



AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAMME IN URBAN DESIGN CAND.TECH, 2015

MASTER OF SCIENCE (MSC) IN TECHNOLOGY
AALBORG

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Curriculum for the Master's Programme in Urban Design Cand.Tech, 2015

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TABLE OF CONTENTS

§ 1: Preface	4
§ 2: Basis in ministerial orders	4
§ 3: Campus	4
§ 4: Faculty affiliation	4
§ 5: Study board affiliation	4
§ 6: Affiliation to corps of external examiners	4
§ 7: Admission requirements	4
§ 8: The programme title in Danish and English	4
§ 9: Programme specifications in ECTS credits	5
§ 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	5
§ 11: Exemptions	5
§ 12: Rules for examinations	5
§ 13: Rules concerning written work, including the Master's Thesis	5
§ 14: Requirements regarding the reading of texts in a foreign language	5
§ 15: Competence profile on the diploma	5
§ 16: Competence profile of the programme	6
§ 17: Structure and Contents of the programme	8
§ 18: Overview of the programme	8
§ 19: Additional information	10
§ 20: Commencement and transitional rules	13
§ 21: Amendments to the curriculum and regulations	13

§ 1: PREFACE

Pursuant to Act 960 of August 14, 2014 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's programme in Urban Design is stipulated. The programme also follows the Framework Provisions and the Examination Policies and Procedures for the Faculty of Engineering and Science.

Commencement of this curriculum is 1. September 2015.

§ 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 Aalborg.

§ 4: FACULTY AFFILIATION

The Master's programme falls under The Technical Faculty of IT and Design, Aalborg University.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under Study Board of Architecture and Design

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the external examiners corps on Nationwide engineering examiners/Design

§ 7: ADMISSION REQUIREMENTS

Admission to the Master's programme in Urban Design requires a:

- Bachelor of Science (BSc) in Engineering (Architecture and Design), *or*

- Bachelor of Science (BSc) in Techno-Anthropology, *or*

- Bachelor of Science (BSc) in Geography, *or*

- Bachelor of Natural and Cultural Heritage Management, University College of Northern Denmark

All students applying must document English language qualifications comparable to an 'English B level' in the Danish upper secondary school (minimum average grade 02).

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 designation Cand.tech. i urbant design. The English designation is: Master of Science (MSc) in Technology (Urban Design).

The Master's programme entitles the graduate to the designation:
Cand.tech. i urbant design med specialisering i urban arkitektur / Master of Science (Msc) in Technology (Urban Design with specialisation in Urban Architecture)

or

Cand.tech. i urbant design med specialisering i mobiliteter og urbane studier / Master of Science (Msc) in Technology (Urban Design with specialisation in Mobilities and Urban Studies)

§ 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS

The Master's programme is a 2-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 texts in his or her native language as well as in English and use reference works etc. in other European languages.

§ 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 graduate of the Master's programme:

Knowledge

- Must have a broad knowledge of theories, methods and practices associated with the professions of engineering, architecture and design combined with a knowledge of methods and practices associated with the professionalisms of engineering, architecture and design ranging from the design component to the building section to the city as a whole
- Must have advanced knowledge of analytical approaches to technical and societal aspects 'of the profession

Additional specialisation in Urban Architecture

- Must have a broad knowledge of both analogue and digital tools for the development and representation of architecture, design and urban design
- Must have extensive knowledge of the methods and theories of engineering related design applied to the styling of design components, building parts, buildings and entire building developments
- Must have an advanced knowledge of periods, theories, works and principal figures in the history of architecture, urban and general design
- Must develop the knowledge on an international level about urban design in relation to global urban challenges
- Must develop knowledge on an international level about theories and methods concerning measuring, mapping and analysing the built environment in engineering related areas
- Must obtain knowledge concerning traffic systems and urban planning
- Must have 'Research based knowledge at highest international level' about design methods and related theories on the built environment
- Must develop knowledge on an international level about sustainable urban environments and urban ecosystems in relation to the design of cities adapting to change.
- Must be able to understand and reflect on the use of the newest digital tools when simulating, calculating, analysing, and mapping the built environment
- Must have knowledge about design theories related to computational design

Additional specialisation in Mobilities and Urban Studies:

- Extensive knowledge of the social significance of mobilities based on the best international research within the new mobilities turn
- Ability to perform scientific reflection on relevant mobilities theories and methods and to identify scientific problems within development, technology, politics and strategies in relation to mobilities
- Theoretical and methodological knowledge of the social significance and consequences of various forms of mobilities
- Knowledge of theories of science and the methodological foundation of various theories of mobilities
- Ability to understand, explain and reflect on the potentials and limitations of relevant theories and methods of mobilities

Skills

- Must be able to assess theoretical and practical problems and to select and motivate relevant solutions in architecture, design and engineering on the basis of scientific methods
- Must be able to practically apply theories, methods and tools within architecture, industrial design and urban design and to apply skills associated with employment within the fields of engineering and architecture on a scientific basis
- Must be able to communicate disciplinary problems and solutions to both peers and non-specialists as well as to collaborators and users, and to analyse and understand the connections between design, architecture, cities and society as a whole

Additional specialisation in Urban Architecture

- Must be able to demonstrate the ability to make advanced integrated design* proposals at different scales

- Must be able to apply advanced theories and methods in technical fields of knowledge such as planning, construction, technique and climatology
- Must on the highest international level be able to identify and address design challenges in relation to urban development and urban transformation
- Must be able to identify and address engineering related problems in relation to climatic, infrastructural, social and cultural issues relevant to the design of the built environment
- Must be able to use computational tools to map, simulate and visualize relations between environmental, infrastructural and spatial, aesthetic parameters
- Must be able to create design proposals for the built environment and communicate those in both digital models and utilised these in advanced production methods for physical models
- Must be able to plan and calculate the dimensions of basic infrastructural systems such as roads, traffic systems and urban water infrastructures in relation to the design of the built environment
- Must be able to utilise analytical and methodological tools concerning sustainable and infrastructural design
- Integrated Design: Is a methodic process where research and evidence based knowledge is continuously applied and integrated through a succession of engineering, design and architectural based theories and methods throughout the design process of the project.

Additional specialisation in Mobilities and Urban Studies:

- Advanced-level knowledge of scientific methods, techniques and tools pertaining to mobilities and proficiency in relation to employment within the field of mobilities in the public and private sectors as well as in research
- Ability to identify theories, methods, techniques and tools pertaining to mobilities and create research-based solutions within mobilities technology, management and research
- Ability to independently create technologies, policies or strategies aiming at managing the field of mobilities
- Ability to assess theoretical, technological and practical problems in the field of mobilities and to substantiate, prepare and select relevant solutions
- Ability to communicate research-based knowledge and discuss scientific problems in relation to mobilities with peers and non-specialists alike

Competencies

- Must be able to handle and manage complex and development-oriented situations in relation to both study and work
- Must be able with a professional approach independently and with demonstrable overview to participate in professional and interdisciplinary cooperation in the fields of engineering, architecture and design
- Must be able to identify own learning needs and structure own learning in various learning environments with a view to solving new types of problems
- Must possess high-level professional competencies in the intersection between the disciplines of engineering, architecture and design

Additional specialisation in Urban Architecture

- Must have competences on the highest international level to create urban design proposals in relation to urban development and urban transformation
- Must have competencies on the highest international level to create technically sound urban design proposals and plan their realization
- Must have the ability to evaluate projects in the built environment and assess their implementation effects in the city
- Must have the ability to carry out design proposals for urban design on highest international level concerning traffic systems, urban water infrastructures in an changing social and cultural context
- Must have the ability to collect, analyse and document urban data and implement these in strategies for urban development
- Must have competencies to communicate the newest urban design projects and participate in interdisciplinary teams concerning the built environment
- Must be able to communicate scientific knowledge applying international recognized methods within urban design engineering

Additional specialisation in Mobilities and Urban Studies:

- Ability to understand relationships between society and the development of mobilities
- Ability to initiate and implement new cross-disciplinary collaborations and solutions between the multifarious professions affected by recent mobilities research
- Ability to manage complicated and unpredictable situations in relation to work and development requiring new solutions in the field of mobilities

- Ability to contribute to continued professional development and innovation in the field of mobilities

* Integrated Design: Is a methodic process where research and evidence based knowledge is continuously applied and integrated through a succession of engineering, design and architectural based theories and methods throughout the design process of the project

§ 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The programme is structured in modules and organized as a problem-based study. A module is a program 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. 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

Overview of the programme

All modules are assessed through individual grading according to the 7-point scale or Pass/Fail. All modules are assessed by external examination (external grading) or internal examination (internal grading or by assessment by the supervisor only).

Minimum 80 ECTS are evaluated by 7-point scale, and minimum 45 ECTS are evaluated with an external examiner.

§ 18: OVERVIEW OF THE PROGRAMME

Offered as:					
Specialisation: Mobilities and Urban Studies					
Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method
1 SEMESTER					
Analysing Contemporary Mobilities	Project	10	7-point grading scale	Internal examination	Oral exam based on a project
The Mobilities Turn	Course	5	7-point grading scale	Internal examination	Written or oral exam
Integrated Design Theory and Methodology	Course	5	7-point grading scale	Internal examination	Written or oral exam
Mobility Technologies and Infrastructures	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Applied Philosophy of Science and Mobile Methods	Course	5	Passed/Not Passed	Internal examination	Active participation/continuous evaluation
2 SEMESTER					
Three out of four course modules are offered					

Mobilities: Place and Culture	Project	15	7-point grading scale	External examination	Oral exam based on a project
Mobilities: Policy, Branding and Place Management	Course	5	Passed/Not Passed	Internal examination	Active participation/continuous evaluation
Mobilities and Tracking Technologies	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Mobile Culture and Communication	Course	5	7-point grading scale	Internal examination	Active participation/continuous evaluation
Mobilities Design: Concept and Diagram	Course	5	7-point grading scale	Internal examination	Written or oral exam
3 SEMESTER Version C (Mobilities Design and Sustainable Mobilities are electives)					
Sustainable Mobilities	Project	20	7-point grading scale	Internal examination	Oral exam based on a project
Academic Paper Writing	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Mobilities Design: Visualisation and Representation	Course	5	7-point grading scale	Internal examination	Written or oral exam
Sustainable Mobilities Infrastructures and Technology	Course	5	7-point grading scale	Internal examination	Written or oral exam
3 SEMESTER Version D					
Academic Internship	Project	25	7-point grading scale	Internal examination	Oral exam based on a project
Academic Paper Writing	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
3 SEMESTER Version E - Study Abroad*					
3-4 SEMESTER Version F					
Long Master's Thesis	Project	60	7-point grading scale	External examination	Master's thesis/final project
4 SEMESTER					
Master's Thesis	Project	30	7-point grading scale	External examination	Master's thesis/final project

On 3rd semester the student of Mobilities and Urban studies must choose between version C, D, E or F.

*3rd semester Version E: If the student wants to study abroad the Study Board recommends this in the third semester. The student must apply for a preapproval of credit transfer by the Study Board of Architecture and Design.

Offered as:					
Specialisation: Urban Architecture					
Module name	Course type	ECT S	Applied grading scale	Evaluation method	Assessment method

1 SEMESTER					
Urban Transformation and Sustainable Engineering Techniques	Project	10	7-point grading scale	Internal examination	Oral exam based on a project
Climate and Hydrology of the Dense City	Course	5	7-point grading scale	Internal examination	Written or oral exam
Integrated Design Theory and Methodology	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Constructing and Designing Performative Urban Environments	Course	10	Passed/Not Passed	Internal examination	Written or oral exam
2 SEMESTER					
Designing Urban Mobility	Project	15	7-point grading scale	External examination	Oral exam based on a project
Simulating and Modeling Urban Flows	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Theories of the Network City and its Technologies	Course	5	7-point grading scale	Internal examination	Written or oral exam
Site Morphology and Landscape Techniques	Course	5	7-point grading scale	Internal examination	Written or oral exam
3 SEMESTER Version A					
Methodology and Theories of Science	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Project, Design and Construction Management in Architecture and Urban Design	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Global Challenges and Urban Technologies	Project	20	7-point grading scale	Internal examination	Oral exam based on a project
3 SEMESTER Version B					
Methodology and Theories of Science	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Academic Internship	Project	25	7-point grading scale	Internal examination	Oral exam based on a project
3 SEMESTER Version E - Study Abroad*					
3-4 SEMESTER					
Long Master's Thesis	Project	60	7-point grading scale	External examination	Master's thesis/final project
4 SEMESTER					
Master's Thesis	Project	30	7-point grading scale	External examination	Master's thesis/final project

On 3rd semester the student of Urban Architecture must choose between version A, B or E.

*3rd semester Version E: If the student wants to study abroad the Study Board recommends this in the third semester. The student must apply for a preapproval of credit transfer by the Study Board of Architecture and Design.

§ 19: ADDITIONAL INFORMATION

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 spelling and formulation 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 Board of Studies 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. If the project is written in English, the summary must be in Danish. The summary must be at least 1 page and not more than 2 pages. The summary is included in the evaluation of the project as a whole.

[1] Or another foreign language (upon approval from the Board of Studies).

[2] The Board of Studies can grant exemption from this.

Rules concerning credit transfer (merit), including the possibility for choice of modules that are part of another program at a university in Denmark or abroad

In the individual case, the Board of Studies can approve successfully completed (passed) program elements from other Master's programs in lieu of program elements in this program (credit transfer). The Board of Studies can also approve successfully completed (passed) program elements from another Danish program or a program outside of Denmark at the same level in lieu of program elements within this curriculum. Decisions on credit transfer are made by the Board of Studies based on an academic assessment. See the Framework Provisions for the rules on credit transfer.

Rules for examinations

The rules for examinations are stated in the Examination Policies and Procedures published by the Faculty of Engineering and Science on their website.

Exemption

In exceptional circumstances, the Board of Studies 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.

Completion of the Master's programme

The Master's program must be completed no later than four years after it was begun.

Additional information

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

Evaluation formats for the Bachelor and Master programmes under the Board of Studies for Architecture and Design, School of Architecture, Design and Planning.

Please refer to the study guide of the relevant semester and module for further descriptions of the chosen evaluation format.

Project modules

Evaluation format C – Project module with external examination:

The module is assessed by an oral assessment based on written material, typically a jointly prepared (or in exceptional cases, prepared by the individual student) project module report (containing the report/analyzes/posters/drawings/models or similar) where the individual examinee's contribution is not indicated. It is further presumed that the student has regularly and actively participated in evaluation seminars etc..

The module is assessed with external examination.

The written material is submitted in physical form to the semester secretary and also digitally uploaded to the directory assigned by the semester secretary. This according to the current delivery requirements in the Semester Description or Study Guide.

Evaluation format P – Project module with internal examination:

The module is assessed by an oral assessment based on written material, typically a jointly prepared (or in exceptional cases, prepared by the individual student) project module report (containing the report/analyzes/posters/drawings/models or similar) where the individual examinee's contribution is not indicated. It is further presumed that the student has regularly and actively participated in evaluation etc..

The module is assessed with internal examination.

The written material is submitted in physical form to the semester secretary and also digitally uploaded to the directory assigned by the semester secretary. This according to the current delivery requirements in the Semester Description or Study Guide.

Course modules:

Evaluation format L – Course module, oral or written assessment.

Comprising of:

Evaluation format La – Course module, oral assessment:

The module is assessed with an oral assessment based on written material prepared by the individual student such as a portfolio presentation or a (possibly jointly prepared) project module report (containing the report/analyses/posters/drawings/models or similar). It is further presumed that the student has regularly and actively participated in evaluation seminars.

Oral assessment with aid and without preparation time.

The written material must be digitally uploaded to the directory assigned by the semester secretary. This according to the current delivery requirements in the Semester Description or Study Guide.

Evaluation format Lb – Course module, oral assessment:

The module is assessed with an oral exam based on the objectives for the course module. The examinee pulls a known and predefined question, after which the assessment begins.

Oral assessment without aid and without preparation time

Evaluation format Lc – Course module, oral assessment:

The module is assessed with an oral exam based on the objectives for the course module. The examinee pulls a question, gets preparation time, after which the assessment begins.

Oral assessment without aid and with preparation time – aid is allowed in the preparation time.

Evaluation format Ld – Course module, written assessment:

The module is assessed with a written assignment based on central parts of the objectives for the course module through one or more written assignments (including reports/analyses/posters/drawings/models or the like).

A written assignment is developed during the execution of the course module.

The written material must be digitally uploaded to the directory assigned by the semester secretary. This according to the current delivery requirements in the Semester Description or Study Guide.

Evaluation format Le – Course module, written assessment:

The module is assessed with a written assignment based on central parts of the objectives for the course module.

Curriculum for the Master's Programme in Urban Design Cand.Tech, 2015

A written assignment given by the end of the course module and completed within a defined time frame. The written material must be digitally uploaded to the directory assigned by the semester secretary. This according to the current delivery requirements in the Semester Description or Study Guide.

Evaluation format V – Course module:

The module is passed by the student's regular and active participation in teaching/ evaluation seminars or the like and by compliance with the assignment requirements of the course module.

The module is assessed by internal assessment.

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the Dean of the Faculty of Engineering and Science and enters into force as of September 2015.

Students who wish to complete their studies under the previous curriculum must conclude their education by the summer examination period 2016 at the latest, since examinations under the previous curriculum are not offered after this time.

In accordance with the Framework Provisions for the Faculty of Engineering and Science and The Faculty of Medicine at Aalborg University, the curriculum must be revised no later than 5 years after its entry into force. Students who complete their studies under the previous curriculum will however be given the title:

Cand.tech. i urbant design med specialisering i urban arkitektur / Master of Science (Msc) in Technology (Urban Design with specialisation in Urban Architecture)

or

Cand.tech. i urbant design med specialisering i mobiliteter og urbane studier / Master of Science (Msc) in Technology (Urban Design with specialisation in Mobilities and Urban Studies)

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

Minor editorial changes have been made in connection with the digitisation of the study Curriculum