



AALBORG UNIVERSITET

# **MASTER OF SCIENCE (MSC) IN TECHNOLOGY (ENVIRONMENTAL SCIENCE)**

MASTER OF SCIENCE (MSC) IN TECHNOLOGY  
AALBORG

[Link til denne studieordning](#)

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## § 1: PREFACE

Pursuant to Act 261 of March 18, 2015 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's program, Master of Science (MSc) in Technology in Environmental Science is stipulated. The program also follows the Joint programme regulations and the Examination Policies and Procedures for the Faculty of Engineering and Science.

Aalborg University, 2016

Niels T. Eriksen

Chairman of Study Board

Approved by the Dean 2016

## § 2: BASIS IN MINISTERIAL ORDERS

The Master's programme is organised in accordance with the Ministry of Higher Education and Science's Order no. 1328 of November 15, 2016 on Bachelor's and Master's Programmes at Universities (the Ministerial Order of the Study Programmes) and Ministerial Order no. 1062 of June 30, 2016 on University Examinations (the Examination Order). Further reference is made to Ministerial Order no. 111 of January 30, 2017 (the Admission Order) and Ministerial Order no. 114 of February 3, 2015 (the Grading Scale Order) with subsequent changes.

## § 3: CAMPUS

The programme is offered in Aalborg.

## § 4: FACULTY AFFILIATION

The Master's programme falls under Faculty of Engineering and Science, Aalborg University.

## § 5: STUDY BOARD AFFILIATION

The Master's programme falls under Study Board of Biotechnology, Chemistry and Environmental Engineering

## § 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The programme falls falls under the external evaluator corps: ingeniøruddannelernes censorkorps – Chemistry

## § 7: ADMISSION REQUIREMENTS

### Applicants with a legal right of admission (retskrav)

- There are no Bachelors from Aalborg University with legal claim (retskrav) to admission.

### Applicants without legal right of admission

- Bachelor of Science in Engineering (Environmental Science), Aalborg University
- Bachelor of Science in Engineering (Environmental Engineering), Aalborg University
- Bachelor of Science in Biology, Aalborg University

Students with another Bachelor degree may, upon application to the Board of Studies, be admitted following a specific academic assessment if the applicant is considered as having comparable educational prerequisites. The University can stipulate requirements concerning conducting additional exams prior to the start of study.

## **§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH**

The Master's program entitles the graduate to the designation cand. tech. (candidatus/candidata technologiae) i miljøvidenskab. The English designation is: Master of Science (MSc) in Technology (Environmental Science).

## **§ 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS**

The Master's program is a 2-year, research-based, full-time study program. The program is set to 120 ECTS credits.

## **§ 10: RULES CONCERNING CREDIT TRANSFER (MERIT), INCLUDING THE POSSIBILITY FOR CHOICE OF MODULES THAT ARE PART OF ANOTHER PROGRAMME AT A UNIVERSITY IN DENMARK OR ABROAD**

The Study Board can approve successfully completed (passed) programme elements from other Master's programmes in lieu of programme elements in this programme (credit transfer). The Study Board can also approve successfully completed (passed) programme elements from another Danish programme or a programme outside of Denmark at the same level in lieu of programme elements within this curriculum. Decisions on credit transfer are made by the Study Board based on an academic assessment. See the Joint Programme Regulations for the rules on credit transfer.

## **§ 11: EXEMPTIONS**

In exceptional circumstances, the Study Board study can grant exemption from those parts of the curriculum that are not stipulated by law or ministerial order. Exemption regarding an examination applies to the immediate examination.

## **§ 12: RULES FOR EXAMINATIONS**

The rules for examinations are stated in the Examination Policies and Procedures published by the faculty on their website.

## **§ 13: RULES CONCERNING WRITTEN WORK, INCLUDING THE MASTER'S THESIS**

In the assessment of all written work, regardless of the language it is written in, weight is also given to the student's formulation and spelling ability, in addition to the academic content. Orthographic and grammatical correctness as well as stylistic proficiency are taken as a basis for the evaluation of language performance. Language performance must always be included as an independent dimension of the total evaluation. However, no examination can be assessed as 'Pass' on the basis of good language performance alone; similarly, an examination normally cannot 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., dyslexia or a native language other than Danish).

The Master's Thesis must include an English summary (or another foreign language: French, Spanish or German upon approval by the Study Board). If the project is written in English, the summary must be in Danish (The Study Board can grant exemption from this). The summary must be at least 1 page and not more than 2 pages (this is not included in any fixed minimum and maximum number of pages per student). The summary is included in the evaluation of the project as a whole.

## **§ 14: REQUIREMENTS REGARDING THE READING OF TEXTS IN A FOREIGN LANGUAGE**

It is assumed that the student can read academic texts in modern Danish, Norwegian, Swedish and English and use reference works, etc., in German.

## **§ 15: COMPETENCE PROFILE ON THE DIPLOMA**

The following competence profile will appear on the diploma:

A Candidatus graduate has the following competency profile:

A Candidatus graduate has competencies that have been acquired via a course of study that has taken place in a research environment.

A Candidatus graduate is qualified for employment on the labour market based on his or her academic discipline as well as for further research (PhD programmes). A Candidatus graduate has, compared to a Bachelor, developed his or her academic knowledge and independence so as to be able to apply scientific theory and method on an independent basis within both an academic and a professional context.

## § 16: COMPETENCE PROFILE OF THE PROGRAMME

**The graduate of the Master's programme:**

### Knowledge

Has knowledge within environmental science that in selected areas such ecosystem engineering, ecosystem services, soil science, pollution and remediation of ecosystems, and environmental management is based on the highest international research.

Is able, on a scientific basis, to understand and reflect over the knowledge in the above-mentioned areas and to identify scientific problems

### Skills

Masters the scientific methods and tools of the above-mentioned areas and master the general skills that are tied to work within environmental science and technology.

Can evaluate and select among the scientific theories, methods, tools and general skills of environmental science and technology and environmental management, and set up, on a scientific basis, new analysis and solution models

Can communicate research-based knowledge and discuss professional and scientific problems with both peers and non-specialists.

### Competencies

Is able to develop methods and models for environmental management issues, and evaluate and solve assignments concerning environmental and management issues in private and public enterprises.

Manages work and development situations that are complex, unpredictable and require new solutions.

Can independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility.

Can independently take responsibility for own professional development and specialization

## § 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The program is structured in modules and organised as a problem-based study. A module is a program element or a group of program elements, which aims to give students a set of professional skills within a fixed time frame specified in ECTS credits, and concluding with one or more examinations within specific exam periods. Examinations are defined in the curriculum.

The program is based on a combination of academic, problem-oriented and interdisciplinary approaches and organized based on the following work and evaluation methods that combine skills and reflection:

- Lectures
- Project work
- Exercises (individually and in groups)
- Teacher feedback
- Scientific reflection

## § 18: OVERVIEW OF THE PROGRAMME

All modules are assessed through individual grading according to the 7-point scale or Pass/Fail. All modules are assessed by external examination (external grading) or internal examination (internal grading or by assessment by the supervisor only).

Offered as: 1-professional					
Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method

1 SEMESTER					
<a href="#">Human Impact on the Environment</a>	Project	15	7-point grading scale	External examination	Oral exam based on a project
<a href="#">Global Change Biology</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam
<a href="#">Environmental Soil Science and Geostatistics</a>	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
<a href="#">Experimental Hydrology</a>	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
2 SEMESTER					
<a href="#">Ecosystem Analysis</a>	Project	15	7-point grading scale	External examination	Oral exam based on a project
<a href="#">Conservation Biology</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam
<a href="#">Marine Pollution</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam
<a href="#">Hydrodynamics and Time Series Analysis of Environmental Flows</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam
<a href="#">Fundamentals of Wastewater Treatment</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam
<a href="#">Danish Biotopes</a>	Course	5	Passed/Not Passed	Internal examination	Active participation and/or written assignment
3 SEMESTER					
<a href="#">Project Work in an External Organisation</a>	Project	30	Passed/Not Passed	Internal examination	Oral exam based on a project
4 SEMESTER					
<a href="#">Master's thesis in environmental science</a>	Project	30	7-point grading scale	External examination	Master's thesis/final project
3-4 SEMESTER					
<a href="#">Extended Master's Thesis in Environmental Science</a>	Project	60	7-point grading scale	External examination	Master's thesis/final project

Danish Biotopes is part also of the MSc programme in Biology and taught in Danish.

The study board can cancel modules if the number of enrolled students is low.

A compulsory course in Problem based learning (PBL) and student responsibility is offered as an integrated part of all project modules to students not acquainted with PBL at Aalborg University.

#### **Elective courses**

##### 2nd semester (choose 1)

- Hydrodynamics and Time Series, Analysis of Environmental Flows
- Fundamentals of Wastewater Treatment
- Danish Biotopes

## **§ 19: ADDITIONAL INFORMATION**

The current version of the curriculum is published on the Board of Studies' website, including more detailed information about the program, including exams.

*All students who have not participated in Aalborg University's PBL introductory course during their Bachelor's degree must attend the introductory course "Problem-based Learning and Project Management". The introductory course must be approved before the student can participate in the project exam. For further information, please see the [course description](#).*

## **§ 20: COMMENCEMENT AND TRANSITIONAL RULES**

The study regulations are adopted by the Study Board of Biotechnology, Chemistry and Environmental Engineering, approved by the Dean of the Faculty of Engineering and Science and take effect from 1st September, 2017.

Students in the cand.scient.tech. program in Environmental Engineering who wish to complete their studies under the former study regulations from 2016 must conclude their education by the summer examination period 2018 at the latest, since examinations under the former study regulations are not offered after this time.

## **§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS**

Minor editorial changes have been made in connection with the digitisation of the study curriculum.