LIGHTING DESIGN

MSC IN LIGHTING DESIGN
NEW NORDIC MASTER’S PROGRAMME

AALBORG UNIVERSITY
COPENHAGEN
RED PAVILION, AN EXPERIMENT IN URBAN LIGHTING, ELECTROTEXTURE LAB AAU.

“WE NEED STUDENTS WHO KNOW HOW TO DESIGN WITH KNOWLEDGE; IT QUALIFIES THE OUTCOME OF THEIR WORK, AND MAKES THEM KEY PLAYERS IN THE IMPROVEMENT OF INDOOR ENVIRONMENTS AND SPATIAL EXPERIENCES”

SIGNE KONGEBRO, PARTNER AND SUSTAINABILITY MANAGER, HENNING LARSEN ARCHITECTS, DENMARK

“LIGHT IS SUCH A POWERFUL FORM GIVER. I LOOK FORWARD TO EXPLORING HOW LIGHT CAN BE USED AS A MULTIDIMENSIONAL DESIGN ELEMENT COMBINING KNOWLEDGE AND METHODS FROM THREE ACADEMIC FIELDS”

ELLEN KATHRINE HANSEN
ASSOCIATE PROFESSOR, CAND. ARCH,
PROGRAMME DIRECTOR OF LIGHTING DESIGN, AALBORG UNIVERSITY,
DEPARTMENT OF ARCHITECTURE, DESIGN & MEDIA TECHNOLOGY
BECOME A FIRST MOVER

By September 2014, you can be among the first students enrolled in the new Nordic 'MSc in Lighting Design' programme.

Lighting technology is undergoing a significant development – including new light sources, intelligent and interactive control of light and the use of interactive screens. To meet the new demands, the MSc in Lighting Design is a unique combination of the fields of media technology, architecture and science of light. Furthermore, it is founded in a special Danish and Nordic tradition of and sensibility to light in our built environment.

The Lighting Design MSc at Aalborg University Copenhagen (AAU-CPh) offers an innovative education with an attractive international profile.

“MEDIA TECHNOLOGIES WERE DEVELOPED FOR OUR VIRTUAL WORLD. THEY ARE NOW PART OF OUR LIVES, AND THEY PENETRATE OUR REAL WORLD THROUGH DIGITAL LIGHTING. THEY REPRESENT A FANTASTIC OPPORTUNITY TO REINVENT OUR LUMINOUS ENVIRONMENT, INDOOR AND OUTDOOR, DURING DAYS AND NIGHTS, WITH ENERGY-EFFICIENT TECHNIQUES.

MARC FONTOYNONT, VICE-PRESIDENT, INTERNATIONAL LIGHTING COMMISSION (CIE), VICE PRESIDENT, EUROPEAN LIGHTING CLUSTER ALLIANCE (ELCA), PROFESSOR, AALBORG UNIVERSITY, NATIONAL BUILDING RESEARCH INSTITUTE
INDUSTRY CALLS FOR NEW LIGHTING DESIGNERS

With an MSc in Lighting Design, you have very good job opportunities. For years, the industry has longed for a Nordic Master’s programme in Lighting Design at a high international level. The results from an extensive study made by the innovation network ‘Danish Light’ in 2010-2012 concludes: “... since there is already a major need for lighting designers, educational programmes should be prepared quickly”.

An MSc in Lighting Design qualifies you for a job in a variety of fields. You can for instance work at consultancy companies within the fields of engineering, architecture, landscape architecture, etc. You can also work in media production companies where lighting designers are needed to make animation films, computer games and other kinds of entertainment. Or you can work in lighting companies and with producers of lighting armatures. Furthermore, lighting designers are needed in the public sector where you can find work at municipalities and in the State Administration as well as in various other fields where light and media is involved.

”THERE IS A MASSIVE NEED FOR MORE LIGHTING SPECIALISTS IN THE BUILDING INDUSTRY! ONE CAN SAY THAT THE WHOLE CONSULTING INDUSTRY LACKS SUFFICIENT EXPERTISE FOR THE DEVELOPMENT OF GOOD LIGHTING SOLUTIONS SEEN AS SOLUTIONS FOR PEOPLE”

ALLAN RUBERG,
HEAD OF ÅF LIGHTING, ÅF - HANSEN & HENNEBERG, DENMARK
Admission to the MSc programme in Lighting Design presupposes a Bachelor’s degree within media technology, engineering (e.g., IT-Communications, building, electronics) or architecture and design.

You will learn about all three fields, but you are not expected to be an expert in all of them. You will, however, design using both daylight and artificial light by combining the three scientific fields in cooperation with your fellow students.

If your BSc does not immediately qualify for the MSc in Lighting Design, your application will be assessed by the Study Board for Media Technology. There will be a limitation in intake and students will be selected according to qualifications and balance between the three academic fields.

“IT’S AN ADVANTAGE THAT THE PROGRAM IS INTERNATIONAL AND INTERDISCIPLINARY AND THUS ENROLLS STUDENTS WITH PROFESSIONAL AND CULTURAL DIVERSITY. THE STUDENTS WILL BE ABLE TO BENEFIT FROM EACH OTHER’S KNOWLEDGE AND THEREBY STRENGTHEN THEIR UNDERSTANDING OF THE COMPLEXITY ONE HAVE TO NAVIGATE WITHIN, WHEN WORKING PROFESSIONALLY WITH LIGHT”

MERETE MADSEN, TEAM LEADER, LIGHTING, GRONTMJ, COPENHAGEN
As a master’s student in Lighting Design at AAU-Cph, you will be working with both daylight and artificial light in the crossing between three scientific fields; media technology, engineering and architecture. The purpose of the programme is for graduates to have an academic-technological as well as process-related approach to lighting design, and not least, a particular sense in designing with light in virtual and physical spaces.

During the programme, you will be working with the interplay between the basic physical elements of light, lighting technologies, digital media, context, human factors, light perception and creative knowledge-based design methods.

1ST SEMESTER: SEEING THE LIGHT

On the 1st semester, you and your group will work on a project under the theme “Seeing the Light”. The purpose is for you to develop competences in designing with light within architecture and design, science and media technology. Through the project, you will learn about the complexity and interplay between these areas when designing with light in real and virtual spaces.

In the courses, you will be working with the fundamental principles for the interplay between light, space, technology and human perception. One subject will be the “experience of light and space”. Real-world studies of the interplay between light, space, texture and the human experience are included in the course “Meaning of Light: Light and Space”. Moreover, during the course “Lighting Fundamentals”, you will learn about the basic photometric and colorimetric terms as well as the processes in perception of the luminous environment. Last, but not least, the course “Rendered Light Simulation” will introduce you to digital simulation of light. This is an important design tool, and you will also be introduced to CGI - Computer-Generated Imagery – which stands for computer-generated special effects. The three courses propose to link subjective observations and the metrics behind as well as the digital simulation of light.

2ND SEMESTER: CREATING WITH LIGHT; INTERACTIVE LIGHTING

In the project work on the 2nd semester, you will be working with interactive lighting design via media technology and human / conceptual interaction. You and your group will work with a problem defined within a specific context and subject which should be solved both functionally, technically and aesthetically.

In the course “Evidence-based Lighting Design”, you will learn about light’s effect on people in relation to our perception of our luminous environment as well as the psychological effect of light. On the 2nd semester, you will also work with aesthetic, functional, legislative and environmental design parameters in relation to light and context. In the course “Intelligent Lighting Design” you will learn about the use of digital media for interactive applications centered around human factors.
3RD SEMESTER: LIGHTING DESIGN INNOVATION

On the 3rd semester, the project work will take up more time than on the previous two semesters. The theme is “Lighting Design Innovation”, and you are going to synthesise knowledge to create innovative solutions within the field of lighting design. You could include example commercial aspects or socio-cultural implications compared to generation of scientific solutions.

At this stage, you are going to form your own approach to the field based on your background and specialisation. The course “Focus Area” is a mini project where you get the chance to work further with methodology and processes in lighting design within a specific subject. In the course “Creative Innovation and Entrepreneurship”, you are given an introduction to the various factors that are in play when starting a business in the media and lighting industry. You also have the possibility to choose an elective course from another programme.

4TH SEMESTER: MASTER’S THESIS IN LIGHTING DESIGN

The 4th semester is the final semester of the Master’s programme in Lighting Design. Here, you will work on your master’s thesis. There are no courses on the 4th semester, because it is dedicated entirely to working on your thesis, which is done either individually or in small groups.
THE TEAM BEHIND THE PROGRAMME

The programme has been developed by an experienced group of active researchers and teachers who are each leaders in the three academic disciplines. Everyone is professionally rooted in different fields of the science of lighting and can thus see the potential in this unique combination of their professional skills in the MSc in Lighting Design.

The team works with an extensive national and international network of customers from industry, consultants and producers as well as with other universities, enabling an exchange of knowledge and students.

To support the multidisciplinary approach, the education is run in close cooperation between the Department of Architecture, Design & Media Technology at the Faculty of Engineering and Science and the National Building Research Institute, both from Aalborg University.
STUDYING AT AAU-CPH

Studying at Aalborg University is not about rote learning. Each semester, you will work closely together with a group of fellow students on a large project. The study method is called problem based project work, or “The Aalborg Model for Problem Based Learning (PBL)”, and is highly recognised both nationally and internationally.

The problem based project work at Aalborg University gives you a unique opportunity to acquire new knowledge and competences at a high academic level in an independent manner. You will also follow more traditional instruction, but the group work at AAU ensures that you build a network from the very start of your studies, and that you will not constantly be sitting on your own buried in books.

The group work adds an academic and social dimension to your study programme and, at the same time, it prepares you for the labour market where cooperation skills are much sought after. In the project work, you will often co-operate with companies, institutions and organisations. When working with real-life problems, you gain experience and possibly good contacts for job seeking after graduation. Our study method is highly valued by industry, and international evaluations (by among others OECD) have defined it as ideal for learning.

STUDY IN COPENHAGEN

Copenhagen is the capital of Denmark and has approximately 2 million inhabitants. As a student at Aalborg University Copenhagen (AAU-Cph), you can enjoy the many cultural and spare time activities that Copenhagen has to offer.

AAU-Cph is located in the south-western part of central Copenhagen known as ‘Sydhavnen’ (South Harbour). You can easily go to AAU-Cph from anywhere in the greater Copenhagen area by bicycle, s-train or bus.

As a student at AAU-Cph, you can influence the study environment and the academic and social student activities, e.g., the Student Society, academic networks or creative groups. Along with the group work, the extracurricular activities can give you a good academic and social network.

At AAU-Cph, you and your fellow students have access to meeting facilities, well-equipped laboratories, library and a canteen with healthy meals. Around campus, you will find small oases and lounge areas where you can meet up with your fellow students and relax or study for the next lecture.
INTERNATIONAL STUDENTS

ACCOMMODATION
As an international student at AAU-Cph, you have several options regarding accommodation. The Accommodation Office is located at the campus in Copenhagen and we kindly offer international students help finding an accommodation in Copenhagen.

Contact info: accommodation@cph.aau.dk

Please be aware that you should start searching for accommodation around 3 months prior to your arrival in Denmark.

THE BUDDY NETWORK FOR INTERNATIONAL STUDENTS
AAU-Cph has a popular ‘Buddy Network’ for international students. A buddy is another current student. He/she is allocated to you as your contact person and will assist you in getting settled during your first couple of weeks in Copenhagen. Your Buddy can help you finding your way around campus and in Copenhagen and give you valuable advice and support. You will meet your Buddy at the International Welcome Day and during your first semester, he/she will participate in different events together with you. That might include communal eating nights, sightseeing, going to the cinema or theatre or game nights.

Inquiries regarding the Buddy Network may be directed at jd@adm.aau.dk.

“LIGHTING SOLUTIONS ARE BECOMING MORE AND MORE COMPLEX, AND THEREFORE, IT IS ALSO POSITIVE THAT THE PROGRAMME IS LINKED TO MEDIA TECHNOLOGY. VISUALISATION AND STAGING OF LIGHT IN INTERACTION WITH THE USER WILL BE A POSITIVE STEP IN THE DIRECTION OF LIGHTING SOLUTIONS OF HIGHER QUALITY. BOTH THE USER AND THE USER INTERFACE PLAY AN BIGGER ROLE TODAY, AND HERE, MEDIA TECHNOLOGY CAN CERTAINLY PROVIDE VALUABLE INPUT”,

ANNE MARIE LUND
BELYSNINGSSPECIALIST (LIGHTING APPLICATION SPECIALIST), PHILIPS LIGHTING, DANMARK
HOW TO APPLY

All international students (including those with Danish Residence Permit) should apply via apply.aau.dk. Here, you will find all the steps, which you need to follow. The application and the required documents should be sent to AAU’s International Office, which is located in Aalborg. They are responsible for screening all applications and enclosures and forwarding them to the relevant professors/study coordinators.

APPLICATION DEADLINES
The deadline for Danish applicants:
1 April when applying for the September intake.

Deadline for applicants with EU/EEA citizenship and applicants from partner/co-operation institutions:
1 May when applying for the September intake.

The deadline for applicants requiring visa:
15 March when applying for the September intake.

TUITION FEE
Students from outside EU/EEA are required to pay tuition fee in order to study at Aalborg University. Students from partner universities outside EU/EEA will not be charged tuition.

EU citizens are nationals from Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Cyprus (applies to the Greek-Cypriot area only), Estonia, Finland, France, Germany, Greece, Holland, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom. EEA citizens are citizens from Liechtenstein, Norway and Iceland.

Nationals of Switzerland are covered by the same rules as EU and EEA citizens.

ENGLISH LANGUAGE REQUIREMENTS
The official language requirements for international students applying to Aalborg University are:
• IELTS (academic test): 6.5
• TOEFL (paper-based): 550
• TOEFL (computer-based): 230
• TOEFL (internet-based): 80
• Cambridge ESOL: C1

NUMERUS CLAUSUS
The MSc in Lighting Design is subject to numerus clausus. In all, AAU offers 40 places. Screening of applications is based on the following criteria in order of priority:

• Grades obtained on completed semesters of the undergraduate programme at the time of assessment.
• The given motivation for studying and the knowledge of the MSc.
• Relevant, verifiable extra-curricular activities, e.g. craftsman training, work experience within IT and/or design, preferably and especially within the building sector or lighting companies.

Students who already have a Master’s degree are normally only eligible for enrolment on a new MSc programme if available places are offered. In case of unusual circumstances, MSc may apply for dispensation. Documentation for the given unusual circumstances must be submitted together with your application.
Inquiries about application, studying in Denmark, life at Aalborg University Copenhagen etc. may be directed at:

**STUDY BOARD FOR MEDIA TECHNOLOGY**
Aalborg University Copenhagen
A. C. Meyers Vænget 15
2450 Copenhagen SV
Denmark
E-mail: mediatech@create.aau.dk

Find more information about the study plan, research, teachers, location and the education in general at our website light.aau.dk

For information regarding the programme, you are also welcome to contact Lecturer Ellen Kathrine Hansen, Programme Director, MSc in Lighting Design E-mail: ekh@create.aau.dk

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light.aau.dk