



AALBORG UNIVERSITET

STUDIEORDNINGEN FOR KANDIDATUDDANNELSEN I SERVICE SYSTEM DESIGN, 2012

CAND.SCIENT.
KØBENHAVN

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

The System Around the Product 2019/2020	3
User Experience Design for Multi-modal Interaction 2019/2020	5
Designing Product Service Systems 2019/2020	7
Design of a Distributed Product Service System 2019/2020	9
Distributed Systems 2019/2020	11
User Participation and Social Innovation 2019/2020	13
Designing the Experience 2019/2020	15
Master's Thesis 2019/2020	17
Project in Collaboration with a Company 2019/2020	19
Theoretical Elaboration of a Topic or a Case 2019/2020	21
System Organization and Industrialization of Services 2019/2020	23
Strategies and Business in Services 2019/2020	25

THE SYSTEM AROUND THE PRODUCT

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Bachelor's degree in Industrial Design, Media Technology, Interaction Design, Art and Technology, IT Communication and New Media or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this project module is to develop students' ability to analyse and propose syntheses of products and services with high service/technology content, focusing on the interaction aspects between users and the service, human and technologies, and machine to machine

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Must be able to understand time and interaction related issues in specific service cases
- Must be able to apply appropriate methods and tools to organise sequences of events and interactions in a service.
- Must be able to Understand technological, material, social and cultural aspects relating to the design of services and interaction.

SKILLS

Students who complete this module will obtain the following qualifications

- Must be able to **analyse** the products' interplay with users and take into consideration and account for the contextual circumstances that necessitate a particularly active behaviour and analysis.
- Must be able to carry out an **analysis** of problem areas relating to the design of the interaction between products and their users.
- Must be able to **synthesise** technical, time and interaction related, social and cultural aspects into a design proposal.

COMPETENCES

Students who complete this module will obtain the following qualifications

- Must be able to design products and services integrating technical and user aspects through proposal-making (**synthesis**) and assess their integration.
- Must be able to adequate competences to present the project and the process in a professionally appropriate way by **applying** relevant media and techniques.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	The System around the Product
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on a presentation and discussion of a project) or written (in the form of a project/process report) examination with internal censor. The assessment is performed in accordance with the 7-point scale
ECTS	15
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Systemet omkring produktet
Module code	MSNSSDM1121
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

USER EXPERIENCE DESIGN FOR MULTI-MODAL INTERACTION

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Any basic course on interaction design at the bachelor level.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This course trains students to research, analyse, prototype and conceptualise design considering all system aspects including the social and cultural contexts of use. The course gives a comprehensive knowledge about user involvement in the design process, going beyond traditional methods such as usability lab testing. The course introduces students to the application of multi-modal methods and interaction design within contemporary fields such as surface computing, pervasive computing, social and mobile computing, and/or mundane computing.

The objectives are realised by presenting methods and tools in a case based framework and through the students' active participation in workshops and assignments.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the course module will obtain the following qualifications

- **Knowledge** about system design methods including the social and cultural contexts of use.
- **Knowledge** of ethnographic study methods for user behaviour research.
- **Knowledge** about qualitative research methods involving end users in the field, such as interview techniques, analysis and experience sampling.
- **Knowledge** about scenario-based design methods.
- **Knowledge** about principles for multi-modal interaction design.

SKILLS

Students who complete the course module will obtain the following qualifications

- **Apply** the taught methods to solve concrete design problems.
- Able to **evaluate** and compare and apply the methods for a specific design problem.
- **Understand** user analysis and organise data from and interaction in a way that can be used in the design process (**synthesis**).
- **Apply** knowledge to facilitate the design process involving users in real-life contexts.

COMPETENCES

Students who complete the course module will obtain the following qualifications

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

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	User Experience Design for Multi-modal Interaction
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on presentation and discussion) or written (based on a report) examination with internal censor. Assessment: Pass/Fail.
ECTS	5
Permitted aids	With certain 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	Design af brugeroplevelse for multi-modal interaktion
Module code	MSNSSDM1122
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

DESIGNING PRODUCT SERVICE SYSTEMS

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

Bachelor's degree in Industrial Design, Media Technology, Interaction Design, Art and Technology, IT Communication and New Media or similar.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module will introduce service design and provide knowledge and methodological tools to analyse existing services and to develop new services.

The course will provide an overview of analytical methods to understand and integrate users needs, design methods to control and organise time and interaction-based elements of a services and representation techniques, that can be used to communicate with the various actors involved in a service system.

LEARNING OBJECTIVES

KNOWLEDGE

- **Understand** the nature and characteristics of services.
- **Understand** and be able to explain differences and analogies between products and services in relation to the design process.
- **Understand** the structure of a service in relation to its time, experience and interaction factors.
- **Understand** the nature and characteristics of the interaction between service providers, technologies and users in a service encounter.

SKILLS

- **Apply** adequate analytical and interpretation tools to integrate users' need and possibly participation in the design process.
- Able to design a service, its structure, components and actors (**synthesis**).
- Able to organise sets of operations, sequence of events, interactions and material evidences in a service (**synthesis**).
- **Apply** adequate representation techniques to communicate the structure of the service to people with different knowledge and technical/cultural background.

COMPETENCES

Ability to select and **apply** an appropriate approach to the analysis and the design of a service.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Designing Product Service Systems
Type of exam	Written or oral exam

	In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on presentation and discussion) or written (based on a report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See the 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	Design af produkt-servicesystemer
Module code	MSNSSDM1123
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

DESIGN OF A DISTRIBUTED PRODUCT SERVICE SYSTEM

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

1st semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this project module is to give hands-on experience on the design of a complex service on the basis of a modular platform, in which actors and competences are clearly identified, organizational and interaction aspects are planned and user participation is planned and supported.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Must be able to **understand** the nature and structure of distributed system.
- Must be able to organise, explain and discuss the role, capabilities and relevance of different components/actors in a product service system (**synthesis**).

SKILLS

Students who complete this module will obtain the following qualifications

- Must be able to plan and describe competences of different components/actors in a modular service architecture and to organise them appropriately (**synthesis**).
- Must be able to **apply** techniques that support the participation of actors with different backgrounds, skills and culture.
- Must be able to integrate technical and human components on a service platform (**synthesis**).

COMPETENCES

Students who complete this module will obtain the following qualifications

- Must be able to plan adequate systemic structures for the organisation of services (**synthesis**).
- Must be expert in planning and supporting collaboration, participation and integration of different components in a service system (**synthesis**).

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Design of a Distributed Product Service System
Type of exam	Written or oral exam

	In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on a presentation, video, prototypes and discussion of a project) or written (based on a project/process report) examination with external censor. The assessment is performed in accordance with the 7-point scale.
ECTS	15
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Systemet omkring produktet
Module code	MSNSSDM2121
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

DISTRIBUTED SYSTEMS

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

1st semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The objective of this model is to introduce a higher level of complexity in the design of services that allows for the definition of modular systems and service platforms in both IT-based and physical services. In this model students will develop an understanding of all the technical and non-technical elements that are needed to provide successful services and operate a service architecture.

LEARNING OBJECTIVES

KNOWLEDGE

- **Understand** the key technologies behind social networking, search engines, organisation of content and user-generated tagging.
- **Analyse**, explain and discuss methods for "enrichment" of services: involvement of users, identity management, personalization, use of context, etc.
- **Analyse** drivers and barriers for introduction of new ICT services from a technology, user and market perspective.
- **Understand** the concepts of "service architecture".
- **Understand** the concept of modularisation of products and services.
- **Understand** and explain the potential benefits of modularisation.
- **Understand** the concept of product and supply chain architecture.
- **Understand** the paradoxes related to modularisation and innovation.
- **Apply** techniques and tools to control key technologies behind social networking, search engines, organisation of content and user-generated tagging.

SKILLS

- Classify services and outline the requirements that a given service imposes on networks and terminals (**analysis**).
- **Understand** and **apply** user-centric service development and stakeholder analysis in setting up the requirements specification for a service.
- Be able to **analyse** and evaluate various dimensions of modular products and services.
- Be able to position modular products and services in a specific business context (**analysis**).
- Be able to **apply** different concepts and theories to specific cases.

COMPETENCES

- **Analyse** and design (**synthesis**) a realistic ICT or physical service (on a conceptual level) to address an identified user need and discuss the service architecture needed to realise the proposed service.
- Demonstrate **understanding** through application in exercises and cases of:
 - Various types of products and services.
 - Various organizations characterized by differences in maturity and size.

Various types of supply chain relations.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Distributed Systems
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on presentation and discussion) or written (based on a report) examination with internal censor. Assessment: Pass/Fail
ECTS	5
Permitted aids	With certain 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	Distribuerede systemer
Module code	MSNSSDM2122
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

USER PARTICIPATION AND SOCIAL INNOVATION

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

1st semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this module is to provide students with advanced knowledge and methods to interact with users and involve them in a process of co-design and participation. In these modules, exercises and theoretical reflections will also be proposed to analyse and evaluate design action on innovation in specific social contexts. The students will learn to use methods and techniques from different disciplinary contexts and adapt them in order to stimulate and support users' participation and the interpretation of their needs, behaviour and attitudes in relation to their social and cultural context.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the module will obtain the following qualifications

- **Understand** the full potential of methods and tools deriving from different disciplines for the development of a design process.
- **Knowledge** about theories and practice of innovation in social contexts.
- Extensive **knowledge** about participatory design and co-design theories and methodological approach.
- **Understand** the relevance of participatory design approach on specific applications of services in the public and private sector.
- **Understand** the implications and characteristics of innovation processes in open and distributed systems.

SKILLS

Students who complete the module will obtain the following qualifications

- **Apply** advanced knowledge about user centred techniques to support users' co-creation and participation.
- Support user participation by developing prototypes (**synthesis**) that simulate and provide evaluation elements on user interaction and participation.
- **Apply** specific methods and tools to engage with users.
- Develop design strategies that take into account specific socio-technical contexts (**synthesis**).
- **Evaluate** the social-technical implications of design intervention in social contexts.

COMPETENCES

Students who complete the module will obtain the following qualifications

- Plan and develop user-oriented design activities in relation to a specific design task and context (**synthesis**).
- Plan users involvement and participation in the design process (**synthesis**).

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	User Participation and Social Innovation
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on presentation and discussion) or written (based on a report) examination with internal censor. Assessment: Pass/Fail.
ECTS	5
Permitted aids	With certain 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	Brugerinvolvering og social innovation
Module code	MSNSSDM2123
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

DESIGNING THE EXPERIENCE

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

1st semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this project module is to provide students with advanced knowledge of techniques and tools to represent non-functional aspects of services such as time sequences, interactions and experiences. The students will learn how to use narrative, visual and multimodal techniques to communicate nature and characteristics of a service and to support users participation with knowledge about the most complex aspects of the service.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete the course module will obtain the following qualifications

- **Understand** service as experiences through the individuation of the most relevant non-functional component.
- **Knowledge** about different levels, qualities and perceptions of experience in services.
- **Understand** advanced representation techniques to represent experience in a service.
- Extensive and advanced **knowledge** about storytelling and narrative techniques.
- Some **knowledge** about video editing and video sketching techniques.

SKILLS

Students who complete the course module will obtain the following qualifications

- **Apply** narrative techniques to represent service experiences.
- **Apply** appropriate modality of interaction with users according to the level of their involvement in the service and the context of use.
- **Apply** video sketching as a fast and rich representation technique.
- Capability to **apply** multi-modal perception to interactive digital or physical services.
- **Apply** multi-modal perception processes in relation to higher order cognitive processes such as emotional response and intelligibility.
- **Apply** methods to test experience qualities such as usability, sociability, likeability, etc. in services.

COMPETENCES

Students who complete the course module will obtain the following qualifications

- Involve users and reflect on their role in relation to the co-design of services and experiences.
- Represent experience-related aspects in services (**synthesis**).
- Manage and process data in relation to the design of experience in services (**synthesis**).

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Designing the Experience
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on presentation/videos and discussion) or written (based on a report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Design af oplevelsen
Module code	MSNSSDM2124
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

MASTER'S THESIS

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

All previous semesters (projects and course modules) must have been passed (1st through 3rd semesters)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

In the Master's thesis the student has to demonstrate the acquisition of competences, skills and knowledge that allow him/her to master the profession of service design. The student will work on a theme chosen together with the supervisor and possibly an external company or organisation.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Must have **knowledge** about the possibilities to apply appropriate methodological approaches to specific study areas.
- Must have **knowledge** about design theories and methods that focus on the design of advanced and complex product-service systems.

SKILLS

Students who complete this module will obtain the following qualifications

- Must be able to work independently, to identify major problem areas (**analysis**) and adequately address problems and opportunities (**synthesis**).
- Must demonstrate the capability of **analysing**, designing and representing innovative solutions.
- Must demonstrate the ability to **evaluate** and address (**synthesis**) major organisational and business issues emerging in the design of a product-service system.

COMPETENCES

Students who complete this module will obtain the following qualifications

- Must be able to master design and development work in situations that are complex, unpredictable and require new solutions (**synthesis**).
- Must be able to independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility (**synthesis**).
- Must have the capability to independently take responsibility for own professional development and specialisation (**synthesis**)

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
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Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on the project report, a presentation, discussion as well as e.g. video, prototypes and discussion) or written (a project/process report) examination with external censor. The assessment is performed in accordance with the 7-point scale.
ECTS	30
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	MSNSSDM4121
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

PROJECT IN COLLABORATION WITH A COMPANY

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

2nd semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this project module is to give the students the opportunity to have a *hands-on* experience in service design with a company or an organisation. The project can be developed as an internship at the company or through cooperation between the student, the university, and the company.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Must have practical, conceptual and professional **knowledge** that qualify the role and value of service design practice.
- Must have **knowledge** of relevant professional, business related and organizational issues that are relevant for the design practice.

SKILLS

Students who complete this module will obtain the following qualifications

- Must be able to **understand** and engage with a professional environment in relation to service design assignments.
- Must be able to **analyse, understand** and **synthesise** strategic issues in design practice on the basis of the knowledge acquired in the previous courses.

COMPETENCES

Students who complete this module will obtain the following qualifications

Must be able to manage and solve (**synthesis**) systemic tasks related to service design in cross-disciplinary teams in a company, design studio or similar.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Project in Collaboration with a Company
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology:

	Individual oral (based on a presentation and discussion of a project) or written (based on a project/process report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	20
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	Projekt i samarbejde med virksomhed
Module code	MSNSSDM3121
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

THEORETICAL ELABORATION OF A TOPIC OR A CASE

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

2nd semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this module is to give the student the opportunity to reflect and elaborate on the theoretical and methodological knowledge acquired in the previous modules, possibly applying this knowledge to a specific study area, a business sector or a case.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- Must be able to **analyse**, define and frame a relevant subject for investigation and research within the area of design of product service systems.
- Must be able to **understand** and account for relevant theoretical positions and related methodologies pertaining to the chosen subject.

SKILLS

Students who complete this module will obtain the following qualifications

- Must be able to **synthesise** the research problem, taking into account the interdependency between type of knowledge wanted, the possible methods of investigation and type of data produced.
- Must be able to observe, **analyse** and interpret designers' behaviour in specific social and technical contexts.

COMPETENCES

Students who complete this module will obtain the following qualifications

Must be able to plan and carry out research of a chosen subject and have the capacity to describe the chosen problem in a theoretical and methodological framework as well as to draw conclusions on the basis of own analysis of the results (**synthesis**).

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Theoretical Elaboration of a Topic or a Case
Type of exam	Written or oral exam In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology:

	Individual oral (based on a presentation, video, prototype and discussion of a project) or written (based on a project/process report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	20
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Teoretisk uddybelse af et emne eller sag
Module code	MSNSSDM3122
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	20
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

SYSTEM ORGANIZATION AND INDUSTRIALIZATION OF SERVICES

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

2nd semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this module is to provide strategic insights for the organization of service systems of higher complexity that are based on modularization, distribution of work and competences and economy of scale and scope. The module will provide theoretical knowledge about organizational issues in this area and a series of theoretical contributions that will frame the development of such systems from a design perspective.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

- **Knowledge** about organisation structures, strategic and political issues and potential risks.
- **Understand** organisational issues in relation to change and innovation.
- **Knowledge** of how service platforms can be organised according to industrial principles of economy of scale/scope, reproducibility, distribution of work and competences.
- **Knowledge** on how design competences can be used in driving change in organisation.

SKILLS

Students who complete this module will obtain the following qualifications

- **Apply** appropriate methods and tools to support innovation processes in organisation.
- **Evaluate** the impact of change in organisation and in service quality.
- Interpret, **understand** and address (**synthesis**) the need and the opportunities for design-driven change within organisations.

COMPETENCES

Students who complete this module will obtain the following qualifications

- **Evaluate** potential risks and power issues in organisations.
- Support innovation processes in service organisation by **applying** appropriate design strategies.
- **Evaluate** design issues that can address innovation in organisation.

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	System Organization and Industrialization of Services
Type of exam	Written or oral exam

	In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on a presentation and discussion) or written (a report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Systemorganisation og industrialisering af serviceydelser
Module code	MSNSSDM3123
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Copenhagen
Responsible for the module	Claus Brøndgaard Madsen

ORGANISATION

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

STRATEGIES AND BUSINESS IN SERVICES

2019/2020

PREREQUISITE/RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

2nd semester or similar

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The purpose of this module is to provide advanced knowledge on theories and methodological tools to analyse and suggest appropriate and innovative business models for service companies. The module will focus on theories of entrepreneurship with emphasis on innovative business models for product-service systems. Theories and methodological tools will be applied to specific cases.

LEARNING OBJECTIVES

KNOWLEDGE

Students who complete this module will obtain the following qualifications

The purpose of this module is to provide advanced knowledge on theories and methodological tools to analyse and suggest appropriate and innovative business models for service companies. The module will focus on theories of entrepreneurship with emphasis on innovative business models for product-service systems. Theories and methodological tools will be applied to specific cases.

SKILLS

Students who complete this module will obtain the following qualifications

- **Understand** and explain the link between different design elements of business models: customer value, organisation, technology and financial issues.
- Appropriately and critically **apply** innovation and business developments theories and methodologies in the analysis of market trends and business models.
- Combine knowledge on service systems and technology with business development and business potential (**synthesis**).

COMPETENCES

Students who complete this module will obtain the following qualifications

- Appropriately select and use business models in different business areas needed to realise the proposed service (**synthesis**).
- Select and use creative and design-driven perspectives for the development of innovative services, up to the development of appropriate business plans (**synthesis**).

TYPE OF INSTRUCTION

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

EXAM

EXAMS

Name of exam	Strategies and Business in Services
Type of exam	Written or oral exam

	In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology: Individual oral (based on a presentation and discussion) or written (a report) examination with internal censor. The assessment is performed in accordance with the 7-point scale.
ECTS	5
Permitted aids	With certain aids: See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Strategi og forretning i servicesektoren
Module code	MSNSSDM3124
Module type	Course
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Semester	Autumn
ECTS	5
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