AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAM IN URBAN DESIGN, CAND.POLYT, 2013

CIVILINGENIØR
AALBORG

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

ANALYSING CONTEMPORARY MOBILITIES

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

A relevant Bachelor's degree (BSc)

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

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

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

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	15

Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Analyse af nutidens mobiliteter
Module code	AODMPM1P131
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
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

THE MOBILITIES TURN

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

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	Without aids

Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobilitetsvendingen
Module code	AODMPM1K132
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

TECHNOLOGIES AND INFRASTRUCTURES OF MOBILITIES

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module addresses and discusses the relationship between transport/infrastructure planning, mobilities and spatial development. The module furthermore offers an introduction to infrastructure and transportation planning focusing on traditional theories and techniques for transport planning. The course further addresses new ways to analyse the different mobilities systems. The students are consequently introduced to methods for analysing infrastructure-related problems in both public and private transport.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have an understanding of the relationship between infrastructure development, physical mobility and spatial development
- Must know the primary determinants for transport behaviour and transport demands (the determinants of trip production, trip distribution, modal split and routing)
- Must know about the principles behind transport modelling, and the limitations of the models
- Must have an understanding of the relation between conventional traffic planning and the 'mobilities turn'

SKILLS

- Must be able to identify and analyse infrastructure-related transport problems in both public and private transport
- Must be able to understand and analyse mobilities designs and mobilities systems (e.g. automobility, velomobility, aeromobility, metromobility etc.) and the interplay between these
- Must be able to formulate solutions to infrastructure-related transport problems

COMPETENCES

- Must be able to identify discrepancies between road network performance, environmental strains and mobility demands
- Must be able to critically evaluate and examine proposed infrastructure investments
- Must be able to formulate schemes and strategies for the utilisation of technologies of mobilities aiming at balancing considerations to mobilities and environmental strains
- Must have an understanding of various traffic models and their underlying mechanisms

TYPE OF INSTRUCTION

Lectures, workshops, supervision and plenary sessions

EXAM

EXAMS

Name of exam	Technologies and Infrastructures of Mobilities

Type of exam	Written or oral exam
ECTS	5
Permitted aids	Without aids
Assessment	Passed/Not Passed
Type of grading	Internal examination

FACTS ABOUT THE MODULE

Danish title	Mobilitetsteknologier og -infrastrukturer
Module code	AODMPM1K133
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

APPLIED PHILOSOPHY OF SCIENCE AND MOBILE METHODS

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

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 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
ECTS	5

Permitted aids	Without aids
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Anvendt videnskabsteori og mobile metoder
Module code	AODMPM1K134
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

MOBILITIES: PLACE AND CULTURE

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

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

EXAMS

Name of exam	Mobilities: Place and Culture
Type of exam	Oral exam based on a project
ECTS	15
Permitted aids	Without aids
Assessment	7-point grading scale

Type of grading	External examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobiliteter: Sted og kultur
Module code	AODMPM2P132
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
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

MOBILITIES: POLICY, BRANDING AND PLACE MANAGEMENT

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the student's ability to comprehend mobility policies and management as well as place management and branding in relation to the field of mobilities. This includes studies in leisure and travel, place theory and branding as well as mobility policies, mobility management, travel management and meetings management

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of theories and methods in the field of place theory, management, branding and policymaking in relation to the new mobilities turn.
- Must have knowledge of the strengths and weaknesses of methods and tools related to policy, branding and place management
- Must have an understanding of the relationships between spatial development, management, policies and branding
- Must have knowledge of the relationships between societal developments and mobility policies, mobility management, travel management and meetings management
- Must have knowledge of the economic implications of place, branding, policies and management
- Must have knowledge of governmentality and regulatory frameworks

SKILLS

- Must be able to apply relevant scientific theories and methods related to policy, branding and place 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
- Must be able to independently prepare place and mobility policies, plans, programmes and strategies
- Must be able to combine conventional tools from transport planning and travel management with new concepts, technologies, methods and theories in the field of place and mobilities research
- Must be able to analyse empirical cases in relation to policy, branding and place management
- Must be able to evaluate spatial development in relation to place management and branding

COMPETENCES

- Must be able to professionally communicate results and concepts related to policy, branding and place management
- Must be able to work in cross-disciplinary contexts in the field of mobility policy, mobility management, travel management and meetings management
- Must have the necessary competencies in developing models and concepts that capture the relationships between spatial development and the theoretical and methodological aspects of policy, branding and place management

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
ECTS	5
Permitted aids	Without aids
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobiliteter: Politik, branding og steder
Module code	AODMPM2K136
Module type	Course
Duration	1 semester
Semester	Spring
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

MOBILITIES AND TRACKING TECHNOLOGIES

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to introduce the students to the analysis and implementation of tracking technologies in the context of contemporary mobilities. On the background of the 'mobilities turn' the module explores technologies such as GPS, RFID, Bluetooth, etc., as a tool for mobilities analysis and intervention. The module aims at integrating analytical and theoretical understandings of tracking technologies with practical and methodological explorations of the technologies.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of tracking and location-based technologies and methods for the exploration of the application of new hardware and software products in understanding contemporary mobilities
- Must have knowledge of tracking technologies as method

SKILLS

- Must be able to further develop their skills in creating representations and visualisations of location-based data
- Must be able to further develop their analytical skills in analysing the implications of new tracking technologies for mobilities in contemporary society

COMPETENCES

- Must have competencies in assessing normative, cultural and ethical repercussions of pervasive mobilities monitoring and tracking technologies

TYPE OF INSTRUCTION

Supervision and plenary sessions

EXAM

EXAMS

Name of exam	Mobilities and Tracking Technologies
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 Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobiliteter og trackingteknologier
Module code	AODMPM2K137
Module type	Course
Duration	1 semester
Semester	Spring
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

MOBILE CULTURE AND COMMUNICATION

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

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
ECTS	5
Permitted aids	Without aids

Assessment	7-point grading scale
Type of grading	Internal examination

FACTS ABOUT THE MODULE

Danish title	Mobilkultur og -kommunikation
Module code	AODMPM2K138
Module type	Course
Duration	1 semester
Semester	Spring
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

MOBILITIES DESIGN: CONCEPT AND DIAGRAM

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to introduce students to the two of the key tools within mobilities design: the concept and the diagram. The course introduces to the nature of conceptual thinking and diagrammatical analysis as a way of analyzing and understanding mobilities. Various approaches to conceptual development and analysis are explored as well as the manifold applications of diagrams to mobilities analysis are discussed. The course illustrates concepts and diagrams both theoretically as well as with case based examples

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about theories of conceptual thinking and diagrammatical analysis
- Must be able to understand and identify key approaches to conceptual thinking and diagrammatic analysis

SKILLS

- Must be able to discuss and compare key approaches to conceptual thinking and diagrammatic analysis
- Must be able to evaluate advantages and challenges to different perspectives and approaches of conceptual thinking and diagrammatical analysis

COMPETENCES

- Must have competencies to apply concepts in cases of mobilities thinking and diagrams in mobilities analysis

TYPE OF INSTRUCTION

Supervision, case work, workshops and plenary sessions

EXAM

EXAMS

Name of exam	Mobilities Design: Concept and Diagram
Type of exam	Written or oral exam
ECTS	5
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobilitetsdesign: Koncept og diagram
Module code	AODMPM2K139
Module type	Course
Duration	1 semester
Semester	Spring
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

SUSTAINABLE MOBILITIES

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module addresses global mobilities issues from a sustainability perspective. Emphasis is on a broad definition of sustainability, i.e. its economic, social and ecological perspectives. The objective is to strengthen the student's ability to integrate in their work with mobilities a sustainability perspective including environmental mobilities, green technologies and environmental urbanism as well as social mobilities and sustainable migration.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of global mobilities issues both on a global, national and local scale
- Must have an understanding of the connection between sustainability and mobilities
- Must have knowledge of economic consequences in relation to sustainable solutions
- Must have an understanding of dynamic visualisation and mobilities tracking data
- Must have an understanding of sustainable technologies and infrastructures of mobilities

SKILLS

- Must be able to apply relevant theories and methods to the study of sustainable mobilities
- Must be able to assess global mobilities issues in various contexts

COMPETENCES

- Must be able to offer input for sustainable solutions to global mobilities issues
- Must have competencies in organising and managing complex mobilities in cross-disciplinary contexts

TYPE OF INSTRUCTION

Project (studio) with supervision and interactive dialogue

EXAM

EXAMS

Name of exam	Sustainable Mobilities
Type of exam	Oral exam based on a project
ECTS	20
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Bæredygtige mobiliteter
Module code	AODMPM3P136
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
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

ACADEMIC PAPER WRITING

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

By training the basic skills of academic paper writing and designing a research methodology, the students will develop the tools necessary for participation in academic work within the field of mobilities. The module will furthermore enable the students to acquire competencies in communicating with lay and professional audiences

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of the academic production process, the procedures in research quality assessments and monitoring and the channels for publication and dissemination of academic knowledge
- Must have an understanding of the societal and contextual conditions underlying the increasing 'scientification' of the practice field

SKILLS

- Must be able to apply to a specific mobilities case established models for academic paper writing and methodological reflection
- Must be able to evaluate their own academic papers in relation to established practices and systems of academic mobilities research

COMPETENCES

Competencies

- Must have competencies in writing an academic paper and/or a design for a research methodology relating to state-of-the-art research inspired by the 'mobilities turn'
- Must have competencies in communicating with lay and professional audiences

TYPE OF INSTRUCTION

Supervision and plenary sessions

EXAM

EXAMS

Name of exam	Academic Paper Writing
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 Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Akademisk publicering
Module code	AODMPM3K137
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

MOBILITIES DESIGN: VISUALIZATION AND REPRESENTATION

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

A BSc degree (Bachelor) in social science, humanities or engineering

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to introduce students to technologies and approaches for visualization and representation within mobilities design. The course explores the various ways of illustrating and giving visual indication of mobilities and flows. Techniques of representations in visual as well as other media are explored and the students will work towards creating concrete visualizations and representations related to specific examples and cases of mobilities design.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about technologies and approaches for visualization and representation within mobilities design
- Must be able to understand and identify key approaches to visualization and representation within mobilities design

SKILLS

- Must be able to discuss and compare key approaches to visualization and representation within mobilities design
- Must be able to evaluate advantages and challenges to different perspectives and approaches visualization and representation within mobilities design

COMPETENCES

- Must have competencies to apply visualization and representation to specific cases of mobilities design

TYPE OF INSTRUCTION

Supervision, case work, workshops and plenary sessions

EXAM

EXAMS

Name of exam	Mobilities Design: Visualization and Representation
Type of exam	Written or oral exam
ECTS	5
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Framework Provisions

FACTS ABOUT THE MODULE

Danish title	Mobilitetsdesign: Visualisering og repræsentation
Module code	AODMPM3K138
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

SUSTAINABLE MOBILITIES INFRASTRUCTURES AND TECHNOLOGY

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to enable students to acquire the skills necessary to conduct a study concerning issues relating to environmental mobilities, green technologies and environmental urbanism. Relevant theories and concepts, such as mobility management and sustainable mobilities, are explored with a view to their application in mobilities studies of contemporary society.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of state-of-the-art research, theories and technologies in the mobilities field in relation to current challenges to the environment
- Must have an understanding of the development of green technologies, means of transportation, infrastructures and environmental urbanism and mobilities from a theoretical as well as a practical perspective

SKILLS

- Must be able to apply relevant theories for the analysis of contemporary environmental challenges and potential developments based on the mentioned theoretical perspectives
- Must be able to apply tools related to green technologies, means of transportation, infrastructures and environmental urbanism and mobilities

COMPETENCES

- Must have competencies in developing sustainable mobilities solutions applicable to contemporary society

TYPE OF INSTRUCTION

A mixture of lectures supplemented with seminars and workshops

EXAM

EXAMS

Name of exam	Sustainable Mobilities Infrastructures and Technology
Type of exam	Written or oral exam
ECTS	5
Permitted aids	Without aids
Assessment	7-point grading scale

Type of grading	Internal examination
Criteria of assessment	As stated in the framework Provisions.

FACTS ABOUT THE MODULE

Danish title	Bæredygtige mobilitetsinfrastukturer og -teknologier
Module code	AODMTM3K159
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

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ACADEMIC INTERNSHIP

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 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 urban design 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 urban design engineering skills attained in the first part of the Master program.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

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

SKILLS

- Must be able to engage professionally in the environment within which the urban design assignment 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 urban design proposals
- 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 urban design engineering and find technical and design based strategies for illuminating them
- Must be able to participate in the solving of urban design engineering problems
- Must be able to make academic reflections on an identified technical and design focus area relating to urban design 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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Academic Internship
Type of exam	Oral exam based on a project
ECTS	25
Permitted aids	Without aids

Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the framework Provisions

FACTS ABOUT THE MODULE

Danish title	Projektorienteret forløb
Module code	AODUPM3P135
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	25
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

ACADEMIC PAPER WRITING

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Relevant BSc degree (Bachelor)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

By training the basic skills of academic paper writing and designing a research methodology, the students will develop the tools necessary for participation in academic work within the field of mobilities. The module will furthermore enable the students to acquire competencies in communicating with lay and professional audiences.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge of the academic production process, the procedures in research quality assessments and monitoring and the channels for publication and dissemination of academic knowledge
- Must have an understanding of the societal and contextual conditions underlying the increasing 'scientification' of the practice field

SKILLS

- Must be able to apply to a specific mobilities case established models for academic paper writing and methodological reflection
- Must be able to evaluate their own academic papers in relation to established practices and systems of academic mobilities research

COMPETENCES

- Must have competencies in writing an academic paper and/or a design for a research methodology relating to state-of-the-art research inspired by the 'mobilities turn'
- Must have competencies in communicating with lay and professional audiences

TYPE OF INSTRUCTION

Supervision and plenary sessions

EXAM

EXAMS

Name of exam	Academic Paper Writing
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 Framework Provisions.

FACTS ABOUT THE MODULE

Danish title	Akademisk publicering
Module code	AODUPM3K1511
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Location of the lecture	Campus Aalborg
Responsible for the module	Sarah Guldhammer Olesen, Tenna Doktor Olsen Tvedebrink

ORGANISATION

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

LONG MASTER'S THESIS

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 - MSc03 Urban Design Engineering education or similar.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Master’s Thesis
Type of exam	Master's thesis/final project

ECTS	60
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	As stated in the framework Provisions.

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale - lang afgang
Module code	AODUPM3P1314
Module type	Project
Duration	2 semesters
Semester	Autumn
ECTS	60
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

MASTER'S THESIS

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 - MSc03 Urban Design Engineering education or similar.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Master's Thesis
Type of exam	Master's thesis/final project

ECTS	30
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	As stated in the framework Provisions.

FACTS ABOUT THE MODULE

Danish title	Kandidatspecial
Module code	AODUPM4P131
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
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

URBAN TRANSFORMATION AND SUSTAINABLE ENGINEERING TECHNIQUES

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module addresses the transformation of the built urban environment in which the notion of the compact city is a driving force. Emphasis is on integrating engineering techniques and urban design. In this context, the focus is to identify potential in existing built environments and to employ techniques for e.g. densification, climate adaptation and social inclusivity. These will be put into perspective for developing engineering based solutions to environmentally responsible design strategies and interventions.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must understand the dynamics of the urban climate and its effects on the built environment
- Must have knowledge of environmentally and socially sustainable techniques for densifying the urban environment
- Must have knowledge of potential resources in the contemporary built environment as a catalyst to finding sustainable engineering and design solutions
- 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 (*)

(*)To obtain the knowledge, skills and competence marked with (*) it is presupposed that students follow the course in Problem Based Learning and Project Management that the school offers all foreign students in the beginning of 1st semester.

SKILLS

- Must be able to analyse and conceptualise complex urban projects and environments from a number of perspectives related to the 'compact city', e.g. climate adaptation and mitigation, densification, re-use, inclusivity
- Must be able to analyse the interaction between environmental factors such as wind, water and the built environment
- Must be able to utilise theories and methods in order to analyse and evaluate contemporary built environments and notions of 'compact cities'
- Must be able to develop a proposal that integrates engineering techniques with conceptual and spatial design
- Must be able to structure project management activities based on a wellformulated problem formulation (*)

(*)To obtain the knowledge, skills and competence marked with (*) it is presupposed that students follow the course in Problem Based Learning and Project Management that the school offers all foreign students in the beginning of 1st semester.

COMPETENCES

- Must be able to work with techniques for adapting to climate change in densified built environments that compile technical, spatial, social and aesthetic qualities into an integrated design solution
- Must be able to evaluate existing situations and utilise innovative and contemporary sustainable engineering techniques in the transformation of the built environment
- Must be able to evaluate and communicate the effects of urban transformation as environmentally and socially sustainable
- Must be able to reflect on, plan and manage a study project in a PBL learning environment (*)

(*)To obtain the knowledge, skills and competence marked with (*) it is presupposed that students follow the course in Problem Based Learning and Project Management that the school offers all foreign students in the beginning of 1st semester.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Urban Transformation and Sustainable Engineering Techniques
Type of exam	Oral exam based on a project
ECTS	15
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Urban transformation og bæredygtige teknikker
Module code	AODUTM1P161
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
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

CLIMATE AND HYDROLOGY OF THE DENSE CITY

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The course will provide practical knowledge and skills in the development of designs supporting sustainability in the urban built environment. The main goal is to gain knowledge and understanding of the design challenges involved in creating a more ecologically based city considering natural and built elements in the design process. The course will contribute to 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

SKILLS

- Must be able to utilise 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

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

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

EXAM

EXAMS

Name of exam	Climate and Hydrology of the Dense City
Type of exam	Written or oral exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Klima og hydrologi i den tætte by
Module code	AODUTM1K162
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

CONSTRUCTING AND DESIGNING PERFORMATIVE URBAN ENVIRONMENTS

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The aim of the course is the construction and design of performative urban structures and environments. It explores the role of new technologies and their ability to develop performative urban structures, environments and designs in an integrated design process. The module presents theories of parametric design, material and structure in relation to theories of instant urbanism, cultural grafting and city life. The course will present concepts and the use of analogue and digital technologies related to performative urban spaces.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about theories related to the analysis, construction and design of performative urban environments
- Must have knowledge about performative technologies and computational design tools in relation to performative structures in the built environment
- Must have knowledge of parametric design tools that enable the generation of feedback loops from generation of form and performance analysis in relation to structure and urban space
- Must have knowledge about methodologies related to design and construction of performative urban environments

SKILLS

- Must be able to identify, analyse and address challenges related to the development of performative urban environments and media architecture
- Must be able to make a structural analysis of complex spatial systems when setting up design concepts
- Must be able to analyse and to use mixed technological and aesthetical methods when designing performative structures
- Must be able to analyse and identify relevant design concepts in relation to performative technologies in the built environment

COMPETENCES

- Must be able to create a synthesis of structural, urban and performative elements in a complex urban setting by using advanced design tools that support the definition and control of complex context, advanced geometry and performance analysis
- Must be able to evaluate the effect of the design on city life including sensual experiences

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Constructing and Designing Performative Urban Environments
Type of exam	Written or oral exam
ECTS	10

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	Konstruktion og design af performative urbane rum
Module code	AODUTM1K163
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	10
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

DESIGNING URBAN MOBILITY

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the students' ability to functional urban design in the contemporary network city covering a range from urban mobility systems (e.g. metros and subways) and their relation to the city to urban spaces and their linkages to the technical based transit network or large scale urban architecture and transit terminals and their function as urban flow spaces.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must develop knowledge of the importance of contemporary transit systems to the functionality of cities
- Must be able to understand the technical factors shaping and forming the contemporary urban transit system in their social context
- Must develop knowledge of the adequate functional and technical solutions to mobility challenges within the contemporary network city

SKILLS

- Must be able to apply the theories and methods relevant to the design and development of urban transit and mobility
- Must be able to evaluate the solutions presented in the field and assess their values seen in the light of urban design theories, methods and reference projects
- Must be able to establish skills in analysing the mobility challenges of the contemporary city applying relevant technologies and methods

COMPETENCES

- Must have competencies to create design proposals and concepts for urban mobility and assess their implementation effects

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Designing Urban Mobility
Type of exam	Oral exam based on a project
ECTS	15
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Urbant mobilitetsdesign
Module code	AODUTM2P161
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
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

SIMULATING AND MODELING URBAN FLOWS

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the students' ability to create functional urban design based on mobility and flows in the contemporary network city. This should be done by applying a wide field of contemporary information technologies such as interactive media, mediated surface design, mobility tracking technologies (GPS / RFID), mobile and digital networks, ICT software for urban flow simulation and design, mobile robotics and 'intelligent' cybernetics systems design.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about contemporary information technologies and their practical design and implementation in the network city
- Must be able to understand the technical potentials in applying 'intelligent' technologies in urban design
- Must be able to understand and reflect on the use of the newest digital simulation tools, 3D programming, GIS and CAD programs

SKILLS

- Must be able to create design proposals and experiments applying new information technologies and software to mobility and flows in urban design of the network city
- Must be able to evaluate the solutions presented in the field and assess their values seen in the light of 'intelligent' technologies
- Must be able to use CAD and GIS programs to map and visualise relations between environmental, infrastructural and spatial parameters

COMPETENCES

- Must have competencies to create design proposals and concepts for urban mobility/flow and assess their implementation effects

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Simulating and Modeling Urban Flows
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	Urbane flowsimuleringer og -modeller
Module code	AODUTM2K163
Module type	Course
Duration	1 semester
Semester	Spring
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

THEORIES OF THE NETWORK CITY AND ITS TECHNOLOGIES

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective is to strengthen the students' ability to comprehend and understand the technical factors in their social context shaping contemporary network cities. This is done by introducing state-of-the-art scientific theories relating to the development of the network city within the fields of urban theory, mobility theory, network theory and other related theoretical fields.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about the technical forces shaping the network city and their societal consequences
- Must be able to understand the basic factors behind the creation of the network city and its technologies
- Must be able to develop knowledge about the network city and its technologies as a 'large technical system'

SKILLS

- Must be able to apply the relevant scientific theories and methods related to 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 acquire competencies in analysing the network city on a theoretical and methodologically reflective level
- Must acquire competencies in assessing technical solutions to traffic and mobility challenges of the network city

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Theories of the Network City and its Technologies
Type of exam	Written or oral exam
ECTS	5
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Teorier om netværksbyen og dens teknologier
Module code	AODUTM2K164
Module type	Course
Duration	1 semester
Semester	Spring
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

SITE MORPHOLOGY AND LANDSCAPE TECHNIQUES

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module activates theories and methodologies concerning site and investigates the site as an urban landscape of technical and aesthetic features. Thus, the module draws on subjects such as Landscape Urbanism and Landscape Architecture, site mapping and spatial development, as well as geotechnical methods and theories; all of which contribute to the understanding of the site as a living organism. This course works with the spatial section as a tool in order to examine what is above and what is below the surface in order to facilitate a movement from analysis to conceptual design in an integrated process - a process within which, technique, nature and aesthetics mutually influence each other, and are parts of the same totality.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must exhibit knowledge of natural processes and their effect on technical and formal considerations relating to landscape and urban design
- Must be able to understand theories and methods relating to sites and technical and aesthetic landscapes
- Must be able to understand theories and methods relating to geotechnical conditions; among these knowledge about soil conditions and ground water conditions, as well as knowledge of the methods used to solve geotechnical and foundation problems.

SKILLS

- Must be able to apply theories and methods relating to the site seen as a result of natural processes
- Must be able to utilise analytical and methodological tools in the determination of site characteristics, origin and development and further to use this information as a catalyst for design proposals and the generation of form and space
- Must be able to work with sectional models, using this technique as both an analytical and a conceptual design tool
- Must be able to understand the site as being made up of what occurs both above and below the surface, as well as it being constructed of both technical and aesthetic elements
- Must be able to understand what a geotechnical report is and what constitutes the content of such a report

COMPETENCES

- Must be able to reflect upon the interdependency and mutual influence that the built and natural environments have on each other
- Must be able to present the movement from analysis to conceptual design as an integrated proposal through the use of sectional models
- Must be able to communicate knowledge of and methods relating to the geological conditions of the soil

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Site Morphology and Landscape Techniques
Type of exam	Written or oral exam

ECTS	5
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Stedets morfologi og landskabsteknikker
Module code	AODUTM2K165
Module type	Course
Duration	1 semester
Semester	Spring
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

GLOBAL CHALLENGES AND URBAN TECHNOLOGIES

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 of this module is to address the challenges affecting contemporary global societies and environments in a technical, critical and reflective manner. This is achieved through the identification and selection of a physical problem within a global perspective, registration and mapping of the existing situation and the subsequent analytical and technical assessment of the situation and utilisation of empirical case studies. Further this module creates an understanding of these challenges as design challenges solvable by the proposal of strategies that integrate technical solutions with aesthetic practices and that develop a holistic approach to urban problem-solving in a global context.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge about the technical and design based problems facing contemporary global societies and urban environments
- Must be able to understand a local problem in their global context
- Must have knowledge of methods for the attainment of data and information regarding the identified problem
- Must have knowledge of empirical cases that illuminate the given problem from both technical and design based angles

SKILLS

- Must be able to identify a global challenge and relate it to specific challenges in the built environment
- Must be able to identify technical solutions and work with and develop form and space as integral elements in the adaptation of technical solutions
- Must be able to apply technical and analytical methods to extract data and amass critical information regarding the chosen locality and nature of the identified problem
- Must be able to evaluate the quality of the proposed solutions as experiential realities

COMPETENCES

- Must be able to critically assess and synthesise gathered registration and case study material from both a technical and design based perspective
- Must be able to implement the synthesised information into the development of conceptual and spatial strategies
- Must be able to integrate technical and aesthetic factors into a holistic approach
- Must be able to communicate the technical and aesthetic elements of the proposal as a spatially understood reality

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Global Challenges and Urban Technologies
Type of exam	Oral exam based on a project
ECTS	20
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Urban transformation og bæredygtige teknikker
Module code	AODUTM3P163
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
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

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

PROJECT, DESIGN AND CONSTRUCTION MANAGEMENT IN ARCHITECTURE AND URBAN DESIGN

2018/2019

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

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

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

An introduction to project, design and construction management.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

- Must have knowledge and understanding of theories and methods within project, design or construction management Must have knowledge of ethical, economical, legal and social interests in the field of construction management
- Must have knowledge of current theories and practice in construction management

SKILLS

- Must be able to analyse and assess the cross-disciplinary inclusion of actors involved in the decision-making processes
- Must be able to use methods and techniques for preparing cost estimates for building construction projects
- Must be able to apply methods of planning and scheduling of 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 apply methods and theories for project, design or construction management within a given budget using specified materials and construction methods

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Project, Design and Construction Management in Architecture and Urban Design
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	Projekt-, design- og byggeledelse i arkitektur og urbant design
Module code	AODUTM3K162
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

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	AODUTM3K164
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

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ACADEMIC INTERNSHIP

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 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 urban design 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 urban design engineering skills attained in the first part of the Master program.

Students who complete the module:

LEARNING OBJECTIVES

KNOWLEDGE

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

SKILLS

- Must be able to engage professionally in the environment within which the urban design assignment 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 urban design proposals
- 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 urban design engineering and find technical and design based strategies for illuminating them
- Must be able to participate in the solving of urban design engineering problems
- Must be able to make academic reflections on an identified technical and design focus area relating to urban design 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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Academic Internship
Type of exam	Oral exam
ECTS	25
Assessment	7-point grading scale

Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations.

FACTS ABOUT THE MODULE

Danish title	Projektorienteret forløb
Module code	AODMTM3K1611
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	25
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
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LONG MASTER'S THESIS

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 - MSc03 Urban Design Engineering education

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

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 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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	long Master's Thesis

Type of exam	Master's thesis/final project 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.
ECTS	60
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	As stated in the Joint Program Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale - lang afgang
Module code	AODUPM3P7V11
Module type	Project
Duration	2 semesters
Semester	Autumn
ECTS	60
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

MASTER'S THESIS

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 - MSc03 Urban Design Engineering education

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

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 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 the introduction to Chapter 3.

EXAM

EXAMS

Name of exam	Master's Thesis

Type of exam	Master's thesis/final project 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.
ECTS	30
Permitted aids	Without aids
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	As stated in the Joint Program Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	AODUPM4P17V1
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Location of the lecture	Campus Aalborg
Responsible for the module	Tenna Doktor Olsen Tvedebrink, Sarah Guldhammer Olesen

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