

# CURRICULUM FOR THE MASTER'S PROGRAMME IN LIGHTING DESIGN, 2014

MASTER OF SCIENCE (MSC) COPENHAGEN

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Curriculum for the Master's Programme in Lighting Design, 2017

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## § 1: PREFACE

Pursuant to Act 652 of June 24, 2012 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's programme in Lighting Design is stipulated. The programme also follows the Framework Provisions and the Examination Policies and Procedures for the Faculties of Engineering, Science and Medicine.

### § 2: BASIS IN MINISTERIAL ORDERS

The Master's programme is organized in accordance with the Ministry of Science's Ministerial Order no. 814 of June 29, 2010 on Bachelor's and Master's Programs at Universities (the Ministerial Order of the Study Programs) and Ministerial Order on University Examinations (the Examination Order) with subsequent changes. Further reference is made to the Admission Order and the Grading Scale Order with subsequent changes.

## § 3: CAMPUS

The programme is offered in Copenhagen.

### § 4: FACULTY AFFILIATION

The Master's programme falls under the 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/Design

### § 7: ADMISSION REQUIREMENTS

### Applicants with a legal right of admission (retskrav)

None

### Applicants without legal right of admission

- Bachelor of Science (BSc) in Engineering (Architecture and Design), Aalborg University
- Bachelor of Science (BSc) in Engineering (Sustainable Design), Aalborg University
- Bachelor of Science (BSc) in Medialogy, Aalborg University
- Bachelor of Science (BSc) in IT, Communication and New Media, Aalborg University
- Bachelor of Science (BSc) in Engineering (Electronics and Computer Engineering), Aalborg University
- Bachelor of Science (BSc) in Engineering (Mechatronics), University of Southern Denmark
- Bachelor of Science (BSc) in Digital Media and Design. IT University of Copenhagen
- Bachelor of Science (Bsc) in Engineering (Architectural Engineering), Technical University of Denmark
- Bachelor of Science (BSc)in Engineering (Architectural Design), Aarhus University

Students with another Bachelor's degree may, upon application to the Board of Studies, 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 Cand.scient. i lysdesign. The English designation is: Master of Science (MSc) in Lighting Design.

### § 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

A graduate of the Master's programme has competencies acquired through an educational programme that has taken place in a research environment.

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The graduate of the Master's programme can perform highly qualified functions in the labour market on the basis of the educational programme. Moreover, the graduate has prerequisites for research (a Ph.D. programme). Compared to the Bachelor's degree, the graduate of the Master's programme has developed her/his academic knowledge and independence, so that the graduate can independently apply scientific theory and methods in both an academic and occupational/professional context.

### The graduate of the Master's programme

#### Knowledge

- Must have knowledge of theory based on the highest international research in relation to designing with daylight and electric light in virtual and real space.
- Be able to understand and synthesize at the highest international level the knowledge of light in the subject areas of architecture, media technology and engineering.
- Be able to critically relate the knowledge and understand the importance and potential of artistic and scientific innovation, creativity and entrepreneurship in designing with light
- Be able to identify scientific issues across the subject areas by designing with light

#### Skills

- Must master the lighting design scientific methodologies, tools and general skills related to employment within the field of lighting design
- Must be able to evaluate and select among theories, methods, tools and general skills to create new lighting analyses and solutions
- Must be able to set up new analysis and solution models on a scientific basis
- Must be able to discuss professional issues across disciplinary research-based and practice related knowledge and discuss professional and scientific problems and solutions with both peers and non-specialists

### Competencies

- Must be able to manage work situations and developments that are complex, unpredictable and that require new solutions that can be used to explore and exploit the great potential of new lighting design with a media- and light technological, architectural and sustainable approach
- Must be able to independently initiate and carry out discipline-specific and cross-disciplinary collaboration by combining the art and science of designing with light
- Has the ability to apply acquired knowledge in research, innovation and practice
- Must be able to independently take responsibility for own professional development and specialisation in lighting design

## § 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

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- field studies
- portfolio work

## § 18: OVERVIEW OF THE PROGRAMME

An overview of the ECTS credit breakdown for the various semesters by modules is shown in table form below.

In general, students may choose different options for the semester. The thesis project must have a size of at least 30 ECTS. If the thesis project is initiated in the 3rd semester it is possible to make a larger thesis project of 35, 40, 45, 50, 55 or 60 ECTS. Depending on the ECTS choice, there will be room for 2-3 elective courses on the 3rd semester. The following options may be chosen:

Option 1:

- 3rd semester: 15 ECTS semester project, supplemented by courses
- 4th semester: 30 ECTS thesis project

Option 2:

- 3rd semester: internship in Denmark or abroad, or exchange in Denmark or abroad (in this case mandatory courses on the 3rd semester may be waived)
- 4th semester: 30 ECTS thesis project

Option 3 (Long Master's Thesis project):

• A thesis project of 35, 40, 45, 50, 55 or 60 ECTS, extending over 2 semesters, if necessary supplemented by courses on the 3rd semester in order to achieve the required number of ECTS

Offered as: 1-professional							
Study programme: MSc. in Lighting Design, 2014							
Module name	Course type	ECT S	Applied grading scale	Evaluation method	Assessment method		
1 SEMESTER Seeing the Light							
Seeing the Light	Project	15	7-point grading scale	Internal examination	Oral exam based on a project		
Lighting Fundamentals	Course	5	Passed/Not Passed	Internal examination	Written or oral exam		
Meaning of Light: Light and Space	Project	5	Passed/Not Passed	Internal examination	Written or oral exam		
Rendered Lighting Simulation/CGI	Course	5	Passed/Not Passed	Internal examination	Written or oral exam		
2 SEMESTER Creating with Light: Interactive Lighting							
Creating with light: Interactive Lighting	Project	15	7-point grading scale	External examination	Oral exam based on a project		
Evidence-based Lighting Design	Course	5	Passed/Not Passed	Internal examination	Written or oral exam		

Light and Context	Course	5	Passed/Not Passed	Internal examination	Written or oral exam			
Intelligent Lighting Design	Course	5	Passed/Not Passed	Internal examination	Written or oral exam			
3 SEMESTER								
Lighting Design Innovation								
Lighting Design Innovation	Project	20	7-point grading scale	External examination	Oral exam based on a project			
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			
<u>3rd semester elective courses</u> 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			
<u>3rd semester elective courses</u> 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								
<u>Master's Thesis</u>	Project	30	7-point grading scale	External examination	Oral exam based on a project			

3rd semester elective courses package								
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method			
Creative Innovation and Entrepreneurship	Course	5	Passed/Not Passed	Internal examination	Written or oral exam			
Focus area	Course	5	Passed/Not Passed	Internal examination	Written or oral exam			

### Attention

The 3<sup>rd</sup> semester elective course package actually consists of the 2 listed courses, PLUS a 5 ECTS elective course offered by the Study Board of Media Technology or by other study boards at Aalborg University. The list of approved elective courses is maintained by the Study Board of Media Technology. Students who wish to follow courses not included in the list of approved elective courses, must apply in writing for approval to the Study Board of Media Technology.

## § 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 Faculties of Engineering, Science and Medicine and enters into force as of September 1, 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.