AALBORG UNIVERSITET

CAND.TECH. I FORRETNINGSINNOVATION 2020

CAND.TECH.
AALBORG

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

ENTREPRENEURIAL PRACTICE

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

The student must be able to:

- Describe and understand general capabilities needed for organisations to become and stay innovative in their business development.
- Describe and understand general abilities and conditions needed for people to become and stay entrepreneurial.
- Describe and understand tools and methods for supporting entrepreneurial processes with an emphasis on discovery processes.
- Describe and understand theories of creative methodologies and creative mind-set (dedicated ressources will be allocated for the initiation and sustaining of the objective).

SKILLS

The student must be able to:

- Identify and analyse a need or problem using various theoretical perspectives related to a business development process.
- Use creative theory and methods in discovery processes.
- Be able to assess and analyse the entrepreneurial/innovation capabilities of the unit of analysis in focus.
- The student must be able to identify possible conceptual solutions or development directions for solutions by using theory and creative skills.
- Compose a project report according to the norms of the scientific field, include relevant original literature, use correct academic language and communicate the project's research-based basis and problem and results in a coherent written and oral manner, including the connection between the problem formulation, the project's execution and the main conclusions.
- Evaluate and select relevant original literature and current scientific methods, models and other tools used in the project work, as well as assess the project's problem in relevant technical scientific context.

COMPETENCES

The student must be able to:

- Approach an empirical field and identify a problem or need related to innovative and/or entrepreneurial processes and theories thereof, with an emphasis on discovery.
- Contribute to the development of a conceptual solution by relating innovation and/or entrepreneurship theories with empirical insight.
- Critically evaluate analysis and solutions.
- Situational application/facilitation of creative skills (dedicated ressources will be allocated to the initiation and sustaining of the objective).
- Plan, implement and manage complex and unpredictable research and / or development tasks and assume a professional responsibility for conducting professional and interdisciplinary collaborations.
- Take responsibility for own academic development and specialization.

TYPE OF INSTRUCTION

The module is carried out as group-based, problem-oriented project work. The group work is carried out as an independent work process in which the students themselves organise and coordinate their workload in collaboration with a supervisor. The project is carried out in groups with normally no more than 6 members.

EXTENT AND EXPECTED WORKLOAD

Since it is a 15 ECTS project module the expected workload is 450 hours for the student.

EXAM

EXAMS

Name of exam	Entrepreneurial Practice
Type of exam	Oral exam based on a project The learning outcome is measured individually during oral group examination.
ECTS	15
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	Praktisk entreprenørskab
Module code	M-EE-K1-1A
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

AGILE BUSINESS NAVIGATION

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- The student will be able to understand the different positions within agile methods.
- The student will be able to understand the underlying methodology behind innovative agile business processes.
- The student will be able to navigate between agile methods related to different practical business constrains.
- The student will be able to understand human and own preferences in order to understand group dynamic within an innovative, agile team.

SKILLS

- The student will be able to navigate with agile methods related to different business cases and related to problem areas in an organization context.
- The student will be able to navigate through innovative agile processes using methods to sustain high innovation capacity through a project cycle from idea to finalizing.
- The student will be able to navigate in a multidisciplinary business environment with different business drivers in order to bring most value to an innovative project cycle.
- The student will be able to set, supply and navigate an interdisciplinary team though an innovative project cycle including the facilitation of agile processes.

COMPETENCES

- Reflect on the innovative, agile processes in relation to relevant agile methods.
- The student will enhance his or her personal level of innovative businesses navigation.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Agile Business Navigation
Type of exam	Written or oral exam
ECTS	5
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	Agile forretningsudviklingsmetoder
Module code	M-EE-K1-2
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Claus Andreas Gram Foss Rosenstand

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

DESIGN BASED INNOVATION

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Must understand the prototyping process and the strengths and weaknesses of fast prototyping.
- Must understand the concept of problem framing and reframing through a rapid and iterative prototyping process for developing a product/service business concept..
- Must understand the process of user-driven innovation used in a prototyping process.

SKILLS

- Must be able to use observation, interviews and other research methods to collect data on user/customer behaviour.
- Must be able to transform data on user/customer behavior into specifications and demands and subsequently use this as basis for problem framing and a prototyping process.
- Must be able to apply prototyping tools to problem solving, product-, service and business development.
- Must be able to work through and document a process of design-driven innovation.
- Must be able to frame specific problem-areas and/or opportunities.

COMPETENCES

- Must be able to plan and execute a prototyping process that to a large extent involves users, customers and other stakeholders.
- Must be able to navigate through and facilitate an open-ended process.
- Must be able to reflect on the process and outcome of the prototyping process within a business development context.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Design Based Innovation
Type of exam	Written or oral exam
ECTS	5
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	Designbaseret innovation
Module code	M-EE-K1-3
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Christian Tollestrup

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

UNDERSTANDING ENTREPRENEURSHIP

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- The students will acquire an understanding of entrepreneurship concepts and theories, methods and tools.
- The student must understand theories of the entrepreneurial role at a personal, organisational as well as societal level.

SKILLS

- The student must be able to analyse entrepreneurial problems by using relevant theory, methods and tools
- The students must be able to use theory in analysing entrepreneurial challenges at the personal and organisational level.

COMPETENCES

- The student must be able to select and use various relevant theoretical perspectives, methods and tools in relation to the planning and engaging in entreneurial business development processes.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Understanding Entrepreneurship
Type of exam	Written or oral exam
ECTS	5
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	Entreprenørskabsforståelse
Module code	M-EE-K1-4
Module type	Course

Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Kjeld Nielsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

ENTREPRENEURIAL TACTICS

2022/2023

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

1. Semester courses and project (or equivalent)

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Describe and understand processes, methods, tools, and associated resources needed for people and companies to become and stay innovative, with an emphasis on incubation processes.
- Describe and understand specific tools and methods for supporting entrepreneurial processes.
- Describe and understand advanced theories of creative methodologies and creative mind-set.

SKILLS

- The student must be able to use sound research methods to identify and analyse a need or problem using various theoretical perspectives related to a business development processes with an emphasis on incubation processes.
- The student must be able to experiment with possible conceptual solutions or development in order to develop new business or to leverage the innovation capability directions by using practice insights, theory and creative skills.
- The student must be able to facilitate creative processes (dedicated ressources will be allocated to the initiation and sustaining of the objective) and excel in communication.
- Compose a project report according to the norms of the scientific field, include relevant original literature, use correct academic language and communicate the project's research-based basis and problem and results in a coherent written and oral manner, including the connection between the problem formulation, the project's execution and the main conclusions.
- Evaluate and select relevant original literature and current scientific methods, models and other tools used in the project work, as well as assess the project's problem in relevant technical scientific context.

COMPETENCES

- The student must be able to approach an empirical field using scientifically sound methods and informed by theory experiment with conceptual soluitons in relation to market/users, technology, organisation, and resources.
- Contribute to creative further development of a conceptual solution by combining innovation and/or entrepreneurship theories with empirical insight.
- Critically evaluate own analysis and solutions.
- Situational application/facilitation of creative skills (dedicated ressources will be allocated to the initiation and sustaining of the objective).
- Plan, implement and manage complex and unpredictable research and / or development tasks and assume a professional responsibility for conducting professional and interdisciplinary collaborations.
- Take responsibility for own academic development and specialization.

TYPE OF INSTRUCTION

The module is carried out as group-based, problem-oriented project work. The group work is carried out as an independent work process in which the students themselves organise and coordinate their workload in collaboration with a supervisor. The project is carried out in groups with normally no more than 6 members.

EXTENT AND EXPECTED WORKLOAD

Since it is a 15 ECTS course module the expected workload is 450 hours for the student.

EXAM

PREREQUISITE FOR ENROLLMENT FOR THE EXAM

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

EXAMS

Name of exam	Entrepreneurial Tactics
Type of exam	Oral exam based on a project
ECTS	15
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	Taktisk entreprenørskab
Module code	M-EE-K2-1A
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

CORPORATE ENTREPRENEURSHIP

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Gain theoretical insight into high impact innovation concepts such as corporate entrepreneurship, disruptive innovation, breakthrough/radical innovation/innovation.
- Understand the role and impact of corporate entrepreurship/(radical) innovation in organisations.
- Understanding high-impact innovation processes and how to organize them in and around companies

SKILLS

- Be able to identify and analyse challenges of corporate entrepreneurship/innovation in organizations.
- Be able to choose and use relevant theories, methods, and tools.

COMPETENCES

- Be able to audit, evaluate and contribute to design of the innovative capabilities of an established organisation.
- Be able to better navigate in contexts of corporate entrepreneurship/(radical) innovation given the complexity, politics and emergent nature of the processes.
- Ability to develop conceptual solutions to the challenges faced by established organisations when attempting to organise corporate entrepreneurship/(radical) innovation.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Corporate Entrepreneurship
Type of exam	Written or oral exam
ECTS	5
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	Innovationsledelse og forretningsudvikling
Module code	M-EE-K2-2

Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

APPLIED BUSINESS MODELLING

2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- The student will be able to understand the different elements of the business model as well as the internal connections between the elements of the model.
- The student will be able to distinguish between different business models archetypes and how their design features differ.

SKILLS

- The student will be able to develop the most suitable business model for a new business based on data collected through desk- and field research.
- The student will be able to distinguish between different archetypes of business models and describe the implications of adopting a new business model within an existing business.
- The student will be able to use the business model as a strategic tool of communication within new business creation.
- The student will be able to unfold different scenarios through business model prototyping.

COMPETENCES

- The student will be able to analyse and develop new business with both an external and internal perspective through a business modeling approach.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Applied Business Modelling
Type of exam	Written or oral exam
ECTS	5
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	Anvendt forretningsmodellering

Module code	M-EE-K2-3
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Yariv Taran

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

MARKETS, RESOURCES AND ENTREPRENEURSHIP 2022/2023

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- The student will understand theories of market analysis and market development strategies and implementation of strategies.
- The student will understand and distinguish between the different types of financing, including: lending based, equity based and cash-flow based.

SKILLS

- The student will learn aspect of how to identify and analyse markets and how to make strategies for approaching the market.
- The student will learn how to address financing issues of the business from a resource standpoint.
- The students will learn to identify the most suitable form of financing and resource acquirement for a specific business.

COMPETENCES

- The student will be able to use methods of identifying a market, and develop a market strategy, and to implementing the strategy.
- The student will be able to identify the needs of the new business and approach potential stakeholders and key persons in order to acquire the resources to meet the needs.
- The student will be able to operate under the restraints of limited resources and optimize the usage of those resources.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme cirruculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

Name of exam	Markets, Resources and Entrepreneurship
Type of exam	Written or oral exam
ECTS	5
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	Marked, ressourcer og entreprenørskab
Module code	M-EE-K2-4
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Jonas Strømfeldt Eduardsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

ENTREPRENEURIAL STRATEGY

2022/2023

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in 1st – 2nd Semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge and understanding of implementation/realisation aspects of entrepreneurship/new business innovation in the broader organisational context (including the impact on realised strategy).
- Explain the scientific basis and scientific issues within the specialization.
- Explain the highest international research in the field of specialization.

SKILLS

- Be able to describe the problem solved and the criteria applied for its solution.
- Be able to analyse an organizational context, innovative capabilities and potential.
- Be able to evaluate the concepts, theories and methodologies applied to the solution of the problem.
- Be able to assess the limitations of the concepts, theories and methodologies applied in the solution of the problem.
- Be able to train creativity skills and excel in communication.
- Master the scientific methods and general skills related to the field of specialization.
- Compose a project report according to the field's norms, use correct professional language, document extensive inclusion of relevant original literature, communicate and discuss the project's research-based basis and problem and results in a written, graphic and oral manner in a coherent way.
- Critically evaluate the project's results in relation to relevant original literature and current scientific methods, models and evaluate and discuss the project's problem in a relevant technical scientific context.
- Assess and put the project's potential into perspective for further development.

COMPETENCES

- Be able to navigate and interact in an organizational context in the business development process (emphasis on implementation) through relevant choices of methods and use of theories.
- Be able to account for the choices made during the solution of the problem, and to substantiate that these are made at a professional level.
- Situational advanced application/facilitation of creative processes.
- Participate in and independently carry out technological development and research, as well as solve complex tasks using scientific methods.
- Perform planning, implementation and management of complex and unpredictable research and / or development tasks and assume a professional responsibility for completing independent academic tasks as well as interdisciplinary collaborations.
- Independently take responsibility for own professional development and specialization.

TYPE OF INSTRUCTION

The Semester is carried out as a project at Aalborg University; the work is carried out as an independent work process in which the students themselves organise and coordinate their workload in collaboration with a supervisor. The project may be carried out individually or in teams. This format is used in case of a start-up project. The project may be finalized with a project report or in the form of a scientific paper.

EXTENT AND EXPECTED WORKLOAD

Since it is a 30 ECTS course module the expected workload is 900 hours for the student.

EXAM

EXAMS

Name of exam	Entrepreneurial Strategy
Type of exam	Written or oral exam
ECTS	30
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	Entreprenørskab i strategisk kontekst
Module code	M-EE-K3-1A
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	30
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

PROJECT-ORIENTED STUDY IN AN EXTERNAL ORGANISATION

2022/2023

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in 1st – 2nd Semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge and understanding of implementation/realisation aspects of entrepreneurship/new business innovation in the broader organisational context (including the impact on realised strategy).
- Explain the scientific basis and scientific issues within the specialization
- Explain the highest international research in the field of specialization.

SKILLS

- Be able to describe the problem solved and the criteria applied for its solution.
- Be able to analyse an organizational context, innovative capabilities and potential.
- Be able to evaluate the concepts, theories and methodologies applied to the solution of the problem.
- Be able to assess the limitations of the concepts, theories and methodologies applied in the solution of the problem.
- Be able to train creativity skills and excel in communication.
- Master the scientific methods and general skills related to the field of specialization.
- Compose a project report according to the field's norms, use correct professional language, document extensive inclusion of relevant original literature, communicate and discuss the project's research-based basis and problem and results in a written, graphic and oral manner in a coherent way.
- Critically evaluate the project's results in relation to relevant original literature and current scientific methods, models and evaluate and discuss the project's problem in a relevant technical scientific context.
- Assess and put the project's potential into perspective for further development.

COMPETENCES

- Be able to navigate and interact in an organizational context in the business development process (emphasis on implementation) through relevant choices of methods and use of theories.
- Be able to account for the choices made during the solution of the problem, and to substantiate that these are made at a professional level.
- Situational advanced application/facilitation of creative processes.
- Participate in and independently carry out technological development and research, as well as solve complex tasks using scientific methods.
- Perform planning, implementation and management of complex and unpredictable research and / or development tasks and assume a professional responsibility for completing independent academic tasks as well as interdisciplinary collaborations.
- Independently take responsibility for own professional development and specialization.

TYPE OF INSTRUCTION

The semester is carried out as a voluntary traineeship (internship) at a company/organisation in Denmark or abroad, the student is included in the organisation’s daily work of relevance to the Semester objectives. Concurrently as part of the internship, the student makes a report, which is evaluated after ending the internship. The student has a university supervisor and a contact person in the organization in which the internship takes place.

EXTENT AND EXPECTED WORKLOAD

Since it is a 30 ECTS course module the expected workload is 900 hours for the student.

EXAM

EXAMS

Name of exam	Project-oriented Study in an External Organisation
Type of exam	Oral exam based on a project
ECTS	30
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	Projektorienteret forløb i en virksomhed
Module code	M-EE-K3-2A
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	30
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

MASTER'S THESIS

2022/2023

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in 1st – 2nd Semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Demonstrate overview and deep knowledge regarding the chosen subject of relevancy to innovation and/or entrepreneurship.
- Explain the scientific basis and scientific issues within the specialization.
- Explain the highest international research in the field of specialization.

SKILLS

- The student must be able to analyse a need or problem using various advanced theoretical perspectives related to the choice of specialization.
- The student must be able to critically identify possible conceptual solutions or development directions using theory and to contribute to the implementation of such solutions.
- Demonstrate good communication skills.
- Master the scientific methods and general skills related to the field of specialization.
- Compose a project report according to the field's norms, use correct professional language, document extensive inclusion of relevant original literature, communicate and discuss the project's research-based basis and problem and results in a written, graphic and oral manner in a coherent way.
- Critically evaluate the project's results in relation to relevant original literature and current scientific methods, models and evaluate and discuss the project's problem in a relevant technical scientific context.
- Assess and put the project's potential into perspective for further development.

COMPETENCES

- Contribute to the development of a conceptual solution by synthesizing innovation and/or entrepreneurship theories with empirical insight.
- Critically evaluate her/his own analysis and solutions.
- Contribute to the continuous development or enrichment of theories of entrepreneurship and/or innovation.
- Participate in and independently carry out technological development and research, as well as solve complex tasks using scientific methods.
- Perform planning, implementation and management of complex and unpredictable research and / or development tasks and assume a professional responsibility for completing independent academic tasks as well as interdisciplinary collaborations.
- Independently take responsibility for own professional development and specialization.

TYPE OF INSTRUCTION

In this module, the Master's Thesis is carried out. The module constitutes independent project work and concludes the programme. Within the approved topic, the Master's Thesis must document that the level of the programme has been attained.

EXTENT AND EXPECTED WORKLOAD

Since it is a 60 ECTS course module the expected workload is 1800 hours for the student.

EXAM

EXAMS

Name of exam	Master’s Thesis
Type of exam	Master's thesis/final project
ECTS	60
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

ADDITIONAL INFORMATION

The master thesis can be conducted as a long master thesis using both the 3rd and 4th Semester. 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

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale
Module code	M-EE-K3-3A
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	60
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science

MASTER'S THESIS

2022/2023

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module adds to the knowledge obtained in 1st – 3rd Semester.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Demonstrate overview and deep knowledge regarding the chosen subject of relevancy to innovation and/or entrepreneurship.
- Explain the scientific basis and scientific issues within the specialization.
- Explain the highest international research in the field of specialization.

SKILLS

- The student must be able to analyse a need or problem using various advanced theoretical perspectives related to the choice of specialization.
- The student must be able to critically identify possible conceptual solutions or development directions using theory and to contribute to the implementation of such solutions.
- Demonstrate good communication skills.
- Master the scientific methods and general skills related to the field of specialization.
- Compose a project report according to the field's norms, use correct professional language, document extensive inclusion of relevant original literature, communicate and discuss the project's research-based basis and problem and results in a written, graphic and oral manner in a coherent way.
- Critically evaluate the project's results in relation to relevant original literature and current scientific methods, models and evaluate and discuss the project's problem in a relevant technical scientific context.
- Assess and put the project's potential into perspective for further development.

COMPETENCES

- Contribute to the development of a conceptual solution by synthesizing innovation and/or entrepreneurship theories with empirical insight.
- Critically evaluate her/his own analysis and solutions.
- Contribute to the continuous development or enrichment of theories of entrepreneurship and/or innovation.
- Participate in and independently carry out technological development and research, as well as solve complex tasks using scientific methods.
- Perform planning, implementation and management of complex and unpredictable research and / or development tasks and assume a professional responsibility for completing independent academic tasks as well as interdisciplinary collaborations.
- Independently take responsibility for own professional development and specialization.

TYPE OF INSTRUCTION

Since it is a 30 ECTS course module the expected workload is 900 hours for the student.

EXTENT AND EXPECTED WORKLOAD

In this module, the Master's Thesis is carried out. The module constitutes independent project work and concludes the programme. Within the approved topic, the Master's Thesis must document that the level of the programme has been attained.

EXAM

EXAMS

Name of exam	Master’s Thesis
Type of exam	Master's thesis/final project Oral exam based on a project Group examination with max. 3 students. The student may also choose to write the project alone.
ECTS	30
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	M-EE-K4-1A
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Frank Gertsen

ORGANISATION

Study Board	Study Board of Production
Department	Department of Materials and Production
Faculty	The Faculty of Engineering and Science