Curriculum for the Master’s Programme in Urban, Energy and Environmental Planning

with specialisation in
• Urban Planning and Management
• Sustainable Energy Planning and Management
• Environmental Management and Sustainability Science

1st – 4th semester
Preface
Pursuant to Act 985 of October 21, 2009 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's Programme in Urban, Energy and Environmental Planning is stipulated. The programme also follows the Framework Provisions and the Examination Policies and Procedures of the Faculty of Engineering and Science.

The Master’s Programme in Urban, Energy and Environmental Planning is of 2 years (1st-4th semester) and builds on a relevant bachelor programme of 3 years. In the master’s programme, which this curriculum concerns, there are specialisations within the master’s programme in Urban, Energy and Environmental planning within the fields Urban Planning and Management, Sustainable Energy Planning and Management and Environmental Management and Sustainability Science. The education takes place with a special view to theoretical and methodical handling of complex and new engineering problems. In the last semester of the programme a master’s thesis is prepared.

This curriculum takes effect as from September 1, 2010.
The curriculum will be readjusted not later than 5 years after its coming into force.
Contents

Chapter 1: Legal Basis of the Curriculum, etc. ................................................................. 3
  1.1 Basis in Ministerial Orders .................................................................................. 3
  1.2 Faculty Affiliation .............................................................................................. 3
  1.3 Study Board Affiliation ..................................................................................... 3

Chapter 2: Admission, Degree Designation, Duration and Competence Profile .................. 3
  2.1 Admission .......................................................................................................... 3
  2.2 Degree Designation ........................................................................................... 3
  2.3 Specification in ECTS Credits ......................................................................... 3
  2.4 Competence Profile of the Certificate ............................................................ 3
  2.5 Competence Profile of the Programme ........................................................... 4

Chapter 3: Contents and Organisation of the Programme .................................................. 5

Chapter 4: Coming into Force, Interim Provisions and Revision ....................................... 29

Chapter 5: Other Rules ............................................................................................... 29
  5.1 Rules concerning Written Work, including the Master’s Thesis ......................... 29
  5.2 Rules on Credit, including the Possibility of Choice of Modules being Part of another Study Programme of a University in Denmark or Abroad ......................................................... 29
  5.3 Examination Rules ......................................................................................... 29
  5.4 Exemption ........................................................................................................ 29
  5.5 Completion of the Master’s Programme .......................................................... 30
  5.6 Rules and Requirements about Reading of Texts in Foreign Languages .......... 30
  5.7 Further Information ......................................................................................... 30
Chapter 1: Legal Basis of the Curriculum, etc.

1.1 Basis in Ministerial Orders
The Master’s Programme in Urban, Energy and Environmental Planning is organised in accordance with the Ministry of Science, Technology and Innovation’s Ministerial Order No. 814 of June 29, 2010 on Bachelor and Master's Programmes at Universities (the Ministerial Order of the Study Programmes) and Ministerial Order No. 857 of July 1, 2010 on University Examinations (the Examination Order) with subsequent changes. Further reference is made to Ministerial Order No. 181 of February 23, 2010 (the Admission Order) and Ministerial order No. 250 of March 15, 2007 (the Grading Scale Order) with subsequent changes.

1.2 Faculty Affiliation
The master’s programme falls under The Faculty of Engineering and Science, Aalborg University.

1.3 Study Board Affiliation
The master’s programme falls under the Study Board of Planning and Geography, the School of Architecture, Design and Planning.

Chapter 2: Admission, Degree Designation, Duration and Competence Profile

2.1 Admission
Admission to the Master's Programme in Urban, Energy and Environmental Planning requires a bachelor education in urban, energy and environmental planning, surveying science, geography, biology or a corresponding education after specific assessment.

Students with another bachelor education may, on application to the Study Board of Planning and Geography, be admitted after a specific professional assessment, if the applicant is estimated to have comparable educational qualifications. The university can demand supplementary examinations before study start.

2.2 Degree Designation
The master’s programme entitles the graduate to the designation Master of Science (MSc) in Engineering (Urban, Energy and Environmental Planning).

The master’s programme can be read with three specialisations:

- Master of Science (MSc) in Engineering (Urban, Energy and Environmental Planning with specialisation in Urban Planning and Management)
- Master of Science (MSc) in Engineering (Urban, Energy and Environmental Planning with specialisation in Sustainable Energy Planning and Management)
- Master of Science (MSc) in Engineering (Urban, Energy and Environmental Planning with specialisation in Environmental Management and Sustainability Science)

2.3 Specification in ECTS Credits
The master’s programme is a 2-year research-based full-time study programme and is prescribed to 120 ECTS credits.

2.4 Competence Profile of the Certificate
The below competence profile will appear from the certificate:

The graduate has competences acquired through a course of study that took place in a research environment.
The graduate can perform highly qualified functions in the labour market based on the education. In addition, the graduate has qualifications for research (PhD studies). Compared to the bachelor, the graduate has expanded his/her expertise and independence so that he/she independently applies scientific theory and method in academic and occupational/professional contexts.

2.5 Competence Profile of the Programme
In addition to the competence profile of the certificate, the candidate acquires the following:

Knowledge

- Has knowledge within one or more fields of urban, energy and environmental planning which in selected areas is based on the highest national and international research in this field
- Has basic knowledge of the implications of research ethics
- Has thorough knowledge of relevant national and international research work
- Has thorough knowledge of theories and methods in planning, administration and/or management within the public and private sector
- Possesses specialist understanding in continuation of the previous degree/or new professional competence in addition to the previous degree
- Possesses insight into and understanding of the social conditions under which strategies, plans and projects within urban, energy and environmental planning are implemented.

Skills

- Can handle the methods and tools of urban, energy and environmental planning as well as general skills connected with occupation within the field(s)
- Can assess and choose among the theories, methods, tools and general skills or urban, energy and environmental planning and on a scientific basis draw up new models of analysis and solution
- Can analyze the technical and social context of which strategies and plans within urban, energy and environmental planning are a part
- Can analyze and prepare strategies, plans and projects at different levels
- Can assess if strategies, plans, projects or infrastructure systems are expedient and feasible in technical, town planning, area planning, economic, environmental, business and social respects
- Can involve the public and relevant actors at all levels
- Can reflect on ethical matters in connection with professional practice
- Can independently make and motivate professionally related decisions and when necessary carry out investigations procuring a sufficient basis of decision
- Can understand development work on a scientific basis
- Can impart research-based knowledge within the field of urban, energy and environmental planning and discuss professional and scientific problems with both colleagues and non-specialists.
Competences

- Can be part of public organisations as well as private firms, including NGOs
- Can understand and on a scientific basis reflect on the knowledge and problems of the field of urban, energy and environmental planning and in this relation identify important social problems
- Can assess the expediency of different theories and methods for independent analysis and professional problem solution
- Can formulate and analyze essential problems independently, systematically and critically by using relevant scientific methods
- Can be part of interdisciplinary teams within the field of urban, energy and environmental planning, working with the lay-out and implementation of plans and strategies in Danish or international contexts
- Basic understanding of the technical, structural and social conditions connected with the development and infrastructures of towns and regions
- Able to independently prepare, structure and evaluate strategies, plans and projects
- Can develop proposals for management instruments to secure the implementation of strategies, plans and projects
- Insight in and understanding of planning and social theory as well as competence in the structure and function of the planning and management system and/or the structure and function of companies
- Can use the acquired knowledge to provide and initiate open and democratic decision processes in the planning through public participation in the development, structure and implementation of strategies and plans
- Understanding of the complex processes taking place in connection with the structure and implementation of strategies and plans, where both public and private interests prevail
- Competence to participate in the research within the field of urban, energy and environmental planning and in this way contribute to the development of the profession
- Independently develop own competences and specialisation.

Chapter 3: Contents and Organisation of the Programme

The programme is modular and organized as a problem-based study. A module is a discipline or a group of disciplines the objective of which is to give the student an entirety of professional qualifications within a specified time frame indicated in ECTS merits and which is finished with one or more examinations within certain examination periods. The examination is indicated and limited in the curriculum.

The programme builds on a combination of professional, problem-oriented and interdisciplinary approaches and is organized on the basis of the following work and evaluation forms combining skills and professional reflection:

- lectures
- class teaching
- project work
- workshops
- task handling (individually and in groups)
- teacher feedback
- professional reflection
- portfolio work
- pin up, etc.

**Survey of the Programme**

In the below figure a survey of the contents and course of the programme is given:

In the table below a survey of project modules and course modules at the four semesters of the master programme is given. For the first and second semesters the three specialisations are indicated separately. The master programme includes teaching in theory of science and research methods corresponding to a 5 ECTS course module. This course is placed at the first semester of the programme.

All modules are graded through individual grading according to the 7-point scale or pass/fail (P/F). All modules are graded through an external examination (external grading) or an internal examination (internal grading or no grading).

<table>
<thead>
<tr>
<th>Specialisation</th>
<th>Semester</th>
<th>Module</th>
<th>ECTS merits</th>
<th>Grading 7-point P/F</th>
<th>Exam Internal/external</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1</td>
<td>Theories of Science and Research Designs</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td>The Complex City</td>
<td>15</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td>Urban Development, Causes and Consequences</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td>Complexity, Interrelationships, Synergies and Conflicts</td>
<td>5</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>EM</td>
<td>1</td>
<td>Business and Sustainability Management</td>
<td>15</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>EM</td>
<td>1</td>
<td>Current Topics in Sustainability Research I</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>EM</td>
<td>1</td>
<td>Tools and Systems of Sustainable Development</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>Sustainable Energy Planning in a Technical and Business Economic Perspective</td>
<td>15</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>Energy and Environmental Analysis Tools and Project Evaluation</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>Specialisation</td>
<td>Semester</td>
<td>Module</td>
<td>ECTS merits</td>
<td>Grading 7-point P/F</td>
<td>Exam Internal/external</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>-------------------------------------------------</td>
<td>-------------</td>
<td>---------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>Sustainable Energy System Analysis</td>
<td>5</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>C****</td>
<td>2</td>
<td>Policy, Planning and Governance</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>U*</td>
<td>2</td>
<td>Power in Planning</td>
<td>15</td>
<td>7-point</td>
<td>E</td>
</tr>
<tr>
<td>U</td>
<td>2</td>
<td>The Deliberative Practitioner</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>U</td>
<td>2</td>
<td>Planning Theory</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>EM***</td>
<td>2</td>
<td>Sustainable Management in a Societal and Institu-</td>
<td>15</td>
<td>7-point</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tional Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>2</td>
<td>Current Topics in Sustainability Research II</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>EM</td>
<td>2</td>
<td>Sustainability by Design</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>C**</td>
<td>2</td>
<td>Sustainable Energy Planning in an Institutional and Societal Perspective</td>
<td>15</td>
<td>7-point</td>
<td>E</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>Energy and Environmental Policies</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>Technical Energy System Analysis and Policy Design</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>Professional Development</td>
<td>20/25/30 (dependent on optional courses)</td>
<td>7-point</td>
<td>I</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>Urban Development, Causes and Consequences (optional from 1st semester Urban Planning)</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>Tools and Systems in Sustainable Development (optional from 1st semester Environmental Management and Sustainability)</td>
<td>5</td>
<td>P/F</td>
<td>I</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>Master's Thesis</td>
<td>30</td>
<td>7-point</td>
<td>E</td>
</tr>
<tr>
<td><strong>Totally</strong></td>
<td></td>
<td></td>
<td><strong>120</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


At the 1st and 2nd semester the student is entitled to construct a course of study within the objectives of the semester after previous application. The project work may here be replaced by other study activities (cf. the Framework Provisions).

At the 3rd semester the student can choose freely between carrying through the semester as 1) Project semester – with or without integrated, project-oriented internship - or 2) International or national credit or 3) Long final project (master’s thesis) (cf. the project module description of the 3rd semester). In relation to option 1) the student, who has followed the 1st and 2nd semester of Urban Planning, Energy Planning or Environmental Management and Sustainability, can furthermore choose to follow a course offered at the 1st semester under another specialisation on Urban, Energy, Environmental Planning or Integrative Geography, etc.

The programme is in English.
Module Descriptions

1st semester: Common Course Module (Urban Planning, Energy Planning and Environmental Management and Sustainability)

Title: Theories of Science and Research Designs (Videnskabsteori og forskningsdesign)

Requirements: The student is expected to have a level corresponding to having passed the course “Basic Theory and Method – Theories of Science and Geographic Information Sciences” placed at the 2nd semester (the bachelor programme in Urban, Energy and Environmental Planning) or correspondingly after specific assessment. Guest students and similar are exempted. They are assigned relevant supplementary literature by the course-responsible person.

Objectives: Students completing the module, acquire the following:

Knowledge:
- Understanding of the history and theoretical framework of theories of science at a graduate level
- Understanding of the relation between theories of science, research design and research methods at a graduate level
- Understanding of the contents and interrelation of the positions of theories of science and capability of relating critically to them
- Thorough knowledge of the relation to theories of science and research designs of own professional fields.

Skills:
- Capable of using the basic complex of problems of theories of science in relation to assessment of courses and references in projects at a graduate level
- Capable of independently assessing the value and reliability of own science production in relation to scientific basic complexes of problems
- Capable of using theories of science, research design and research methods within own fields at a graduate level
- Capable of imparting knowledge of theories of science and research designs to specialists as well as non-specialists.

Competences:
- Able to reflect critically on project-related choices of value bases, theories of science and methods
- Capable of continuous professional development through acquisition of new knowledge of the development and renewal of theories of science and research designs.

Teaching: Lectures, workshops, synopses, seminars, assignments, problem solving, etc.

Examination: Individual written examination, internal grading, pass/fail.

1st semester: Project module (Urban Planning)

Title: The Complex City (Den komplekse by)

Requirements: Students must have passed the examination as Bachelor in Urban, Energy and Environmental Planning, Geography or Science of Surveying or other study programmes with corresponding contents after specific assessment.

Objectives: Students completing the module acquire the following:

Knowledge:
- Knowledge and understanding of direct and indirect consequences of changes in the urban land use and infrastructure
- Able to understand and on a scientific basis reflect on urban development as well as ability to identify scientific problems in this context
- Have thorough knowledge of the complexity of connections and effects between different changes in the land use and transport infrastructure of the towns and the behavioural, distributional, environmental and economic consequences of these changes
- Knowledge within one or more fields of urban theories which in selected areas is based on the highest international research
- Have thorough knowledge of theories of science and research methods relevant for the analysis or urban development as well as ability to reflect on them.

Competences:
- Can use relevant scientific theories and methods within the chosen problem
- Can use relevant theories of science and research methods within the chosen problem
- Can analyze strategies within urban development in relation to their immediate as well as more long-term social, environmental and economic consequences
- Can analyze and assess the environmental, social and economic consequences which the strategies are expected to have as well as assess which values/interests are positively and negatively affected by the strategies
- Can analyze and assess which needs have caused the strategy or the superior plan as well as in which alternative ways the relevant needs could be covered and under which circumstances
- Can analyze the effect that the implemented or proposed strategy or superior plan as well as one or two alternative strategies is expected to have on the further urban and transport infrastructure development
- Can in relation to urban development impart research-based knowledge and discuss professional and scientific problems with both colleagues and non-specialists.

Skills:
- Can, in relation to urban development, manage work and development situations which are complex, unpredictable and imply new solution models
- Can, in relation to urban development, independently start and carry through a professional and interdisciplinary cooperation and take a professional responsibility
Teaching: Problem-oriented project work in groups

Examination: Individual oral examination based on the project report. Internal grading, 7-point scale.


1st semester: Course module 1 (Urban Planning)

Title: Urban Development, Causes and Consequences (Byudvikling, årsager og konsekvenser)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Knowledge of the social, economic and environmental consequences of urban development
- Thorough knowledge and understanding of relevant concepts, theories and models in relation to spatial development in towns and regions, including the geographic localisation of enterprises, residences, service and other facilities as well as relations between mobility and localisation
- Knowledge of theories, methods and experiences as regards the relation between urban development and the social development and living conditions of the town
- Can understand and on a scientific basis reflect on the causes and consequences of urban development as well as ability to identify scientific problems in this relation.

Skills:
- Can critically analyze and evaluate solution strategies and proposals concerning the spatial development in towns and regions, especially in a perspective of sustainability and climate
- Can critically analyze the social and economic consequences of urban development
- Can – on the background of an analysis – draw up alternative solution strategies and proposals in relation to handling the social, economic and environmental consequences of urban development
- Can – in relation to the causes and consequences of urban development – impart research-based knowledge and discuss professional and scientific problems with both colleagues and non-specialists.

Competences:
- Can, in relation to the causes and consequences of urban development, independently start and carry through a professional and interdisciplinary cooperation and take a professional responsibility.

Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.
Examination: Current evaluation or active participation. Internal grading, pass/fail.


1st semester: Course module 2 (Urban Planning)

Title: Complexity, Interrelationships, Synergies and Conflicts (Kompleksitet, tværgående relationer, synergier og konflikter)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Understanding of towns as complex systems, where a number of different contexts, structures, changes and states affect each other, and where the result of a single impact factor is conditional on the concurrent impact from a large number of other factors
- Understanding of how urban development approaches, which aim to meet certain needs and objectives, usually also have considerable consequences in relation to a number of other considerations and objectives
- Knowledge of mutual dependences between the nature-geographic/eco-logical context of towns, the built-up environment, the social life and conditions of the inhabitants and the economic framework conditions
- Thorough knowledge of important side effects of the most common strategies for promotion of social, environmental and economic considerations in the urban development
- Understanding of the challenges that the complexity of the towns imply for research into and theorizing about towns and the driving forces of urban development, processes and consequences.

Competences:
- Can critically analyze environmental, social and economic side effects of urban development approaches primarily starting from a certain need or a certain objective
- Can – on the basis of an analysis – prepare solution proposals in relation to a topical urban development problem, based on implication of knowledge and theories from different fields which cover the most important types of impact factors and consequences
- Can, in relation to complex towns, impart research-based knowledge and discuss professional and scientific problems with both colleagues and non-specialists.

Skills:
- Can, on the basis of the complex connections of the town and urban development, independently combine knowledge from different relevant fields, start and carry through interdisciplinary co-operation and take a professional responsibility for interdisciplinary knowledge application when preparing solution proposals within urban planning
- Can carry out simple research investigations or urban and urban development related subjects where - in the methodical approach – the complex connections of the towns between different impact factors are taken into account.
Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.

Examination: Individual oral examination in continuation of the project examination. Internal grading, 7-point scale.


1st semester: Project module (Environmental Management and Sustainability)

Title: Business and Sustainability Management (Virksomheds- og bæredygtighedsledelse)

Requirements: Students must have passed a relevant environmental technical bachelor education, for example within urban, energy and environmental planning, geography, surveying science, biology or a corresponding education after specific assessment.

Objectives: Students completing the module acquire the following:

Knowledge:
- Have thorough knowledge and understanding of the framework conditions, challenges and roles of enterprises and organisations in relation to sustainable development, including also the tools and systems which are relevant on an organisation level.

Skills:
- Can identify, analyze and assess project-relevant sustainable problems and consequences
- Can understand, use and critically reflect on relevant quantitative as well as qualitative economic, sociological, environmental and/or engineering methods of analysis and uncover the interests connected
- Can independently procure relevant data in relation to the challenge and problem of the project and assess the quality and reliability of these data
- Can motivate, argue and communicate the general structure and methods of the project in a science-theoretical connection. Must also be able to relate critically to sources and use accurate source references.

Competences:
- Can structure and handle the complex combinations of specific challenges at an organisation level (business level) in the study and project work
- Can combine and compose the use of relevant theories, understandings, methods and analyses so that they form a synthesis towards the preparation of specific strategies and plans directed towards the possibilities of the enterprise (organisation) of working with sustainable solutions
- Can independently start and participate in interdisciplinary planning tasks and co-operation on an organisation level (business level).

Teaching: Problem-oriented project work in groups.

Examination: Individual oral examination based on the project report. Internal grading, 7-point scale.
1st semester: Course module 1 (Environmental Management and Sustainability)

Title: Current Topics in Sustainability Research I (Aktuelle emner i forskning om bæredygtighed I)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Have thorough knowledge of superior themes in relation to the challenges of enterprises (organisations) in relation to sustainable development
- Have knowledge of complex combinations of specific challenges on an organisation level (business level)
- Have knowledge of the different forms of interaction of the enterprises with their partners
- Have knowledge of relevant theories, understandings, methods and analyses that concretize the possibilities of the enterprise (organisation) of working with sustainable solutions.

Skills:
- Can in an enterprise and organisation perspective identify, analyze and assess sustainable problems and consequences
- Can assess interdisciplinary planning tasks and cooperation on an organisation level (business level)
- Can uncover interests connected with the work of enterprises (or the lack of it) with sustainable development
- Can communicate and discuss superior themes which have special relevance for the work of enterprises and organisations with sustainable development
- Can reflect on relevant quantitative and qualitative economic, sociological, environmental and/or engineering methods of analysis.

Competences:
- Can independently start and participate in interdisciplinary tasks and cooperate on an organisation level (business level).

Teaching: Lectures, workshops, seminars, problem solving, etc.

Examination: Continuous evaluation or active participation. Internal grading, pass/fail.


1st semester: Course module 2 (Environmental Management and Sustainability)

Title: Tools and Systems of Sustainable Development (Værktøjer og systemer i bæredygtig udvikling)

Requirements: None.
Objectives: Students having completed the module acquire the following:

Knowledge:
- Have thorough knowledge of different types of tools and systems for promotion of a sustainable development on an organisation level
- Have understanding of strengths and weaknesses of different tools and systems in relation to the organizing context.

Skills:
- Can analyze and assess different tools and approaches for anchoring of the environmental efforts in an organisation, just from mapping and documentation to ensure continuous environmental improvements through motivation, participation, etc.
- Can use different tools for a product-oriented environmental effort, including life cycle assessment, eco-design, etc.
- Can contribute to strengthening the social dimension in the effort around sustainability, including the introduction of Corporate Social Responsibility
- Can – by means of different tools – assess effects of both strategic and project approaches regarding sustainable development
- Can use theories on power, learning and organisation to assess which understanding of the context is embedded in different tools and systems.

Competences:
- Can reflect critically on project-related choices of tools and systems and their significance for the environmental work in an organisation
- Can currently adjust and adapt different tools and systems for the topical challenges and needs in an organisation.

Teaching: Lectures, workshops, seminars, problem solving, etc.

Examination: Individual written examination. Internal grading, pass/fail.


1st semester: Project module (Energy Planning)

Title: Sustainable Energy Planning in a Technical and Business Economic Perspective (Energiplanlægning i et teknisk og virksomhedsøkonomisk perspektiv)

Requirements: Students must have passed the examination as Bachelor in Urban, Energy and Environmental Planning, Geography or Surveying Science or other educations with corresponding contents after specific assessment.

Objectives: Students completing the module acquire the following:

Knowledge:
- Thorough knowledge and understanding of the framework conditions, challenges and roles in relation to energy and environmental problems of enterprises or energy companies, including an ability to use tools and systems to analyze these, which are relevant on an enterprise/organisation level
Can understand and on a scientific basis reflect on energy planning on an enterprise/organisation level and are able to identify scientific problems in this connection.

Thorough knowledge of organisation on an enterprise/organisation level and sketch projecting of energy plants.

Knowledge of theories of science and research methods relevant for analysis of energy planning and ability of reflecting on them.

**Skills:**
- Can identify, analyze and assess the project-relevant energy and environmental problems and consequences.
- Can prepare proposals for a specific energy and environmental improvement proposal in relation to the realisation of the solution in the relevant enterprise, organisation or energy company and seen in relation to relevant actors.
- Can understand, use and critically reflect on relevant quantitative and qualitative economic, sociological, environmental and/or engineering methods of analysis and uncover the interests connected to them.
- Can independently collect relevant data in relation to specific problems/challenges as well as assess the quality and reliability of these data.
- Can motivate, argue and communicate the general structure and methods of the project in a scientific-theoretical context. Must also be able to relate critically to sources and use accurate source references.
- Can communicate the result of the project work to selected target groups.

**Competences:**
- Can structure and handle the complex composition of specific challenges on an enterprise/organisation level in the study and project work.
- Can combine and compose the use of relevant theories, understandings, methods analyses so that they form a synthesis towards the preparation of specific strategies and plans directed towards enterprise/organisation level possibilities of working with sustainable solutions.
- Can independently start and participate in interdisciplinary planning tasks and cooperation on an enterprise/organisation level.

**Teaching:** Problem-oriented project work in groups.

**Examination:** Individual oral examination based on the project report. Internal grading, 7-point scale.

**Assessment criteria:** Indicated in the Framework Provisions.

**1st semester: Course module 1 (Energy Planning)**

**Title:** Energy and Environmental Tools and Project Evaluation (Energi- og miljøanalyseværktøjer og projektevaluering)

**Requirements:** None.

**Objectives:** Students completing the module acquire the following:

**Knowledge:**
• Thorough knowledge of energy-related environmental, economic and socially related problems for enterprises/organisations
• Knowledge of business economic and socio-economic impact analyses as well as the interaction with implementation and public regulation
• Knowledge of institutional and organizing conditions related to energy planning
• Knowledge of historic and present environmental problems in relation to energy supply and evaluation methods and tools to analyze them.

Skills:
• Knowledge of theories, evaluation methods and tools in relation to energy planning and environmental, economic, institutional and organizing problems
• Can critically analyze energy-related problems
• Can understand, use and analyze evaluation methods and tools for socio-economic impact analyses
• Can understand and reflect on connections between institutions and organisations, their dynamics as well as their interaction with the surrounding world
• Can understand energy-related environmental problems and analyze them on the basis of evaluation methods and tools for analysis of environmental problems
• Can assess application fields for evaluation methods and tools, including critically assess results and conclusions on the basis of different methods and tools
• Can understand and reflect on theories, evaluation methods and analysis tools within the relevant fields.

Competences:
• Can independently start and participate in interdisciplinary tasks and cooperation on an organisation level
• Can independently take responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.

Examination: Individual written examination. Internal grading, pass/fail.


1st semester Course module 2 (Energy Planning)

Title: Sustainable Energy System Analysis (Energisystemanalyse)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
• Thorough knowledge of the energy system from energy consumption to energy production, including energy savings, conversion technologies, fuels, renewable energy plants and localisation
• Knowledge on the operation of energy plants as well as evaluation methods and analysis tools for energy plants, including technical limitation, optimizing possibilities, environmental and economic consequences, involvement of externalities and plans
• Knowledge of public regulation of energy plants.

Skills:
• Can understand, use and analyze theories, evaluation methods and tools in relation to technologies and energy system analysis of the environmental, economic, institutional and organizing problems of energy plants
• Can critically analyze energy-related problems for energy plants
• Can understand, use and analyze evaluation methods and tools for impact analyses for energy plants
• Can assess application fields for evaluation methods and tools, including critically assess results and conclusions on the basis of different methods and tools
• Can understand and reflect on theories, evaluation methods and analysis tools within the relevant areas.

Competences:
• Can independently start and participate in interdisciplinary tasks and cooperation on an organisation level
• Can independently take responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.

Examination: Individual oral examination in continuation of the project examination. Internal grading, 7-point scale.


2nd semester: Common course module (Urban Planning, Energy Planning and Environmental Management and Sustainability)

Title: Policy, Planning and Governance (Politik, planlægning og governance)

Requirements: Bachelor education.

Objectives: Students completing the module acquire the following:

Knowledge:
• Knowledge of power, politics and policies in relation to decision processes based on national and international research
• Knowledge of governance and planning in relation to decision processes based on national and international research
• Knowledge of discourses, institutions and actors as tools of analysis in relation to decision processes based on national and international research
• Capability of reflecting critically on the use of the presented concepts and methods of analysis.
Skills:
- Must at an advanced level be able to use the introduced concepts and methods of analysis in relation to specific problems
- Must independently be able to develop and introduce new concepts and methods of analysis in relation to problems relevant to own professional standards
- Must be able to impart knowledge of policies, planning and governance to both specialists and non-specialists.

Competences:
- Able to critically and independently use and develop the presented concepts and methods of analysis in problem-based project work
- Capable of current professional development through acquisition of new knowledge of policies, planning and governance.

Teaching: Lectures, workshops, synopses, field studies, seminars, assignments, problem solving, etc.

Examination: Individual written examination. Internal grading, pass/fail.


2nd semester: Project module (Urban Planning)

Title: Power in Planning (Magt i planlægning)

Requirements: That the student has followed the courses and participated in the exams at the 1st semester; guest students, etc. are exempted.

Objectives: Students completing the course acquire the following:

Knowledge:
- Knowledge of planning processes and their relation to questions about power in relation to specific practices
- Knowledge of relevant power theories and concepts, including especially knowledge of power theories and concepts in planning
- Knowledge of relevant theories of science and research designs.

Skills:
- Can identify questions about power in planning
- Can identify relevant theories and concepts in relation to the analysis of power in the practices of planning
- Can use relevant theories of science and research methods
- Can independently and critically evaluate and develop theories, concepts and methods for analysis of power in the practices of planning
- Can independently and critically assess the role of power in the practices of planning
- Can communicate research-based knowledge.

Competences:
- Can independently and critically handle work and development situations that are complex, unpredictable and require new solutions
- Can independently start and implement subject specific and interdisciplinary cooperation and take a professional responsibility
Can independently take the responsibility for own professional development and specialisation.

Teaching: Problem-oriented project work in groups.

Examination: Individual oral examination on the basis of the project report. External grading, 7-point scale.

Assessment criteria: Indicated in the Framework Conditions.

2nd semester: Course module 1 (Urban Planning)

Title: The Deliberative Practitioner (Den refleksive praktiker)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Knowledge of the institutional contexts and power relations within which the planner is working in practice
- Knowledge of alternative understandings of the role of the planner
- Knowledge of professional behaviour codes and ethical frames for the practice of the planner
- Knowledge of communication and work with conflicts due to differences in the planning.

Skills:
- Can identify central elements in the professional planning behaviour
- Can use relevant theories, concepts and methods to analyze the practice of planning and critically evaluate it
- Can use relevant theories and concepts relating to the practice of the planner, especially in relation to independently being able to understand the roles and interventions of the planner in different contexts
- Can design and handle the dialogues of planners and evaluate their ability to handle power, conflicts and differences.

Competences:
- Can independently and critically be part of complex planning processes and be able to handle conflicts and differences
- Can critically reflect on and develop own professional ethics and procedures
- Can independently start and implement specific professional and interdisciplinary cooperation and can take a professional responsibility.

Teaching: Lectures, workshops, synopses, field studies, seminars, assignments, problem solving, etc.

Examination: Continuous examination or active participation. Internal grading, pass/fail.

2nd semester: Course module 2 (Urban Planning)

Title: Planning Theory (Planlægningsteori)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Thorough knowledge of international planning theory
- Has in one or more selected fields knowledge of planning theory research carried out on the highest international level
- Can understand and, on a scientific basis, reflect on the planning theory and on this basis identify scientific problems in relation to the planning theory
- Is able to understand the role of planning in society
- Is able to understand the role of the planner in society
- Knowledge of the ethical questions of planning
- Thorough knowledge of participation and democracy in planning.

Skills:
- Must be able to use international planning theory in a practical context and in relation to the problems of planning
- Can distinguish between descriptive and normative theories within planning theory
- Is able to analyze and evaluate the value basis of the planning theories and the planning methods
- Can analyze different planning concepts and methods by using planning theory
- Can evaluate and select relevant planning theories, methods, tools and general skills and on a scientific basis improve analyses and solutions
- Must be able to communicate research-based planning theory and discuss professional and scientific problems with professionals as well as non-professionals.

Competences:
- Can handle work and development situations which are complex, unpredictable and require new solutions by using planning theory
- Can independently start and implement subject specific and interdisciplinary cooperation and take a professional responsibility by using planning theory
- Can independently take a responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, synopses, field studies, seminars, exercises, problem solving, etc.

Examination: Individual written examination. Internal grading, pass/fail.

2nd semester: Project module (Environmental Management and Sustainability)

Title: Sustainability Management in a Societal and Institutional Perspective (Bæredygtighedsledelse i et samfundsmæssigt og institutionelt perspektiv)

Requirements: That the student has followed the courses and participated in the exams at the 1st semester; guest students, etc. are exempted.

Objectives: Students completing the module acquire the following:

Knowledge:
- Have thorough knowledge and understanding of social framework conditions and challenges in relation to environmental management and sustainable development
- Have thorough knowledge and understanding of differently directed social interests and the roles of actors in relation to environmental management and sustainable development.

Skills:
- Can analyze and understand the handling of environmental problems on a social level, including the integration of environmental policies, instruments and institutional aspects in relation to a total picture of the society’s handling of environmental problems
- Can formulate and analyze proposals for strategies within the environmental field which are based on an analysis of the social conditions
- Can identify, analyze and assess project-relevant sustainability problems and consequences in a superior social perspective
- Can understand, use and critically reflect on relevant quantitative and qualitative economic, sociological, environmental and/or engineering analysis methods. Must be able to uncover the interests connected
- Can independently collect data in relation to relevant social problems and assess the quality and reliability of the used data
- Can motivate and argue the general structure and methods of the project in a scientific-theoretical context. Must also be able to relate critically to sources and use accurate source references.

Competences:
- Can structure and handle the complex combination of specific challenges which on a social level relates specially to the environmental and sustainable development
- Can combine and compose the use of relevant theories, understandings, methods and analyses so that they form a synthesis towards the preparation of specific strategies and plans directed towards institutional and socially conditional possibilities of working with sustainable solutions
- Can independently start and participate in interdisciplinary planning tasks and cooperation across social levels, nationalities and cultures.

Teaching: Problem-oriented project work in groups

Examination: Individual oral examination based on the project report. External grading, 7-point scale.

2nd semester: Course module 1 (Environmental Management and Sustainability)

Title: Current Topics in Sustainability Research II (Aktuelle emner i forskning om bæredygtighed II)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
• Have thorough knowledge of relevant theories, understandings, methods and analyses that concretize the possibilities of different actors of working with sustainable production and consumption
• Have detailed and specialized knowledge of different form of Danish and international environment, energy and climate regulation.

Skills:
• Can, from a political and institutional perspective identify, analyze and assess sustainability problems and consequences
• Can communicate and discuss environmental as well as sustainable consequences of plans, programmes and projects
• Can communicate and discuss superior themes which have special relevance for sustainable production and consumption
• Can reflect on relevant quantitative and qualitative economic, sociological, environmental and/or engineering analysis methods.

Competences:
• Can independently start and participate in interdisciplinary tasks and cooperation on an organisation level (business level)
• Can independently take the responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, seminars, problem solving, etc.

Examination: Continuous evaluation or active participation. Internal grading, pass/fail.


2nd semester: Course module 2 (Environmental Management and Sustainability)

Title: Sustainability by Design (Bæredygtighed gennem design)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
• Have thorough knowledge and understanding of the applications of different tools for solution of design, planning and policy tasks on a sustainable basis.
Skills:
- Can critically reflect on a given problem, argue in favour of and use relevant tools, theories and practices and in this way bring forward solution proposals
- Can discuss institutional perspectives of the indicated solution
- Can identify, analyze and assess the project-relevant sustainable problems and consequences in a superior social perspective.

Competences:
- Can structure and handle the complex combination of specific challenges in relation to the solution of design, planning and policy tasks on a sustainable basis
- Can combine and combine the use of relevant theories, understandings, methods and analyses so that they form a synthesis towards the preparation of specific strategies and plans enabling the work with sustainable solutions.
- Can motivate, argue and communicate the general structure of the project, used methods and solution to both professionals and non-professionals.

Teaching: Lectures, workshops, seminars, problem solving, etc.

Examination: Individual written examination. Internal grading, pass/fail.


2nd semester: Project module (Energy Planning)

Title: Sustainable Energy Planning in an Institutional and Societal Perspective (Energiplanlægning i et institutionelt og samfundsmæssigt perspektiv)

Requirements: That the student has followed the courses and participated in the exams at the 1st semester; guest students, etc. are exempted.

Objectives: Students completing the module acquire the following:

Knowledge:
- Thorough knowledge and understanding of framework conditions, challenges and roles in relation to the energy and environmental problems of the society, including an ability to use tools and systems to analyze them
- Able to understand and on a scientific basis reflect on the energy planning on a social level as well as ability to identify problems in this context
- Thorough knowledge as to how the economic, organizing and institutional context in different countries and cultures affect the energy situation and the environment and the technical and organizing possibilities of action within the energy and environmental field.

Skills:
- Can formulate and analyze proposals for strategies within energy and the field of the environment which are based on an analysis of the social conditions
Can understand, use and critically reflect on relevant quantitative as well as qualitative economic, sociological, environmental and/or engineering analysis methods and uncover the interests connected

Can independently collect the relevant data in relation to specific problems/challenges and assess the quality and reliability of these data

Can motivate, argue and communicate the general structure and methods of the project in a scientific-theoretical context. Must also be able to relate critically to sources and use accurate source references

Can communicate the result of the project work to selected target groups.

Competences:
Can structure and handle the complex combination of specific challenges that on a social level especially relate to energy planning
Can combine and compose the use of relevant theories, understandings, methods and analyses so that they form a synthesis towards the preparation of specific strategies and plans directed towards institutional and socially conditional possibilities
Can independently start and participate in interdisciplinary planning tasks and cooperation across social levels, nationalities and cultures.

Teaching: Problem-oriented project work in groups.

Examination: Individual oral examination based on the project report. External grading, 7-point scale.


2nd semester: Course module 1 (Energy Planning)

Title: Energy and Environmental Policies (Energi- og miljøpolitikker)

Requirements: None.

Objectives: Students completing the module acquire the following:

Knowledge:
- Thorough knowledge of international energy and environmental policies, including their origin and historical context
- Knowledge of theories on international energy and environmental policies
- Knowledge of the connection between international decision processes and national or international energy and environmental policies as well as the directly and indirectly involved actors
- Knowledge of the implementation and effect of international energy and environmental policies
- Knowledge of international technology transfer.

Skills:
- Can understand and reflect on the connection between context, policies, implementation and effects
- Can critically analyze energy and environmentally related problems in relation to national and international energy and environmental policies
Can understand the interplay between institutions and energy and environmental policies
Can understand and assess planning and the implementation of policies, including the connection between policies and institutions
Can identify problems in relation to technology transfer, analyze and understand strategies for technology transfer.

Competences:
Can independently start and participate in interdisciplinary tasks and cooperation on an organisation level
Can independently take the responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.

Examination: Continuous examination or active participation. Internal grading, pass/fail.


2nd semester: Course module 2 (Energy Planning)

Title: Technical Energy System Analysis and Policy Design (Teknisk energisystemanalyse og virkemidler)

Requirements: None.

Objectives: Students completing the module, acquire the following:

Knowledge:
- Thorough knowledge of technical and economic energy system analysis on a regional, national or international level, including with special focus on renewable energy and energy savings
- Can analyze and assess consequences at the implementation of large quantities of renewable energy
- Can analyze the interplay between energy efficiency improvement (saving) and energy supply in a sustainability strategy
- Knowledge of technical, economic and environmental optimization criteria, etc. in relation to energy planning and interests in the society
- Knowledge of the connection between technical analyses, socio-economic consequences and public regulation.

Skills:
- Can analyze and assess energy systems from technical, economic and environmental criteria
- Can analyze and assess energy systems from a number of optimization criteria, including possible conflicting interests
- Can assess applications for evaluation methods and tools, including critically assess results and conclusions on the basis of different methods and tools
- Can prepare proposals for technical system design and combine it with the design of public regulation and strategies in energy planning.
Competences:
- Can independently start and participate in interdisciplinary tasks and cooperation on an organisation level
- Can independently take the responsibility for own professional development and specialisation.

Teaching: Lectures, workshops, seminars, problem solving and presentation, teacher feedback, etc.

Examination: Individual oral or written examination. Internal grading, pass/fail.


3rd semester: Common project (Urban Planning, Energy Planning and Environmental Management and Sustainability)

Title: Professional Development (Faglig og professionel udvikling)

Skills: Has completed the 1st semester (and has followed courses and exams at the 2nd semester) at the Programmes of Urban Planning, Energy Planning, Environmental Management and Sustainability or another programme after specific assessment.

At the 3rd semester the student can choose between more options:

Option 1: Project Semester – with or without Integrated Internship
The students can choose to carry through a traditional project semester which normally carries on the subject knowledge in which the student has specialized at the 1st and 2nd semesters and/or prepare for the subject about which the student wish to write his/her thesis. The semester comprises the preparation of a project report or a scientific article – possibly with the supervisor as the last author of the article.

In support of the project work courses in “Scientific Article Writing” and “Project Management” are offered, which can be followed as free study activities.

The student can choose to integrate an internship either in Denmark or abroad in his/her project semester. The internship must be of maximum 2-4 months’ duration and has to be approved in advance by the Study Board of Planning and Geography. For each individual internship, specific learning goals have to be drawn up, clearly reflecting the professional problem of the project.

Objectives: Students completing the project module acquire the following:

Knowledge:
- Must within the chosen part of his/her field have knowledge based on the highest international research
- Must be able to understand and relate critically to the knowledge of the field and be able to identify either scientific problems or practical problems in a given complex context.
Skills:
- Can master the scientific methods and tools of the field as well as general skills in relation to the solution of the chosen problem
- Can assess and choose among the scientific methods, tools and general skills of the field and draw up new models of analysis and solution
- Can discuss professional and scientific problems with both colleagues and non-specialists.

Competences:
- Able to manage work and development situations which are complex, unpredictable and require new solution models
- Able to independently start and carry through professional and interdisciplinary cooperation and take a professional responsibility
- Able to independently take responsibility for own professional development and specialisation.

Teaching: Project work, possibly with internship integrated in the project course.

Examination: Internal oral examination based on the project report or an article. Internal grading, 7-point scale.

A student who has followed the 1st-2nd semester at Urban Planning or Energy Planning or Environmental Management and Sustainability may alternatively choose to follow a 1st semester under Urban Planning, Energy Planning, Environmental Planning or Integrative Geography. In that case the student follows course and project modules at this semester in full and in this way acquires the knowledge, skills and competences which are stated in the curriculum for the concerned 3rd semester.

Option 2: International or National Credit
After previous approval by the Study Board, the 3rd semester may be transferred to another educational institution in Denmark or abroad. Previous approval (pre-credit) may be expected if the studies at another educational institution can give the student knowledge, skills and competences corresponding to the extent and knowledge, skills and competences that could otherwise be acquired by following the “Project Semester – with or without Integrated Internship”, see above.

Option 3: Long Final Project (Master’s Thesis)
Students may choose to carry through the 3rd and 4th semesters as one long master’s thesis (60 ECTS). Long final project is especially advised to work with project topics, where an extraordinary great collection of data is necessary. Final projects have to be approved in advance by the Study Board of Planning and Geography, and the student has to fulfil the knowledge, skills and competences as indicated for master’s theses.

4th semester: Common project module (Urban Planning, Energy Planning and Environmental Management and Sustainability)

Title: Master’s Thesis (Kandidatspeciale)

Requirements: Has passed the three first semesters of the Programme of Urban Planning or Energy Planning or Environmental Management and Sustainability or correspondingly after specific assessment.
Objectives: Students completing the module acquire the following:

Knowledge:
- Thorough knowledge of relevant theories and methods in relation to the chosen problem and can reflect on them
- Can describe the used theory(ies) so that the special characteristics of the theory are brought to light and in this way document understanding of the possibilities and limitations of the used theory(ies) within the concerned field of problems
- Have knowledge of the scientific-theoretical and methodical embeddedness of the used theories and can reflect on them
- Have thorough knowledge of the research embeddedness of the chosen problem, including knowledge of the most important national and international research in the field.

Skills:
- Are independently able to plan and carry through a project course at a high professional level
- Can give an account of possible methods for solution of the problem formulation of the project and describe and assess the suitability of the chosen method, including an account of chosen limitations and their importance to the results of the product
- Can give an account of the relevance to the education of the chosen problem, including a precise account of the core of the problem and the professional context
- Can analyze and describe the chosen problem by using relevant theories and empirical investigations
- Can analyze and assess the results of empirical investigations, whether it is the student’s own investigations or those of others, including an assessment of the importance of the investigation methods to the validity of the results
- Can point out relevant future strategies, possibilities of change and/or solution proposals
- Can impart knowledge of the problem to both professionals and non-professionals.

Competences:
- Can form a synthesis between the professional problem, theoretical and empirical investigations and make a critical assessment of the synthesis formed and the other results of the project work
- Can independently, on the basis of the acquired problem, be part of interdisciplinary discussions and development work
- Can independently acquire the newest knowledge in the field and are on this background capable of continuously developing the professional skills and competences.

Teaching: Problem-oriented project work in groups.

Examination: Individual oral examination on the basis of the project report of the group. External grading, 7-point scale.

Chapter 4: Coming into Force, Interim Provisions and Revision

This curriculum is approved by the Dean of the Faculty of Engineering and Science and comes into force as of September 1, 2010.

Students who wish to complete their studies under the previous curriculum from 2009 must conclude their education by the summer examination period 2014 at the latest, since examinations under the previous curriculum are not offered after this time.

In accordance with the Framework Provisions and the Handbook on Quality Management for the Faculty of Engineering and Science at Aalborg University, this curriculum must be revised no later than five years after its entry into force.

Chapter 5: Other Rules

5.1 Rules concerning Written Work, including the Master’s Thesis
In the assessment of all written work, regardless of the language in which it is written, importance is also attached to the student’s spelling and formulation ability, in addition to the academic content. Orthographic and grammatical correctness as well as stylistic proficiency are considered basis for the evaluation of language performance. Language performance must always be included as an independent dimension of the total evaluation. However, no examination may be assessed as ‘Pass’ on the basis of language performance alone; similarly, an examination cannot normally be assessed as ‘Fail’ on the basis of poor language performance alone.

The Study Board can grant exemption from this in special cases (e.g. due to dyslexia).

The Master’s Thesis must contain a summary in English\(^1\). If the project is written in English, the summary must be written in Danish\(^2\). The summary must be of minimum one and maximum two pages. The summary is part of the general assessment of the project.

5.2 Rules on Credit, including the Possibility of Choice of Modules being Part of another Study Programme of a University in Denmark or Abroad
In each single case the Study Board can approve that passed educational elements from other master programmes replace educational elements in this education (credit). The Study Board can also approve that passed educational elements from another Danish or foreign education at the same level replace educational elements according to this curriculum. Decisions about credit are made by the Study Board on the basis of a professional assessment. For rules on credit see the Framework Provisions.

5.3 Examination Rules
The examination rules are stated in the Examination Policies and Procedures published by the Faculty of Engineering and Science on its homepage.

5.4 Exemption
The Study Board can, in case of unusual circumstances, exempt from those parts of the rules of the curriculum, which are not provided by Statute or Ministerial Order. Exemption regarding an examination applies to the first succeeding examination.

---

\(^1\) Or another foreign language (after the approval of the Study Board)
\(^2\) The Study Board can grant an exemption
5.5 Completion of the Master’s Programme
The master’s programme must be concluded not later than four years after its start.

5.6 Rules and Requirements about Reading of Texts in Foreign Languages
It is a condition that the student can read academic texts in modern Danish, Norwegian, Swedish and English as well as use encyclopedias in other European languages.

5.7 Further Information
The current version of the curriculum is published on the homepage of the Study Board, including further information about the study programme and examinations.