus University
- Bachelor of Science in Medialogy, Aalborg University

Students with another Bachelor's degree, upon application to the Board of Studies, will be admitted after a specific academic assessment, if the applicant is deemed to have comparable educational prerequisites. The University can stipulate requirements concerning conducting additional exams prior to the start of study.

§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH

The Master's programme entitles the graduate to the Danish designation Civilingeniør, cand.polyt. i lyd- og musikteknologi. The English designation is: Master of Science (MSc) in Engineering (Sound and Music Computing).

§ 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS

The Master's programme is a two year, research-based, full-time study programme. The programme is set to 120 ECTS credits.

§ 10: RULES CONCERNING CREDIT TRANSFER (MERIT), INCLUDING THE POSSIBILITY FOR CHOICE OF MODULES THAT ARE PART OF ANOTHER PROGRAMME AT A UNIVERSITY IN DENMARK OR ABROAD

The Study Board can approve successfully completed (passed) programme elements from other Master's programmes in lieu of programme elements in this programme (credit transfer). The Study Board can also approve successfully completed (passed) programme elements from another Danish programme or a programme outside of Denmark at the same level in lieu of programme elements within this curriculum. Decisions on credit transfer are made by the Study Board based on an academic assessment. See the Joint Programme Regulations for the rules on credit transfer.

§ 11: EXEMPTIONS

In exceptional circumstances, the Study Board study can grant exemption from those parts of the curriculum that are not stipulated by law or ministerial order. Exemption regarding an examination applies to the immediate examination.

§ 12: RULES FOR EXAMINATIONS

The rules for examinations are stated in the Examination Policies and Procedures published by the faculty on their website.

§ 13: RULES CONCERNING WRITTEN WORK, INCLUDING THE MASTER'S THESIS

In the assessment of all written work, regardless of the language it is written in, weight is also given to the student's formulation and spelling ability, in addition to the academic content. Orthographic and grammatical correctness as well as stylistic proficiency are taken as a basis for the evaluation of language performance. Language performance must always be included as an independent dimension of the total evaluation. However, no examination can be assessed as 'Pass' on the basis of good language performance alone; similarly, an examination normally cannot be assessed as 'Fail' on the basis of poor language performance alone.

The Study Board can grant exemption from this in special cases (e.g., dyslexia or a native language other than Danish).

The Master's Thesis must include an English summary (or another foreign language: French, Spanish or German upon approval by the Study Board). If the project is written in English, the summary must be in Danish (The Study Board can grant exemption from this). The summary must be at least 1 page and not more than 2 pages (this is not included in any fixed minimum and maximum number of pages per student). The summary is included in the evaluation of the project as a whole.

§ 14: REQUIREMENTS REGARDING THE READING OF TEXTS IN A FOREIGN LANGUAGE

It is assumed that the student can read academic text and use reference works, etc., in English.

§ 15: COMPETENCE PROFILE ON THE DIPLOMA

The following competence profile will appear on the diploma:

A Candidatus graduate has the following competency profile:

A Candidatus graduate has competencies that have been acquired via a course of study that has taken place in a research environment.

A Candidatus graduate is qualified for employment on the labour market based on his or her academic discipline as well as for further research (PhD programmes). A Candidatus graduate has, compared to a Bachelor, developed his or her academic knowledge and independence so as to be able to apply scientific theory and method on an independent basis within both an academic and a professional context.

§ 16: COMPETENCE PROFILE OF THE PROGRAMME

The mission of the Master's Programme in Sound and Music Computing is to train the professionals that will push forward the sound and music technologies of the new information society. By combining practical and theoretical approaches in topics such as computational modeling, audio engineering, perception, cognition, and interactive systems, the programme gives the scientific and technological background needed to start a research or professional career. This programme trains the students on the technologies for the analysis, description, synthesis, transformation and production of sound and music, and on the technologies and processes that support sound and music creation.

The graduate of the Master's programme:

Knowledge

- has in-depth **knowledge** and understanding of issues within the areas of sound and music technology and design
- can **understand** and, on a scientific basis, reflect on the technical, organizational and market drivers in sound and music technology as well as the interplay between technology, market and user issues
- can **analyze** sound and music computing's knowledge, theory, methodologies and practice, and identify scientific issues

Skills

- ability to **synthesize** scientific methods, tools and general skills within the field of sound and music computing
- ability to **evaluate** and select among relevant scientific theories, methods, tools and general skills and, on a scientific basis, advance new analyzes and solutions within the subject areas
- ability to **synthesize** research-based knowledge and discuss professional and scientific problems with both peers and non-specialists
- ability to **synthesize** knowledge in scientific writing: articles, reports, documentation, etc
- ability to **analyze** and select among relevant theories, technologies and methods for development of sound and music technology solutions and services
- an **analyze** different technologies for optimal selectionc
- can **analyze** the research potential or the market, ethical and regulatory framework for application of the technologies

Competencies

- ability to **apply** acquired knowledge in research, innovation and entrepreneurship that can be used to explore and exploit the great potential of new media technologies with an engineering approach
- ability to **synthesize** acquired knowledge creatively and innovatively to identify and propose new opportunities and develop services/solutions, which can empower the users and assist them in solving their current and future tasks on a daily basis
- ability to **synthesize** project work and problem based learning in a global/multicultural environment
- ability to **apply** knowledge to independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility
- ability to **synthesize** knowledge and independently take responsibility for own professional development and specialization
- **apply** acquired knowledge in mediating collaborations and exchange between development- and business-related functions in organizations

§ 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The programme is structured in modules and organized as a problem-based study. A module is a programme element or a group of programme elements, which aims to give students a set of professional skills within a fixed time frame specified in ECTS credits, and concluding with one or more examinations within specific exam periods. Examinations are defined in the curriculum. Each semester has an overall theme, which is reflected in the scope of the (mandatory) course modules and semester projects.

The programme is based on a combination of academic, problem-oriented and interdisciplinary approaches and organized based on the following work and evaluation methods that combine skills and reflection:

- lectures
- classroom instruction
- project work
- workshops
- exercises (individually and in groups)
- teacher feedback
- reflection
- portfolio work

§ 18: OVERVIEW OF THE PROGRAMME

Offered as: 1-professional Study programme: MSc. in Sound and Music Computing, 2014, Copenhagen					
Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method
1 SEMESTER Foundations of SMC					
Foundations of SMC	Project	15	7-point grading scale	Internal examination	Oral exam based on a project
Sound Processing	Course	5	7-point grading scale	Internal examination	Oral exam
Multivariate Statistics and Pattern Recognition	Course	5	7-point grading scale	Internal examination	Written or oral exam
Music Perception and Cognition	Course	5	7-point grading scale	Internal examination	Written or oral exam
2 SEMESTER Music Information Research / Sonic Interaction Research					
2nd semester elective project package Choose 1 project (15 ECTS)	Project	15			
Realtime Interaction and Performance	Course	5	7-point grading scale	Internal examination	Oral exam
Sound and Music Signal Analysis	Course	5	7-point grading scale	Internal examination	Written or oral exam
2nd semester elective courses package Choose 1 course (5 ECTS)	Course	5			
3 SEMESTER Sound and Music Innovation					
Sound and Music Innovation	Project	15	7-point grading scale	Internal examination	Oral exam based on a project
Research in Sound and Music Computing	Course	5	7-point grading scale	Internal examination	Written or oral exam
3rd semester elective courses package	Course	10			

3-4 SEMESTER Option A					
Master's Thesis	Project	50	7-point grading scale	External examination	Oral exam based on a project
3rd semester elective courses package	Course	10			
3-4 SEMESTER Option B					
Master's Thesis	Project	55	7-point grading scale	External examination	Oral exam based on a project
3rd semester elective courses package	Course	5			
3-4 SEMESTER Option C					
Master's Thesis	Project	60	7-point grading scale	External examination	Oral exam based on a project
4 SEMESTER Master´s Thesis					
Master's Thesis	Project	30	7-point grading scale	External examination	Oral exam based on a project

2nd semester elective project package Choose 1 project (15 ECTS)					
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method
Music Information Research	Project	15	7-point grading scale	External examination	Oral exam based on a project
Sonic Interaction Research	Project	15	7-point grading scale	External examination	Oral exam based on a project

2nd semester elective courses package Choose 1 course (5 ECTS)					
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method
Multimedia Programming	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Modelling Physical Systems	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Human Sound Perception and Audio Engineering	Course	5	Passed/Not Passed	Internal examination	Written or oral exam

3rd semester elective courses package					
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method

Multimodal Perception and Cognition	Course	5	7-point grading scale	Internal examination	Written or oral exam
Prototyping and Fabrication Techniques	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Applied Experimental Psychology and Psycho-physics	Course	5	7-point grading scale	Internal examination	Written or oral exam

§ 19: ADDITIONAL INFORMATION

The current version of the curriculum is published on the Board of Studies' website, including more detailed information about the programme, including exams

All students who have not participated in Aalborg University's PBL introductory course during their Bachelor's degree must attend the introductory course "Problem-based Learning and Project Management". The introductory course must be approved before the student can participate in the project exam. For further information, please see the Schools website.

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the Dean of the Technical Faculty of IT and Design and enters into force as of September 2014.

In accordance with the Framework Provisions and the Handbook on Quality Management for the Faculties of Engineering, Science and Medicine at Aalborg University, the curriculum must be revised no later than 5 years after its entry into force.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

Minor editorial changes have been made during the digitalization.