AALBORG UNIVERSITET

STUDIEORDNINGEN FOR KANDIDATUDDANNELSEN I LYSDESIGN, 2017

CAND.SCIENT.
KØBENHAVN

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

SEEING THE LIGHT

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Develop an understanding and skills in designing with light by synthesizing the fundamental principles of lighting design from the fields of architecture and design, science and media technology. The students must understand the complexity and possibilities that lie in the interplay between the specialized fields. The students will combine the art and science of designing with light in real and virtual spaces.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will obtain the following qualifications:

- **Understand** the fundamentals of light from an architectural, scientific and media technological approach
- **Understand** of lighting design methods and ability to understand light as a holistic tool to create spaces with different purposes
- **Understand** central issues related to how different light designs effect human experience

SKILLS

Students who complete the module will obtain the following qualifications

- Ability to **analyze** and measure, calculate and animate how light relates to the user experience of space and how different designs have different effects and functions
- Ability to **apply** mixed methods to demonstrate design solutions of an aesthetic, technical and functional character
- Ability **toidentify** problems that meet needs, **apply** appropriate goals and **create** solutions

COMPETENCES

Students who complete the module will obtain the following qualifications

- Ability to **create** a light design project in a simple space using mixed methods such as registration, calculations, animations, models, user observations, etc.
- Ability to **analyze** how to choose the appropriate method and technology to suit different dimensions of lighting design problems at different stages in the design process
- Ability to **apply** and synthesize relevant theoretical, methodological and practical knowledge of lighting

Ability to **apply** presentation techniques and communication skills

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work

EXAM

EXAMS

Name of exam	Seeing the Light
Type of exam	Oral exam based on a project

	In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Oral exam with an internal censor based on a scientific paper written in English and a product, illustrating and summarizing the project, a poster in English, and edited worksheets/portfolio documenting project details. The assessment is performed in accordance with the 7-point scale
ECTS	15
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	At opleve lys
Module code	MSNLIDM1171
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

MEANING OF LIGHT: LIGHT AND SPACE

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module covers understanding and synthesizing the fundamental principles of the interplay between light, space, technology, and human perception. Theory on the sensory and qualitative parameters of lighting design is introduced for natural- and electrical lighting, together with examples of lighting techniques. The starting point of this course is the “experience of light and space”. Real world studies of the interplay between light, space, texture, and the human experience are included. The Nordic light and design tradition will be explored to demonstrate a sensibility to designing with light.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Understand classical theories of cultural and aesthetic responses to light and the space/time continuum
- Understanding of a group of reference buildings, places and indoor and outdoor spaces where light plays a specific role
- Understand core elements of lighting design in regard to the interplay between daylight and electric light in spaces: form, function, sustainability, location, technique and human significance
- Understand lighting design methodologies including scenarios and social contexts of use
- Applying qualitative methods for research by design, including end-user interview techniques, analysis and experience sampling
- Analyse the qualities of light in space and present the analysis verbally and visually
- Understanding of historical and cultural aspects of lighting; theory of current lighting design practice

SKILLS

Students who complete this module will obtain the following qualifications

- Ability to understand light’s functional applications and light used as a design element
- Ability to apply light in space through sketching and/or modelling to demonstrate design solutions of an aesthetic and functional character
- Ability to apply research-based knowledge into practice design
- Ability to apply knowledge to facilitate the design process involving users in real-life contexts
- Ability to demonstrate understanding of relation between characteristics of lighting schemes (daylight and electric light) with the associated luminous effects

COMPETENCES

Students who complete this module will obtain the following qualifications

- Ability to synthesize relevant theoretical, methodological and practical knowledge of lighting
- Ability to apply the design process involving users in context
- Ability to synthesize and apply experienced and measured/calculated qualities of light in space

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Meaning of Light: Light and Space
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the 7-point scale.

FACTS ABOUT THE MODULE

Danish title	Lysets betydning: Lys og rum
Module code	MSNLIDM1172
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

LIGHTING FUNDAMENTALS

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this module is to introduce students to the basic photometric and colorimetric terms, quantities and relationships as well as the processes involved in the perception and appreciation of the luminous environment. The course will propose to master the link between subjective observation and the metrics behind. This covers: real scenes, indoor, outdoor, stage, automotive and virtual spaces.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain the following qualifications:

- Ability to describe the basic photometry terms and fundamental laws
- Ability to relate to the physiology of the human eye and visual perception
- Ability to understand and describe light propagation and light interaction with matter
- Ability to relate to the possibilities offered by materials with embedded nanoparticles or diffractive surfaces
- Ability to describe the basic colorimetry systems
- Understand the characteristics and performance of all light sources (including daylight)

The assignments will allow the student to demonstrate the achievement of this knowledge and apply this in practical and theoretical situations

SKILLS

Students who complete the module will gain the following qualifications

- Ability to compute illuminances for various light sources (point and area light sources)
- Ability to assess contribution of light reflexion on surfaces
- Ability to measure luminous quantities with portable equipment
- The ability to select the most appropriate light source for a given application
- The ability to communicate results of measurements and calculations
- Ability to apply objective methods of observation and analysis of lighting conditions based on a scientific approach to light

COMPETENCES

Students who complete the module will gain the following qualifications

- Understanding of the basic photometric and colorimetric systems used in international standards
- Understanding of the rational system of measurement of lighting qualities based on photometric and colorimetric calculations
- Ability to understand and analyse various lighting patterns occurring in space

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Lighting Fundamentals
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Grundlæggende viden om lys
Module code	MSNLIDM1173
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

RENDERED LIGHTING SIMULATION/CGI

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

In order to communicate and develop lighting designs it is essential to be able to develop and communicate rendered lighting simulations. The course rational is that students need to have an understanding of how rendered lighting simulations are essential as reproduction of illuminations of a context and how the rendering can be used as design tool and to communicate and develop different aspects of lighting designs

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- **Understanding** of how photometric/radiometric illumination concepts transfer to, and are simulated by, rendering software
- **Understanding** of the advanced rendering techniques for global illumination simulation, in particular ray tracing, final gather and photon mapping
- Understanding of aspects of the trade-offs between rendering quality and rendering time
- **Understanding** of High Dynamic Range imaging (HDRi)
- **Understanding** of computational day light models
- **Understanding** of shaders

SKILLS

Students who complete this module will obtain the following qualifications

- Ability to **apply** rendering packages (3dsMAX, Maya, LuxRender, RADIANCE, PBRT, or similar) to simulating radiance/luminance, or irradiance/illuminance levels in complex scenes, with complex illumination conditions
- Ability to **apply** virtual reproduction of exterior and interior illumination and analyse the object appearance
- Ability to **use** shadows in rendering to achieve greater depth and realism
- Ability to **apply** HDRi light probe techniques for capturing real-world illumination conditions and re-creating them in a simulation

COMPETENCES

Students who complete this module will obtain the following qualifications

- Ability to **analyse, synthesize, and evaluate** illumination designs through physics-based, realistic simulation using rendering packages, and to use such simulations in an iterative process to balance functional and aesthetic elements of the illumination design

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work

EXAM

EXAMS

Name of exam	Rendered Lighting Simulation/CGI
Type of exam	Written or oral exam

	In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Oral exam with an internal censor based on a scientific paper written in English and a product, illustrating and summarizing the project, a poster in English, and edited worksheets/portfolio documenting project details. The assessment is performed in accordance with the 7-point scale
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Digitale simuleringer med lys/CGI
Module code	MSNLIDM1174
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

CREATING WITH LIGHT: INTERACTIVE LIGHTING

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Develop an understanding of creating with light with a focus on an interactive lighting design through media technology and human/conceptual interaction. The students must find a specific context, function and theme where it is possible to define a lighting design project that must show solutions on several levels such as functional, technical, aesthetic, etc.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- **Understanding** of the core elements of lighting in regards to the interactive interplay between human, context, function and light
- Ability to **describe** the lighting fundamentals and the relationship between simulations/renderings of light as design elements
- **Understanding** how light can be used as an interactive design element
- Knowledge of **creating** a project – from concept sketches, programming, mock-ups, tests, technical drawings and realisation
- Must be able to see, appreciate and **analyse** lighting design projects, theories, principles and methods

SKILLS

Students who complete this module will obtain the following qualifications

- Ability to **apply** light and use technology to create intelligent and/or interactive effects in a virtual or real space
- Ability to **analyse** lighting designs according to scientific lighting theories
- Ability to **apply** light design theories, principles and methods to the process of creating lighting design
- Ability to **identify** problems and programmes where lighting design creates holistic solutions

COMPETENCES

Students who complete this module will obtain the following qualifications

- Ability to **create** and present holistic lighting design projects by applying the right knowledge about light design, tools and scientific methods into the design process
- Ability to **analyse, communicate and discuss** research-based knowledge in the area of lighting design

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work

EXAM

EXAMS

Name of exam	Creating with Light: Interactive Lighting
Type of exam	Oral exam based on a project Oral exam with an external censor based on a scientific paper written in English and a product, illustrating and summarizing the project, a poster in English, and edited worksheets/portfolio documenting project details. The assessment is performed in accordance with the 7-point scale
ECTS	15
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	At skabe med lys: Interaktivt lysdesign
Module code	MSNLIDM2171
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

EVIDENCE-BASED LIGHTING DESIGN

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this module is to provide students with evidence concerning the relationship between causes and effects of lighting, particularly in relation to the way we perceive our luminous environment and the possible physiological effects of light.

The facts that will be presented are obtained through scientific testing protocols, and the robustness of the scientific literature will be discussed. The results will be used to improve lighting designs and to identify possible risks attached to lighting schemes.

References will be provided and the students will be required to verify the validity of the information, which will relate to any context of lighting design. Light source and luminaire specification claims will be verified by the students themselves on product level as well as application level.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications:

- **Understanding** on the characteristics of the human visual system
- **Understanding** on vision of the elderly and the visually impaired
- Will be able to **analyse** perceived lighting quality
- **Understanding** on lights effect on circadian rhythms
- **Understand** health risks affiliated with lighting
- **Understanding** on optimal lighting for plants

SKILLS

Students who complete this module will obtain the following qualifications:

- Ability to **assess** the performance of a given lighting scheme, based on scientific evidence
- Ability to **analyse** a lighting scheme using the appropriate metric, going beyond state of the art
- Ability to read and **understand** scientific material related to evidence based lighting issues.
- Ability to **understand** existing standards (IEC, CIE, WMO, etc.)

COMPETENCES

- Students who complete this module will obtain the following qualifications
- Ability to **create** lighting schemes which comply with various constraints issued from scientific research and evidence based requirements for specific applications
- Ability to **create** sound solutions, and create innovative lighting schemes
- Ability to **analyse and evaluate** on lighting solutions based on up to date knowledge from the scientific literature

TYPE OF INSTRUCTION

In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology:

Individual oral or written examination with internal censor. The assessment is performed with the 7 point scale

EXAM

EXAMS

Name of exam	Evidence-based Lighting Design
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the 7 point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Evidens baseret Lysdesign
Module code	MSNLIDM2172
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

LIGHT AND CONTEXT

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module covers aspects of designing with light, with focus on the understanding and practical application of aesthetic, functional, legislative and environmental design parameters in different contexts.

Objectives:

The module will enable the student to acquire theoretical and applied knowledge of light in different context with emphasis on its qualitative aspects; to see, to understand, to be inspired, to design with light and to communicate light in a conceptual framework.

The objectives are realized by presenting scientific methods and tools in a case-based framework and through the students' active participation in workshops and assignments to deepen an understanding of the various design contexts and opportunities for the experience, knowledge and application of light.

The module will develop students' ability to create design solutions in different scales and areas of application, through the combination of research-based theory with examples from practice and exercises through small exercises.

LEARNING OBJECTIVES

KNOWLEDGE

- Critical **understanding** of theories and references of cultural and aesthetic responses to light and the space/time continuum
- **Understand** the process of identifying qualities of light and define desired effects through design
- **Recognize** various contexts such as environment, people's need, legislation, energy and atmosphere and integrate in the design process
- **Understand** the qualitative and scientific methods for research by design
- **Understand** how to illustrate, communicate and model natural light and electric lighting design solutions
- **Understand** daylight design and control; sustainable architecture; building automation

SKILLS

- **Evaluate** light in different context verbally and visually
- **Choose, implement and apply** lighting design solutions in a context that include aesthetic, social and functional considerations.
- **Evaluate and compare** research-based knowledge supplemented by knowledge from practical design competences and apply the methods for a specific design problem/solution
- **Apply** the taught methods to solve concrete practical design problems

COMPETENCES

- Upon successful completion of this module the student will acquire a thorough knowledge and training of practice various aspects of **designing** with daylight and artificial lighting in different context:
- **Evaluate and document** design solutions of lighting in different contexts
- **Synthesize** knowledge, technical and functional aspects of lighting design with an understanding of context
- **Predict** lighting performance in relation to sustainability and energy
- **Communicate** to professional designers and design team
- **Synthesize** lighting design for specific environments

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Light and Context
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the 7 point-scale.
ECTS	5
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Lys og kontekst
Module code	MSNLIDM2173
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

INTELLIGENT LIGHTING DESIGN

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module has a focus on interactive lighting design, Interactive applications and multimedia Interaction, using digital media, for both indoor and outdoor applications centred around human factors.

Objectives:

In this module the student will gain an understanding of the principles of intelligent lighting design and development using computational media. The student will gain knowledge in contemporary lighting design in real life and in virtual representations. The student will understand innovation in the field of intelligent and/or interactive lighting, based on research in aesthetics and science. The student will gain an understanding of design processes in prototyping tools and techniques, programming and interaction technology. The student will also get practical exercises in a variety of new materials, scenario techniques, and usability studies.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the course module will obtain the following qualifications:

- **Understand** the design process and methodologies in interactive systems
- **Understanding** emerging lighting technologies in designing intelligent or interactive lighting systems, both for indoor and outdoor applications as well as virtual representations
- **Understanding** of principles for designing, prototyping, programming, realizing, analysing and evaluating of the highest level for an intelligent or interactive lighting system
- Critical **understanding** of the scientific and aesthetic processes according to international research in the use of human centred interactive technologies for lighting design
- **Synthesis** of methodological consideration to describe the theoretical and empirical foundation of the project

SKILLS

Students who complete the course module will obtain the following qualifications:

- Ability to **apply** design methodologies and processes in the development of an intelligent or interactive lighting system for real and virtual applications
- Ability to **plan, design, implement and evaluate** systematic tests of the intelligent or interactive lighting design from a human-centred and system-based perspective (analysis)
- Ability to **implement and discuss** feasibility, design requirement specifications and sustainability of the developed interactive lighting system including human physiological and psychological factors (evaluation)

COMPETENCES

Students who complete the course module will obtain the following qualifications:

- Can independently **synthesize** knowledge in aesthetic design methods, choice of material, theories and techniques in interactive lighting systems
- Expertise in **communicating and presenting** the project, applying aesthetic and scientific-based descriptions of aspects such as design, construction, analysis and evaluation of an interactive lighting system, including consideration of human factors (evaluation)
- Must have competencies in **comparing and assessing** complex interactive lighting technologies, and methods in order to make the proper design choices for optimum functionality (synthesis)

- Can independently **mediate** collaboration with professionals such as city planners, designers, and architects in order to implement interactive lighting system

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Intelligent Lighting Design
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the 7 point-scale.
ECTS	5
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Intelligent lysdesign
Module code	MSNLIDM2174
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

LIGHTING DESIGN INNOVATION

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st and 2nd semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Develop and evaluate new solutions where cross-disciplinary knowledge in the field of lighting design can be synthesized to create innovative solutions. The focus can be exploring commercial aspects as well as socio-cultural implications and/or its use in generating scientific knowledge.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- **Evaluation** of core state-of-the-art concepts, theories, techniques and methodologies related to lighting design
- Ability to **synthesize** relevant lighting concepts, theories and techniques with a significant focus on process and context in lighting design
- **Evaluation** of the design phases including identifying problems, concept, design development, detailed design, specification, laboratory experiments, model building, mock-ups

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **synthesise** market and trend analysis methods to a lighting product or installation based on light and the principals related to lighting design
- Ability to **evaluate** lighting design related to scientific design methods, tools and technologies to create lighting designs that meet specific needs and are viable from a product, commercial, socio-cultural, and/or scientific perspective

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **evaluate** and select relevant lighting theories, methods and tools with the specific aim of working towards **creating** new qualitative products, commercially viable products/installations, or new knowledge
- Ability **tocreate** lighting drawings and lighting layouts that support the design process and communicate the project

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

EXAM

EXAMS

Name of exam	Lighting Design Innovation

Type of exam	Oral exam based on a project In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Oral exam with an internal censor based on a scientific paper written in English and a product, illustrating and summarizing the project, a poster in English, and edited worksheets/portfolio documenting project details. The assessment is performed in accordance with the 7-point scale.
ECTS	20
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Innovativt lysdesign
Module code	MSNLIDM3171
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

PROJECT-ORIENTED WORK IN A COMPANY

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st and 2nd semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The Academic Internship must have a scope that corresponds the ECTS load.

Objectives:

Develop and evaluate new solutions where cross-disciplinary knowledge in the field of lighting design can be synthesized to create innovative solutions. The focus can be exploring commercial aspects as well as socio-cultural implications and/or its use in generating scientific knowledge.

The purpose of this project module is to give the student the opportunity to acquire practical, real-world experience with developing Lighting Design products within the context of a company or an organization. The development must be subject to relevant constraints and conditions of the real-world context.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- **Evaluation** of core state-of-the-art concepts, theories, techniques and methodologies related to lighting design
- Ability to **synthesize** relevant lighting concepts, theories and techniques with a significant focus on process and context in lighting design
- **Evaluation** of the design phases including identifying problems, concept, design development, detailed design, specification, laboratory experiments, model building, mock-ups
- Must be able to **understand** professional, business-related and organizational concepts that are relevant for the hosting organization and the developed project.

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **synthesise** market and trend analysis methods to a lighting product or installation based on light and the principals related to lighting design
- Ability to **evaluate** lighting design related to scientific design methods, tools and technologies to create lighting designs that meet specific needs and are viable from a product, commercial, socio-cultural, and/or scientific perspective
- Must be able to **apply** host relevant constraints and affordances in the product design

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **evaluate** and select relevant lighting theories, methods and tools with the specific aim of working towards **creating** new qualitative products, commercially viable products/installations, or new knowledge
- Ability **tocreate** lighting drawings and lighting layouts that support the design process and communicate the project

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

EXAM

EXAMS

Name of exam	Project-Oriented Work in a Company
Type of exam	Oral exam based on a project Oral examination on basis of a submitted Company Stay Report. Assessment: pass/fail
ECTS	25
Permitted aids	With certain aids: See semester description.
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Projekt orienteret forløb i en virksomhed – Lysdesign
Module code	MSNLIDM3178
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	25
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

PROJECT-ORIENTED WORK IN A COMPANY

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st and 2nd semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The Academic Internship must have a scope that corresponds the ECTS load.

Objectives:

Develop and evaluate new solutions where cross-disciplinary knowledge in the field of lighting design can be synthesized to create innovative solutions. The focus can be exploring commercial aspects as well as socio-cultural implications and/or its use in generating scientific knowledge.

The purpose of this project module is to give the student the opportunity to acquire practical, real-world experience with developing Lighting Design products within the context of a company or an organization. The development must be subject to relevant constraints and conditions of the real-world context.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- **Evaluation** of core state-of-the-art concepts, theories, techniques and methodologies related to lighting design
- Ability to **synthesize** relevant lighting concepts, theories and techniques with a significant focus on process and context in lighting design
- **Evaluation** of the design phases including identifying problems, concept, design development, detailed design, specification, laboratory experiments, model building, mock-ups
- Must be able to **understand** professional, business-related and organizational concepts that are relevant for the hosting organization and the developed project.

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **synthesise** market and trend analysis methods to a lighting product or installation based on light and the principals related to lighting design
- Ability to **evaluate** lighting design related to scientific design methods, tools and technologies to create lighting designs that meet specific needs and are viable from a product, commercial, socio-cultural, and/or scientific perspective
- Must be able to **apply** host relevant constraints and affordances in the product design

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **evaluate** and select relevant lighting theories, methods and tools with the specific aim of working towards **creating** new qualitative products, commercially viable products/installations, or new knowledge
- Ability **tocreate** lighting drawings and lighting layouts that support the design process and communicate the project

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

EXAM

EXAMS

Name of exam	Project-Oriented Work in a Company
Type of exam	Oral exam based on a project Oral examination on basis of a submitted Company Stay Report. Assessment: pass/fail
ECTS	20
Permitted aids	With certain aids: See semester description.
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Projekt orienteret forløb i en virksomhed – Lysdesign
Module code	MSNLIDM3177
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

PROJECT-ORIENTED WORK IN A COMPANY

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st and 2nd semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The Academic Internship must have a scope that corresponds the ECTS load.

Objectives:

Develop and evaluate new solutions where cross-disciplinary knowledge in the field of lighting design can be synthesized to create innovative solutions. The focus can be exploring commercial aspects as well as socio-cultural implications and/or its use in generating scientific knowledge.

The purpose of this project module is to give the student the opportunity to acquire practical, real-world experience with developing Lighting Design products within the context of a company or an organization. The development must be subject to relevant constraints and conditions of the real-world context.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- **Evaluation** of core state-of-the-art concepts, theories, techniques and methodologies related to lighting design
- Ability to **synthesize** relevant lighting concepts, theories and techniques with a significant focus on process and context in lighting design
- **Evaluation** of the design phases including identifying problems, concept, design development, detailed design, specification, laboratory experiments, model building, mock-ups
- Must be able to **understand** professional, business-related and organizational concepts that are relevant for the hosting organization and the developed project.

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **synthesise** market and trend analysis methods to a lighting product or installation based on light and the principals related to lighting design
- Ability to **evaluate** lighting design related to scientific design methods, tools and technologies to create lighting designs that meet specific needs and are viable from a product, commercial, socio-cultural, and/or scientific perspective
- Must be able to **apply** host relevant constraints and affordances in the product design

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Ability to **evaluate** and select relevant lighting theories, methods and tools with the specific aim of working towards **creating** new qualitative products, commercially viable products/installations, or new knowledge
- Ability **tocreate** lighting drawings and lighting layouts that support the design process and communicate the project

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

EXAM

EXAMS

Name of exam	Project-Oriented Work in a Company
Type of exam	Oral exam based on a project Oral examination on basis of a submitted Company Stay Report. Assessment: pass/fail
ECTS	30
Permitted aids	With certain aids: See semester description.
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Projekt orienteret forløb i en virksomhed – Lysdesign
Module code	MSNLIDM3176
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	30
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

MASTER'S THESIS

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the first three semesters.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The master thesis can be conducted as a long master thesis. If choosing to do a long master thesis, it has to include experimental work and has to be approved by the study board. The amount of experimental work must reflect the allotted ECTS.

Objective:

To give the students the ability to make a project as an experimental, empirical, artistic, technological /engineering and/or theoretical investigation of one or more central issues in the chosen specialisation within the field of lighting design. This happens with reflective incorporation of relevant scientific theories and mixed methods acquired throughout the master's programme in lighting design. The final thesis must substantiate the student's ability to apply scientific theories and mixed methods from the fields of architecture, science of lightning and media technology into new solutions.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- Must have knowledge and **understanding** about relevant theories and methods in relation to the chosen project theme
- Must have knowledge and **understanding** in one or more subject areas that are representative of the state of the art in the research community of the chosen specialisation
- Can **synthesise** and, on a scientific basis, **apply** an area of the chosen specialisation and identify scientific problems
- Must be able to **understand** and **synthesise** the theories and methods applied in relation to the practice of lighting design profession

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Must be able to **synthesize** scientific methods and tools and general skills related to the chosen specialisation
- Can **evaluate and select** among scientific theories, methods, tools and general skills and, on a scientific basis, **create** new analyses and solutions in the chosen specialisation
- Can **synthesize** research-based knowledge and discuss professional and scientific problems with both peers and non-specialists
- Must be able to **make** proposals for design, strategies and interventions of relevance to the lighting design field

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Must have competencies to **synthesize** knowledge and use mixed methods to create design solutions of an aesthetic, technical and functional character
- Must have competencies to **synthesize and create** solutions and that are complex, unpredictable and require new solutions

- Must have competencies to independently **synthesize** and take responsibility for one's own professional development and specialisation

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

The project is carried out individually or in small groups of a maximum of three students. At least one internal supervisor is assigned, who deals with the primary area of the project in his or her research.

EXAM

EXAMS

Name of exam	Master's Thesis
Type of exam	Oral exam based on a project In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral examination with external censor based on a written project report and a media-technological product plus an A/V-production illustrating and summarizing the project. The assessment is performed in accordance with the 7-point scale.
ECTS	50
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	MSNLIDM4172
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	50
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

MASTER'S THESIS

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the first three semesters.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The master thesis can be conducted as a long master thesis. If choosing to do a long master thesis, it has to include experimental work and has to be approved by the study board. The amount of experimental work must reflect the allotted ECTS.

Objective:

To give the students the ability to make a project as an experimental, empirical, artistic, technological /engineering and/or theoretical investigation of one or more central issues in the chosen specialisation within the field of lighting design. This happens with reflective incorporation of relevant scientific theories and mixed methods acquired throughout the master's programme in lighting design. The final thesis must substantiate the student's ability to apply scientific theories and mixed methods from the fields of architecture, science of lightning and media technology into new solutions.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will gain knowledge, skills and competences as follows:

- Must have knowledge and **understanding** about relevant theories and methods in relation to the chosen project theme
- Must have knowledge and **understanding** in one or more subject areas that are representative of the state of the art in the research community of the chosen specialisation
- Can **synthesise** and, on a scientific basis, **apply** an area of the chosen specialisation and identify scientific problems
- Must be able to **understand** and **synthesise** the theories and methods applied in relation to the practice of lighting design profession

SKILLS

Students who complete the module will gain knowledge, skills and competences as follows:

- Must be able to **synthesize** scientific methods and tools and general skills related to the chosen specialisation
- Can **evaluate and select** among scientific theories, methods, tools and general skills and, on a scientific basis, **create** new analyses and solutions in the chosen specialisation
- Can **synthesize** research-based knowledge and discuss professional and scientific problems with both peers and non-specialists
- Must be able to **make** proposals for design, strategies and interventions of relevance to the lighting design field

COMPETENCES

Students who complete the module will gain knowledge, skills and competences as follows:

- Must have competencies to **synthesize** knowledge and use mixed methods to create design solutions of an aesthetic, technical and functional character
- Must have competencies to **synthesize and create** solutions and that are complex, unpredictable and require new solutions

- Must have competencies to independently **synthesize** and take responsibility for one's own professional development and specialisation

TYPE OF INSTRUCTION

Academically supervised student-governed problem oriented project work.

The project is carried out individually or in small groups of a maximum of three students. At least one internal supervisor is assigned, who deals with the primary area of the project in his or her research.

EXAM

EXAMS

Name of exam	Master's Thesis
Type of exam	Oral exam based on a project In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral examination with external censor based on a written project report and a media-technological product plus an A/V-production illustrating and summarizing the project. The assessment is performed in accordance with the 7-point scale.
ECTS	30
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	MSNLIDM4171
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

FOCUS AREA

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in the 1st and 2nd semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This mini project will develop the student's ability to collect knowledge in a specific chosen focus area that relates to lighting design to create new possibilities. Investigation of a specific area using mixed methods and synthesising it with lighting design explores the profession of lighting design and trains the student in methodologies and processes.

LEARNING OBJECTIVES

KNOWLEDGE

- **Understand** how useful knowledge in a specific area is based on international scientific knowledge, practice and development
- **Synthesise** knowledge in a specific area with lighting design
- **Understand** strategies and processes for creating new knowledge, products or events

SKILLS

- **Identify, select and apply** appropriate knowledge in a specific area
- **Develop** an appropriate problem statement
- **Synthesise** specific knowledge with light in a high professional and mixed methods process

COMPETENCES

- **Creating** synergy and new innovative solutions by **synthesising** a specific area with lighting design

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Focus Area
Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology: Individual oral or written examination with internal censor. The assessment is performed with the Pass/fail grade.
ECTS	5
Permitted aids	With certain aids: See semester description.
Assessment	Passed/Not Passed

Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Fokusområde
Module code	MSNLIDM3172
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

USER EXPERIENCE DESIGN FOR SERVICE INTERACTION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This course trains students to research, analyse, prototype and conceptualise design considering all system aspects including the social and cultural contexts of use. The course gives a comprehensive knowledge about user involvement in the design process, going beyond traditional methods such as usability lab testing.

Experience prototyping techniques and interaction design methods will be introduced with the aim of better understanding and representing the different levels of interaction within a service. The objectives are realised by presenting methods and tools in a case based framework and through the students' active participation in workshops and assignments.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the course module will obtain the following qualifications:

- **Knowledge** about the system design methods including the social and cultural contexts of use.
- **Knowledge** about ethnographic study methods for user behaviour research
- **Knowledge** about advanced qualitative research methods involving both design, data collection, data analysis and reporting.
- **Knowledge** about validity and reliability within qualitative methods
- **Knowledge** about interaction design methods

SKILLS

Students who complete the course module will obtain the following qualifications:

- **Apply** the taught methods to solve concrete design problems.
- Able to **evaluate** and compare and apply the methods for a specific design problem.
- **Understand** user analysis and organise data from and interaction in a way that can be used in the design process (synthesis).
- **Apply** knowledge to facilitate the design process involving users in real-life contexts.
- **Apply** personas and scenario based design methods in different contexts for facilitating both different user types and system descriptions.
- **Apply** data into specific strategies for implementation taken different stakeholders into consideration.

COMPETENCES

Students who complete the course module will obtain the following qualifications:

- Ability to choose the appropriate methods to suit different dimensions of a design problem at different stages in the process and the pitfalls of each approach (**synthesis**)
- **Understanding** the strengths and weaknesses of methods.

TYPE OF INSTRUCTION

See general description of the types of instruction described in the introduction to chapter 3

EXAM

EXAMS

Name of exam	User Experience Design for Service Interaction
Type of exam	Written or oral exam Individual oral (based on presentation and discussion) or written (based on a report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description.
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Brugeroplevelse af serviceinteraktion
Module code	MSNSSDM1172
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

ADVANCED A/V PRODUCTION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will obtain the following qualifications:

- **Understanding** of concept- and iterative format development
- **Understanding** the dramatic premise as the basis of the three-act paradigm
- **Understanding** of the elements of propulsion within fiction: conflicts, obstacles, complications, expectations, foretellings, tests, timelimits, suspense, surprise, and changes
- **Understanding** of the elements of propulsion within entertainment formats: competition, assignment, challenge, randomizer, the vote and the unexpected visitor
- **Understanding** of AV-production management concepts and tools – and the application of such
- **Understanding** and application of various advanced lighting setups including greenscreen lighting
- **Understanding** the effects of combining multicam and singlecam within fictional and factual programming

SKILLS

Students who complete the module will obtain the following qualifications:

- Ability to **analyse** and methodically produce and analyse productions that feature more than one shot shown simultaneously
- Ability to **analyse** and choose the means of expression that manage the audience's perception in multishot productions
- Ability to **analyse** and edit factual material and combine it with fictioncodes
- Ability to discuss and **analyse** three different editing methods: the formalists' five methods of montage, the valuebased Rule of Six and the Kuleshov effect
- Ability to **analyse** advanced lighting set-ups combining hard light, soft light and eye light
- Ability to **analyse** and methodically produce using POV and POA
- Ability to **analyse** methodical uses of long takes
- Ability to **analyse** and methodically produce greenscreen shots on pre-produced material

COMPETENCES

Students who complete the module will obtain the following qualifications:

- Must be able to **apply** the general framework of advanced A/V-production in new contexts. This includes choosing the relevant methods and the ability to evaluate the output
- Must be able to **synthesize** the different means of expression and understand the resulting effect they have on the audio-visual entity

TYPE OF INSTRUCTION

Refer to the overview of instruction types listed in the start of chapter 3. The types of instruction for this course are decided in accordance with the current Joint Programme Regulations and directions are decided and given by the Study Board for Media Technology.

EXAM

EXAMS

Name of exam	Advanced A/V Production

Type of exam	Written or oral exam In accordance with the current Joint Programme Regulations and directions on examination from the Study Board for Media Technology. To be eligible to take the exam the student must have fulfilled: • handing in of written assignments or the like • completion of certain – or all – study activities Note that if admittance to the exam or parts of the assessment is to be based on written work or exercises, a deadline is stipulated for when the work must be handed in. If the student hands in a paper/exercises after the deadline, the student has used an examination attempt. The exam: Oral or written examination with internal censor. The assessment is performed with the7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria for the evaluation are specified in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Avanceret A/V-produktion
Module code	MSNMEDM1177
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg, Campus Copenhagen, Campus Esbjerg
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

Study Board	Study Board of Media Technology
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design

METHODOLOGY AND THEORIES OF SCIENCE

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The student must have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 and MSc02 Urban Design Engineering education or similar.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to give the students the necessary skills to participate in the academic and professional practice within the fields of Architecture, Design and Planning (or related areas) as contributing scholars and researchers by training the basic academic skills of paper writing and design of research methodology seen in light of the adequate positions within theories of science / philosophy of science.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about the academic production process, the systems of research quality assessments and monitoring governing the field of research and the channels for publication and dissemination of academic knowledge
- Must be able to understand societal and contextual conditions for a situation of increasing ‘scientification’ of practice fields
- Must be able to understand how the ‘state-of-the-art’ within academic fields of relevance are emerging and how these are evolving

SKILLS

- Must be able to apply established models for paper writing and methodological reflection to a specific case within architecture, design or planning
- Must be able to write a methodologically reflective paper which positions itself in relation to relevant and adequate positions within theories of science / philosophy of science
- Must be able to evaluate the paper in relation to established practices and systems of academic research

COMPETENCES

- Must have competencies to write an academic paper and/or a design for research methodology relating to the state-of-the-art of knowledge production within architecture, design or planning

TYPE OF INSTRUCTION

See general description of the types of instruction described in the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Methodology and Theories of Science
Type of exam	Written or oral exam
ECTS	5

Permitted aids	Without aids
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Forskningsmetode og videnskabsteori
Module code	AODUTM3K161
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Location of the lecture	Campus Aalborg
Responsible for the module	Tenna Doktor Olsen Tvedebrink, Sarah Guldhammer Olesen

ORGANISATION

Study Board	Study Board of Architecture & Design
Department	Department of Architecture, Design and Media Technology
Faculty	Technical Faculty of IT and Design