AALBORG UNIVERSITET

MASTER OF SCIENCE (MSC) IN ENGINEERING (OPERATIONS AND INNOVATION MANAGEMENT) 2017

MASTER OF SCIENCE (MSC) IN ENGINEERING
AALBORG

Link to this studyline

TABLE OF CONTENTS

§ 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 in Operations and Innovation Management is stipulated. The programme also follows the Joint Programme Regulations and the Examination Policies and Procedures for the The Faculty of Engineering and Science..

§ 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 the The Faculty of Engineering and Science, Aalborg University.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under the Study Board of Production.

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the external examiners corps on Nationwide engineering examiners/Machine.

§ 7: ADMISSION REQUIREMENTS

Applicants with a legal claim to admission (retskrav):

Applicants with one of the following degrees are entitled to admission:

- Bachelor of Science in Manufacturing and Operations Engineering, Aalborg University
- Bachelor of Science in Global Business Engineering, Aalborg University
- Bachelor of Engineering in Export Technology, Aalborg University

Applicants without legal claim to admission:

Applicants with one of the following degrees meet the admission requirements:

- Bachelor of Engineering in Export, IHK
- Bachelor of Engineering in Global Business Development, VIA

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 programme entitles the graduate to the Danish designation Civilingeniør, cand.polyt. i værdikæder og innovationsledelse. The English designation is: Master of Science (MSc) in Engineering (Operations and Innovation Management).

§ 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS

The Master's programme is a 2-year, research-based, full-time study programme. The programme 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 that passed programme elements from other educational programmes at the same level replaces programme elements within this programme (credit transfer).

Furthermore, the Study Board can, upon application, approve that parts of this programme is completed at another university or a further education institution in Denmark or abroad (pre-approval of credit transfer).

The Study Board's decisions regarding credit transfer are based on an academic assessment.

§ 11: EXEMPTIONS

The Study Board's possibilities to grant exemption, including exemption to further examination attempts and special examination conditions, are stated in the Examination Policies and Procedures published at this website: https://www.studieservice.aau.dk/regler-vejledninger

§ 12: RULES FOR EXAMINATIONS

The rules for examinations are stated in the Examination Policies and Procedures published at this website: https://www.studieservice.aau.dk/regler-vejledninger

§ 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. If the project is written in English, the summary can be in Danish. The summary is included in the evaluation of the project as a whole.

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

At programmes taught in Danish, it is assumed that the student can read academic texts in modern Danish, Norwegian, Swedish and English and use reference works, etc., in other European languages At programmes taught in English, it is assumed that the student can read academic text and use reference works, etc., in English.

§ 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 programme exhibits the following characteristics:

Knowledge

- Have international-level knowledge, based on state-of-the-art research in the field of Operations and Innovation Management, in particular disciplines that take a management engineering perspective on the analysis of complex problems in complex industrial systems, and the design and implementation of innovative solutions to such problems, based on an integration of technological, organizational and managerial aspects. These disciplines include organization/enterprise analysis, engineering and design; operations strategy; business intelligence and performance management; and innovation and change management
- Understand and are able to reflect, on a scientific basis, on the technological, organizational, managerial, industrial and competitive aspects of Operations and Innovation Management problems and solutions.

Skills

- Are skilled management engineers who are able to:
  - Work systematically, analytically and solution design-oriented
  - Apply a deep understanding of the technological, organizational, managerial, industrial and competitive aspects of Operations and Innovation Management in analyzing complex problems and designing and implementing solutions in a wide range of empirical settings, in particular industrial and professional service settings
  - Evaluate, select among, and apply scientifically-based management engineering knowledge, methods and tools related to Operations and Innovation Management to analyze problems and design and implement solutions, alone as well as in a collaborative context, e.g. cross-functional projects
- Can communicate research-based knowledge, methods and tools and discuss professional and scientific problems and solutions with both peers and non-specialists.

Competencies

- Can manage work and development in complex and unpredictable situations requiring innovative solutions
- Can independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility within the area of Operations and Innovation Management
- Can independently take responsibility for own professional development and specialisation.

§ 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The programme is structured in modules and organised as a problem-based study. A module is a programme element or a group of programme elements aiming 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 that are defined in the curriculum. Each semester has an overall theme which serves a focal point in both modules and the project work. The programme is based on a combination of academic, problem-oriented and interdisciplinary approaches and organised based on the following work and evaluation methods that combine skills and reflection:

- Lectures
- Classroom instruction
- Project work
- Workshops
- Exercises (individually and in groups)
- Teacher feedback
- Reflection
- Portfolio work.

§ 18: OVERVIEW OF THE PROGRAMME

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

Offered as:

Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method	Language
1 SEMESTER						
Organisation Analysis and Design (M-OIM-K1-1)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Enterprise Engineering and Design (M-OIM-K1-2)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Operations Development and Strategy (M-OIM-K1-3)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Integrated Solutions - Designing Global Business Systems and Value Chains (M-OIM-K1-4)	Project	15	7-point grading scale	External examination	Oral exam based on a project	English
2 SEMESTER						
Innovation and Change Management (M-OIM-K2-1)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Global Business Performance (M-OIM-K2-2)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Business Intelligence and Analytics (M-OIM-K2-3)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Global Implementation (M-OIM-K2-4)	Project	15	7-point grading scale	Internal examination	Oral exam based on a project	English
3 SEMESTER Option A						
Operations and Innovation Management (M-OIM-K3-1)	Project	30	7-point grading scale	Internal examination	Oral exam based on a project	English
3 SEMESTER Option B						
Academic Internship (M-OIM-K3-2)	Project	30	7-point grading scale	Internal examination	Oral exam based on a project	English
3-4 SEMESTER						
Long Master's Thesis (M-OIM-K3-3)	Project	60	7-point grading scale	External examination	Master's thesis/final project	English
4 SEMESTER						
Master's Thesis (M-OIM-K4-1)	Project	30	7-point grading scale	External examination	Master's thesis/final project	English

The 3rd semester is allocated to gaining practical international experience. The semester will enable students to appreciate theoretical reflective work practice and cultural challenges. The aim of the semester is to

1. Gain practical experience within the subject field
2. Analyse and reflect on educational experiences and professional practice
3. Clarify the Master's Thesis topic.

The third semester offers different ways of organisation – depending on the student's choice of content; project work at Aalborg University, study visit at an educational institution in Denmark or abroad, voluntary traineeship with project work at a company in Denmark or abroad, or a semester programme that comprises cross-disciplinary programme elements composed by the student. The total work load of the semester has to be equivalent to 30 ECTS. The project may be finalized with a project report or in the form of a scientific paper, or, if the project is continued at the 4th semester, with a midterm evaluation.

§ 19: ADDITIONAL INFORMATION

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

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the Dean of the Faculty of Engineering and Science and enters into force as of September 2017.

Students who wish to complete their studies under the previous curriculum from 2016 must conclude their education by the summer examination period 2018 at the latest, since examinations under the previous curriculum are not offered after this time.

In accordance with the Joint programme regulations for the Faculty of Engineering and Science at Aalborg University, the curriculum must be revised no later than five years after its entry into force.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

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