AALBORG UNIVERSITET

STUDIEORDNING FOR KANDIDATUDDANNELSEN (CAND.TECH.) I URBANT DESIGN, 2022

CAND.TECH.
AALBORG

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

SUSTAINABLE URBAN TRANSFORMATION

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module addresses the ongoing transformation of the built urban environment. The focus is on how to continually develop and re-develop the built environment. The aim is to identify problems and potentials in existing built environments and to develop proposals for environmentally and socially responsible urban design strategies and proposals.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge on environmentally and socially sustainable urban design and the dynamics of the climate and its effects on the built environment.
- Must be able to understand and based on research reflect on sustainable urban design methods and theories and thereby be able to identify contemporary urban design issues.
- Must have knowledge of the fundamental principles of Problem Based Learning (PBL) as implemented in the Aalborg PBL model at the Faculty of IT and design.

SKILLS

- Must master a range of urban design theories, digital and analogue tools and methods in order to develop and present an urban design proposal that integrates engineering techniques and architectural qualities into conceptual urban design.
- Must be able to evaluate and apply sustainable urban design methods and theories as well as digital and analogue tools and engineering knowledge in order to identify site-specific analytical discoveries and urban design proposals.
- Must be able to communicate knowledge of sustainable urban design in written, visual, spatial and verbal form to discuss and present professional insights with peers and nonprofessionals.
- Must be able to structure project management activities based on a well-formulated problem formulation

COMPETENCES

- Must be able to integrate technical, spatial, social, environmental and aesthetic aspects to create a sustainable urban design proposal.
- Must independently, and in collaboration with others, be able to undertake professional responsibility and to initiate and accomplish sustainable urban design tasks.
- Must be able to reflect on, plan and manage a study project in a PBL learning environment.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Sustainable Urban Transformation
Type of exam	Oral exam based on a project
ECTS	20

Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Bæredygtig urban transformation
Module code	AODUM1P201
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

CLIMATE AND HYDROLOGY IN URBAN TRANSFORMATION

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The course provides practical knowledge and skills in the development of designs supporting sustainability in the urban built environment. The aim is to gain knowledge and understanding of the design challenges relevant to creating more ecologically based cities considering natural and built elements in the design process. The course will contribute to fostering knowledge and skills about sustainable urban development in a changing built environment. Hereby, the students obtain competencies in engineering solutions to guide the city through a sustainable transformation.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of causes, development, and effects of climate change from global to local scale.
- Must have knowledge on aquatic and terrestrial ecology and ecosystems.
- Must have knowledge on techniques for addressing climate adaptation.
- Must have knowledge on urban water management practices.
- Must have knowledge of fundamental hydraulics.

SKILLS

- Must be able to utilise digital and analouge analytical tools and methods concerning sustainable and infrastructural design.
- Must be able to identify and address problems in relation to climate adaption and hydrological issues relevant to the design of the built environment.
- Must be able to assess similarities and differences between rural and urban ecosystems.
- Must be able to assess the impact of the build environment on urban climatology.
- Must be able to measure, quantify, and model urban transformation processes in relation to the built environment.
- Must be able to perform simple hydraulic calculations in respect to urban water issues.

COMPETENCES

- Must have the competence to analyse, plan, and guide the sustainable transformation of a city.
- Must be able to evaluate the quality of urban ‘blue’ and ‘green’ ecosystem structures.
- Must have the competence to develop strategies for urban climate adaption.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Climate and Hydrology in Urban Transformation
Type of exam	Oral exam
ECTS	5
Permitted aids	See the relevant semester description/course description in Moodle.

Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Klimatekniske aspekter og hydrologi i urbane transformationer
Module code	B-AD-K1-1
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Vollertsen, Thorndahl, Liu

ORGANISATION

Education owner	Master of Science (MSc) in Engineering (Urban Design)
Study Board	Study Board of Built Environment
Department	Department of the Built Environment
Faculty	The Faculty of Engineering and Science

ANALYSING URBAN TRANSFORMATION

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The course focuses on urban design methods and their academic foundations. The continual transformation of the built environment calls for urban design methods to understand, map and critically analyse the contemporary built environment as well as mastering case study analysis. The aim of the course is to train the student's ability to critically read, analyse and map the built environment and to translate this into site-specific urban design proposals.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must possess general knowledge of research-based methods in relation to urban design mapping and analysis as well as case study methods.
- Must be able to understand and reflect upon different 2D and 3D analysis methods of the urban design profession.

SKILLS

- Must be able to map and analyse the built environment and identify problems and potentials according to specific urban design methods.
- Must be able to analyse and develop relevant design concepts through case studies.
- Must be able to communicate urban design analysis and concepts visually.

COMPETENCES

- Must be able to synthesize an analysis of a complex urban setting into site-specific urban design concepts and proposals.
- Must critically be able to reflect on the contemporary built environment grounded in the profession's research-based methods.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Analysing Urban Transformation
Type of exam	Oral exam based on a project
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Analyse af urbane transformationer
Module code	AODUM1K203
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

DESIGN FOR URBAN MOBILITY

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the students' ability to (critical-creative) develop urban design for mobilities in the contemporary network city. The module includes integration of architectural, functional, technical and societal factors in relation to the design for urban mobility at specific design sites. Insight into mobility systems, human embodied practices and experiences, safe and efficient traffic, digital analytical tools, and urban life and urban space are interdisciplinary components in the integrated urban design proposal that shall be developed in the module.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must demonstrate comprehensive knowledge of the combined architectural, functional, technical and societal factors influencing the urban design of contemporary mobility sites.
- Must be able to understand and based on research reflect on an integrated, advanced approach to urban design of contemporary mobility sites, and thereby be able to identify and discuss key potentials, problems and proposals.
- Must be able to understand problem analysis and problem formulation based on experiments, research-based knowledge, and empirical data.

SKILLS

- Must possess proficiency in the mastery of a wide range of analysis and design methods, digital and analogue urban design tools and urban, architectural and mobilities theories related to developing and presenting an urban design proposal of a mobility site.
- Must possess proficiency in assessing, selecting, adapting and applying methods, tools and theories in relation to an urban design proposal.
- Must be able to communicate methods, tools and theories, and urban design proposals in written, visual, spatial and verbal form to present and discuss them with peers and nonprofessionals.
- Must be able to engage in a learning environment and master complex and multiple learning styles individually and in groups.

COMPETENCES

- Must demonstrate proficient competencies to develop and present an integrated urban design proposal of a specific mobility site.
- Must independently, and in collaboration with others, demonstrate responsibility in conducting an integrated urban design process and proposal.
- Must, independently, demonstrate responsibility for learning, including planning, conducting, completing, communicating and discussing an urban design proposal of a mobility site.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Design for Urban Mobility
Type of exam	Oral exam based on a project
ECTS	20
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Design for urban mobilitet
Module code	AODUM2P201
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	20
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

THEORIES OF THE NETWORK CITY

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the students' ability to comprehend and analyze relevant infrastructural and technical factors shaping the contemporary network city. The course introduces state-of-the-art research-based theories relating to the development of the network city within urban theory, mobilities theory, network theory, and other relevant theoretical fields.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have proficient knowledge of the technical conditions shaping the network city, as well as their social consequences.
- Must be able to develop knowledge about the network city and its technologies as large technical systems.

SKILLS

- Must be able to apply the relevant scientific theories and methods in an analysis of the technological infrastructure systems of the network city.
- Must be able to evaluate proposals for intervention and design of the network city in light of state-of-the-art theories.

COMPETENCES

- Must demonstrate proficient competencies in analyzing the network city on a theoretical and methodologically reflective level.
- Must demonstrate proficient competencies in assessing technical solutions to traffic and mobility challenges of the network city.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Theories of the Network City
Type of exam	Written exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Netværksbyens teorier
Module code	AODUM2K202
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

Education owner	Master of Science (MSc) in Technology (Urban Design)
Study Board	Study Board of Architecture and Design
Department	Department of Architecture, Design and Media Technology
Faculty	The Technical Faculty of IT and Design

SITE MORPHOLOGY: ADVANCED ANALYSIS AND DESIGN

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module focuses on theories and methods relating to site and landscape, with the objective to investigate physical sites as urban landscapes conditioned by spatial, functional, technical and aesthetic properties. The course explores urban environments in section as a mode of analysis and as method of designing; to examine what is above and what is below the surface, as well as to facilitate a transition from analysis to conceptual design in one process.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must demonstrate proficient knowledge of site and landscape analysis, site and landscape theories, and conceptual urban design, observing technical, functional, spatial and aesthetic conditions of sites.
- Must be able to understand as well as academically reflect on integration of selected technical, functional, spatial and aesthetic conditions of sites to identify and discuss key potentials, problems and concepts.

SKILLS

- Must master a wide range of methods and theories relating to site and landscape analysis and conceptual urban design, herein the spatial section as an integrated tool.
- Must proficiently be able to assess, select, adapt and apply specific methods and theories in an integrated urban design site and landscape analysis and conceptual design.
- Must be able to communicate site and landscape analysis and conceptual design in proficiently written, visual, spatial and verbal form.

COMPETENCES

- Must demonstrate proficiency in conducting a site and landscape analysis, as well as a conceptual design, using the spatial section as an integrated tool in the design process.
- Must independently, and in collaboration with others, demonstrate responsibility towards integrating technical, functional, spatial and aesthetic conditions of sites in an analytical and conceptual urban design process.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Site Morphology: Advanced Analysis and Design
Type of exam	Oral exam based on a project

ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Stedets morfologi: Udvidet analyse og design
Module code	AODUM2K203
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

INDEPENDENT CHOICE: RESEARCH, PRACTICE OR DEVELOPMENT IN URBAN DESIGN

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc02 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of the module is to use the contemporary urban design research and/or professional practice to raise students' knowledge and development level. Furthermore, the student must document the use of research-based and/or practice-based knowledge. This means to familiarize the students with basic research, practice or development methods and theory, as well as enable them to acquire specific knowledge within one of the following chosen options:

A) Project-Oriented Study in an External Organisation,

B) Semester project with company contact, or

C) Research semester project, related to urban design.

The Project-Oriented Study in an External Organisation (B) must have a scope that correspond the ECTS load.

LEARNING OBJECTIVES

KNOWLEDGE

- Must demonstrate research-based, practical or conceptual knowledge of relevance to urban design.
- Must be able to understand and reflect upon urban design theories and methods relating to a professional working context in practice and/or research.

SKILLS

- Must be able to transfer urban design methods and professional tools to either a professional community of practice beyond the university or a research community of practice within the university.
- Must be able to articulate a research- or practice-based urban design problem, and to assess, select, adapt and apply research- or practice-based knowledge, methods and tools both digital and analogue of relevance to a specific urban design problem.
- Must be able to communicate research-based urban design knowledge and participate in professional environments.

COMPETENCES

- Must be able to engage in complex professional situations.
- Must be able to participate independently in disciplinary and cross-disciplinary collaborations.
- Must be able to independently take responsibility for own professional development and learning in a practice or research environment.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Independent Choice: Research, Practice or Development in Urban Design
Type of exam	Oral exam based on a project
ECTS	25
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Selvstændigt valg: Forskning, praksis eller udvikling i urbant design
Module code	AODUM3P222
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	25
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

MASTER'S THESIS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc03 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

To give the students the ability to conduct an integrated urban design project as an experimental, empirical, and/or theoretical investigation of one or more central, contemporary issues within the field of urban design. This happens with reflective incorporation of relevant theories and methods acquired throughout the full master in urban design.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must demonstrate advanced research-based knowledge of urban design history, theories, methods, tools and practical approaches.
- Must demonstrate advanced understanding and reflection upon the theories and methods applied in urban design.
- Must be able to acquire and position his/her investigation in dialogue with leading research on an international level.

SKILLS

- Must master the application of research-based theories, methods, and digital and analogue tools of urban design.
- Must at an advanced level be able to identify a relevant urban design problem in relation to urban development and urban transformation, and be able to assess, select and adapt research-based knowledge, methods and tools to address the chosen specific urban design problem and develop an urban design proposal.
- Must possess professionalism in communicating urban design problems and proposals to peers and non-specialists, as well as to collaborators and citizens.
- Must on highest international level be able to make proposals for design, strategies and interventions of relevance to the urban design field applying technical challenges as a central design element using both digital and analogue methods and tools

COMPETENCES

- Must demonstrate advanced integrated competencies to create urban design proposals.
- Must independently as well as in collaboration with others, be able to undertake professional responsibility and to initiate and accomplish complex urban design tasks.
- Must demonstrate responsibility for as well as reflect on own professional development and specialization.

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme."

EXAM

EXAMS

Name of exam	Master's Thesis

Type of exam	Master's thesis/final project
ECTS	30
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	AODUM4P221
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

ACADEMIC PAPER WRITING

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc02 level at the Urban Design Engineering education.

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, Planning and mobilities (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.

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, planning or mobilities
- 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 in writing an academic paper and/or a design for a research methodology relating to the state-of-the-art of knowledge production within architecture, design planning or mobilities
- Must have competencies in communicating with lay and professional audiences

TYPE OF INSTRUCTION

See general description of the types of instruction described in § 17.

EXAM

EXAMS

Name of exam	Academic Paper Writing
Type of exam	Written exam
ECTS	5

Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Akademisk artikelskrivning
Module code	AODUM3K201
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

ADVANCED INTEGRATED DESIGN IV: EXTENDED CONSTRUCTION MANAGEMENT, PROJECT DESIGN AND LIFE CYCLE COST ESTIMATES

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to knowledge, skills and competencies within the architectural design and engineering field corresponding to the completion of the MSc01 and MSc02 level at the Architectural Design-engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The aim of this course is to provide the student with an extended introduction to project-, design- and construction management, as well as an understanding of relevant professional building industry and building design practice in an international level. This includes training life cycle cost analysis (LCC) and dynamic cost evaluations.

LEARNING OBJECTIVES

KNOWLEDGE

- Must independently demonstrate knowledge and understanding of theories and methods within project-, design- or construction management.
- Must have knowledge of ethical-, economical-, legal-, political-, and social interests in the field of construction management.
- Must have knowledge of current practice in construction management.
- Must have knowledge of current practice in life cycle cost analysis and dynamic cost evaluations.

SKILLS

- Must be able to analyse and assess the cross-disciplinary inclusion of actors/stakeholders involved in the decision-making processes of a building construction project.
- Must be able to use methods and techniques for preparing life cycle cost analysis and dynamic cost evaluations/calculations for building construction projects.
- Must be able to apply methods of planning and scheduling of building construction projects.
- Must be able to identifying work elements, estimating activity durations, preparing network schedules and schedule updates, analysing planned vs. actual project progress.

COMPETENCES

- Can independently choose, apply and critically reflect on methods and theories for project-, design- or/and construction management within a given budget using specified materials and construction methods.

TYPE OF INSTRUCTION

See the general types of instructions in §17; Structure and Contents of the Programme.

EXAM

EXAMS

Name of exam	Advanced Integrated Design IV: Extended Construction Management, Project Design and Life Cycle Cost Estimates
Type of exam	Oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Udvidet Integreret Design IV: Udvidet arkitektonisk projektering, byggeledelse og totaløkonomiske vurdering
Module code	AODAM3K201
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

ANALYSING CONTEMPORARY MOBILITIES

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the student's ability to understand and analyse specific cases of contemporary mobilities (e.g. transit spaces, everyday life mobility, virtual mobility and communication) in the light of the cross-disciplinary 'mobilities turn'. The project aims at giving the student an opportunity to apply theories and methods inspired by the mobilities turn, with a particular focus on societal needs and challenges in relation to technological infrastructures, applied philosophy of science and methodology.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of state-of-the-art theories and methods of the mobilities turn
- Must have understanding of key societal challenges related to technology and applied philosophy of science
- Must have an understanding of technologies and infrastructures of mobilities
- Must be knowledgeable about the fundamental principles of Problem Based Learning (PBL) as implemented in the Aalborg PBL model at the Faculty of Engineering and Science

SKILLS

- Must be able to apply theories and methods of the mobilities turn to empirical cases of contemporary mobilities analysis
- Must be able to evaluate policies and management proposals related to organising contemporary mobilities
- Must be able to structure project management activities based on a wellformulated problem formulation

COMPETENCES

- Must have competencies in preparing proposals for contemporary mobility projects and assess the effects of their implementation
- Must have competencies in communicating with lay and professional audiences
- Must have competencies in organising and managing complex mobilities in cross-disciplinary contexts
- Must be able to reflect on, plan and manage a study project in a PBL learning environment

TYPE OF INSTRUCTION

Problem-based project work, supervision and plenary sessions.

EXAM

EXAMS

Name of exam	Analysing Contemporary Mobilities
Type of exam	Oral exam based on a project
ECTS	20

Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Analyse af nutidens mobiliteter
Module code	AODMM1P201
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

THE MOBILITIES TURN

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to introduce the students to the new ‘mobilities turn’ as an innovative approach to the study of contemporary mobility. In the module the student is acquainted with key thinkers and state-of-the-art research in mobilities. The module also gives an introduction to the international community of mobilities researchers as represented by their networks, centres and journals.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of state-of-the-art theory within the mobilities turn
- Must be able to identify and understand key thinkers and concepts involved in the mobilities turn

SKILLS

- Must be able to discuss and compare key theories within the mobilities turn
- Must be able to assess advantages and challenges to different theoretical positions within the mobilities turn

COMPETENCES

- Must have competencies in preparing designs for the analysis of contemporary mobility projects by operationalisation of theories of mobilities
- Must have competencies in reflective learning processes and be able to contribute to cross-disciplinary professional practices

TYPE OF INSTRUCTION

Supervision and plenary sessions.

EXAM

EXAMS

Name of exam	The Mobilities Turn
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Mobilitetsvendingen

Module code	AODMM1K202
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

APPLIED PHILOSOPHY OF SCIENCE AND MOBILE METHODS

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of the module is to acquaint the students with the role of the researcher and with selected schools in the philosophy of science of relevance to mobilities studies. Moreover, the objective is to enable students to acquire the necessary skills to conduct research within the mobilities field as well as knowledge of different approaches and methods, e.g. mobile ethnography, field studies, tracking technologies and mapping.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of various philosophies of science and advanced methods within mobilities research
- Must have an understanding of differences between relevant philosophies of science as well as the connection between the different components in a research design (i.e. philosophies of science, theories of mobilities, the research question and the choice of methods)

SKILLS

- Must be able to assess the applicability of various positions in the philosophy of science in relation to a specific mobilities project and to apply their perspective on the study
- Must be able to apply various methods of relevance, both digital and analogue to the study of mobilities
- Must be able to evaluate the results of data collected by any given mobile method

COMPETENCES

- Must be able to create a research design that combines relevant philosophies of science, theories and methods in answering a research question
- Must have competencies in ensuring validity and reliability in a conducted mobilities study
- Must have competencies in professional communication in cross-disciplinary contexts

TYPE OF INSTRUCTION

A mixture of lectures supplemented with hands-on exercises, seminars and workshops

EXAM

EXAMS

Name of exam	Applied Philosophy of Science and Mobile Methods
Type of exam	Active participation/continuous evaluation Reexamination: Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination

Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Anvendt videnskabsteori og mobile metoder
Module code	AODMM1K223
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

MOBILITIES: PLACE AND CULTURE

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The project module aims at giving the students the opportunity to work at the crossroads between mobilities, place and culture and to develop a theoretical approach alongside their empirical investigations. The project module seeks to study influences and relations between mobilities, place and culture. The objective is to investigate place theory and cultural theory in relation to mobilities, with the aim of achieving an understanding of interrelations between place, culture and the mobilities perspective.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of state-of-the-art theories and methods in mobilities research relating to place and culture
- Must have knowledge of relational place theory
- Must have an understanding of the relations between mobilities and place and culture
- Must have an understanding of mobilities and tracking technologies

SKILLS

- Must be able to apply relevant theories and methods of place and culture to empirical cases
- Must be able to analyse mobilities in relation to place and culture
- Must be able to evaluate contemporary mobilities and their relation to place and culture

COMPETENCES

- Must have competencies in developing mobilities-related models and concepts concerning place and culture in contemporary society
- Must be able to work in interdisciplinary contexts in the field of mobilities, place and culture
- Must have competencies in organising and managing complex mobilities in cross-disciplinary contexts

TYPE OF INSTRUCTION

Problem-based project work, supervision, and plenary sessions

EXAM

PREREQUISITE FOR ENROLLMENT FOR THE EXAM

- An approved PBL competency profile is a prerequisite for participation in the project exam

EXAMS

Name of exam	Mobilities: Place and Culture

Type of exam	Oral exam based on a project
ECTS	20
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Mobiliteter: Sted og kultur
Module code	AODMM2P201
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	20
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

MOBILITIES: POLICY, BRANDING AND PLACE MANAGEMENT

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the student's ability to comprehend place theory, management, branding and policymaking in relation to the new mobilities turn. This includes studies in place and mobilities theories.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of theories and methods in the field of place development, management, branding and policymaking in relation to the new mobilities turn theories
- Must have knowledge of the relationships between place and mobilities
- Must have knowledge of the strengths and weaknesses of methods and tools, both digital and analouge related to place management and mobilities

SKILLS

- Must be able to apply mobilities relevant scientific theories and methods related to place policy, branding and management
- Must be able to evaluate, on the basis of state-of-the-art theories, both private and public sector mobility policies, plans, programmes and strategies relevant to place management
- Must be able to independently prepare policies, plans, programmes and strategies in a relation to a mobilities orientated place understanding

COMPETENCES

- Must be able to professionally communicate results and concepts related to place policy, branding and management relevant to mobilities study
- Must be able to work in cross-disciplinary contexts in the field of place and mobilities
- Must have the necessary competencies in developing models and concepts that capture the relationships between place development and mobilities turn theories

TYPE OF INSTRUCTION

Lectures supplemented with seminars, field trips, study circles and workshops.

EXAM

EXAMS

Name of exam	Mobilities: Policy, Branding and Place Management
Type of exam	Active participation/continuous evaluation

	Reexamination: Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Mobiliteter: Politik, branding og ledelse
Module code	AODMM2K222
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

MOBILE CULTURE AND COMMUNICATION

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to enable the students to understand and analyse the relationship between information and communication technologies, mobilities systems, space and society by introducing state-of-the-art theories relating to mobility cultures, to the integration of communication technologies with the spatial environment, to mobilities-related consequences of new social media and digital networks as well as to interaction design

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have a profound knowledge of contemporary information and communication technologies and their application in mobile cultures and systems
- Must have an understanding of the technological as well as cultural factors that are shaping and enabling mobilities systems

SKILLS

- Must be able to apply theories of information and communication technology and relevant cultural theories to the analysis of mobilities cultures and systems
- Must be able to evaluate the relevance and impact of information and communication technologies on mobilities cultures and systems

COMPETENCES

- Must have competencies in analysing on a theoretically level mobilities cultures and systems and their integration with communication technologies
- Must have competencies in professional communication in relation to both professional and lay audiences

TYPE OF INSTRUCTION

Lectures supplemented with seminars, study circles, workshops and fieldwork

EXAM

EXAMS

Name of exam	Mobile Culture and Communication
Type of exam	Active participation/continuous evaluation Reexamination: Written or oral exam
ECTS	5
Permitted aids	See semester description

Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Mobilkultur og -kommunikation
Module code	AODMM2K203
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

INDEPENDENT CHOICE: RESEARCH, PRACTICE OR DEVELOPMENT IN MOBILITIES AND URBAN DESIGN

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc02 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this module is to give the students an opportunity to use and test the skills they have acquired during the 1st and 2nd semesters by participating in projects developed in a company setting. The testing of the mobilities engineering skills is attained not only through gaining practical experience, but also through the choice of a focus area for academic reflection and the subsequent investigation and illumination of this. The choice of a focus area should be related to mobilities engineering skills attained in the first part of the Master .

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have practical, technical, conceptual and professional knowledge of relevance to mobilities practice
- Must have knowledge of the analytical methods and digital and analogue tools utilised in mobilities practice
- Must be aware of the practice of mobilities field as a practice containing technical, societal and design based factors

SKILLS

- Must be able to engage professionally in the environment within which the field of mobilities takes place
- Must be able to identify a relevant and specific technical focus for subsequent investigation and reflection
- Must be able to utilise analytical and investigative techniques in the development of mobilities proposals, plans and strategies
- Must be able to work both independently and in a team setting in project development

COMPETENCES

- Must be able to describe specific problems relating to mobilities engineering and find technical, social and design based strategies for illuminating them
- Must be able to participate in the solving of mobilities engineering problems
- Must be able to make academic reflections on an identified technical, social and design focus area relating to mobilities engineering and implement previously attained knowledge to qualify it and set it into perspective

TYPE OF INSTRUCTION

See general description of the types of instruction described in § 17.

EXAM

EXAMS

Name of exam	Independent Choice: Research, Practice or Development in Mobilities and Urban Design

Type of exam	Oral exam based on a project
ECTS	25
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Selvstændigt valg: Forskning, praksis eller udvikling i mobilitet og urbant design
Module code	AODMM3P221
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	25
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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

MASTER'S THESIS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The student is recommended to havehave knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc03 Urban Design Engineering education

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.

The objective is to give the students the ability to on the highest international level make an integrated urban design project as an experimental, technological/engineering, empirical, and/or theoretical investigation of one or more central issues within the field of urban design engineering. This happens with reflective incorporation of relevant theories and methods acquired throughout the full master program in urban design engineering.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must develop knowledge on an international level about urban design in relation to global urban challenges
- Must have knowledge on highest international level about relevant theories and methods in relation to the chosen project theme
- Must be able to on the highest international level to understand and reflect the theories and methods applied in relation to the practice of an integrated urban design engineering profession

SKILLS

- Must on the highest international level be able to identify and address design challenges in relation to urban development and urban transformation
- Must on highest international level be able to analyse, map and apply theories on a high reflective level
- Must on highest international level be able to make proposals for design, strategies and interventions of relevance to the urban design field applying technical challenges as a central design element

COMPETENCES

- Must have competencies on the highest international level to create urban design proposals in relation to urban development and urban transformation
- Must on highest international level have competencies to integrate mapping, analysis and theories into an integrated urban design engineering proposal
- Must on highest international level have competencies to make strategies, plans and designs into an integrated urban design engineering proposal

TYPE OF INSTRUCTION

See general description of the types of instruction described in § 17.

EXAM

EXAMS

Name of exam	Master’s Thesis

Type of exam	Master's thesis/final project
ECTS	60
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	AODUM3P203
Module type	Project
Duration	2 semesters
Semester	Autumn
ECTS	60
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger

ORGANISATION

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

MASTER'S THESIS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The course module adds to integrated design knowledge obtained in 1st semester of the Master's program in Urban Design engineering. Therefore, the student is recommended to have knowledge, skills and competencies within the urban design and engineering field corresponding to the completion of the MSc01 - MSc03 level at the Urban Design Engineering education.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must be able to account for relevant mobilities-related knowledge, methods and theories within the chosen topic
- Must demonstrate a high degree of awareness regarding main theories, methods, experiments, tests and models within the field of mobilities
- Must be able to give a satisfactory account of scientific validation methods and the type of data used for the presented work

SKILLS

- Must demonstrate the ability to independently investigate a topic within the field of mobilities
- Must demonstrate the ability to select and apply the appropriate methods, techniques and tools for analysing problems, users, technologies, constructions, competitors, markets, products, strategies and companies
- Must demonstrate the ability to communicate in a professional manner

COMPETENCES

- Must achieve a high degree of integration of appropriate aspects of the topic of choice, in a theoretical, methodological and analytical sense within the broad field of mobilities
- Must be able to plan, conduct, reflect and communicate on processes connected to a relevant topic within mobilities using a wide range of theories, methods and tools
- Must be able to evaluate and put into perspective the investigated topic in relation to its feasibility, market potential and prospects for further development

TYPE OF INSTRUCTION

Types of instruction are listed in § 17; Structure and contents of the programme.

EXAM

EXAMS

Name of exam	Master's Thesis
Type of exam	Master's thesis/final project
ECTS	30
Permitted aids	See semester description
Assessment	7-point grading scale

Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	AODMM4K201
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jaeger, Hartmann

ORGANISATION

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