AALBORG UNIVERSITET

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

MASTER OF SCIENCE (MSC) IN ENGINEERING
COPENHAGEN

Link to this studyline

Link(s) to other versions of the same line:

Master of Science (MSc) in Engineering (Operations and Management Engineering) 2015

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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 in Operations and Management Engineering is stipulated. The programme also follows the Joint Programme Regulations and the Examination Policies and Procedures for the The Faculty of Engineering and Science, the Technical Faculty of IT and Design, and the Faculty of Medicine.

§ 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 Copenhagen.

§ 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 right of admission (retskrav):

Applicants with the following degree are entitled to admission

- Bachelor degree in Manufacturing and Operations Engineering (AAU)

Applicants without legal claim to admission:

Bachelor's programmes qualifying students for admission:

- Bachelor degree in Global Business Engineering (AAU)
- Diplomingeniør – Eksportteknologi (AAU)
- Diplomingeniør – Industri og Produktion (AAU)
- Diplomingeniør – Eksport (IHK)
- Diplomingeniør - 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 teknisk ledelse. The English designation is: Master of Science (MSc) in Engineering (Operations and Management Engineering).

§ 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 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 at this website: https://www.studieservice.aau.dk/Studielegalitet/

§ 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 is able to read academic texts in modern English and use reference works, etc., in other European languages.

§ 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 knowledge (based on the highest level of international research) within the domain of management engineering in the global organization in selected areas such as
  - Technology development and deployment in global supply and value chains
  - Systems and process design and engineering in global supply and value chains
  - Use of technologies for the control and management of supply and value chains
  - Organizational design and development
  - Innovation, implementation and change management from an engineering perspective
- Understand the principles of the above-mentioned areas, can reflect upon their knowledge in these areas at a scientific level, and use their knowledge to identify problems and solutions using technology and an engineering approach as central means for this.

Skills

- Excel in Analysing Complex Business Problems and Designing New Innovative Business systems and solutions by applying scientific methods and tools and general skills related to problem solving and systems design using technologies and an engineering approach within the domain of Global Operations and Innovation Management
- Are able to evaluate and select among scientific theories, methods, tools and general skills used for the conception, design, implementation and operation of global value chains, supply chains and business systems and participate in the development and implementation of novel and innovative technology-based concepts, systems and solutions
- Can apply theories, methods and concepts in different organizational and empirical settings in order to solve complicated technical problems in a societal context
- Can communicate research-based knowledge and discuss professional and scientific problems within the domain of global management with both peers and non-specialists.

Competencies

- Can manage work and development in complex and unpredictable situations requiring new solutions
- Can independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility within the area of global 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
1 SEMESTER					
Supply Chain Configuration	Course	5	7-point grading scale	Internal examination	Written or oral exam
Researching Business Systems	Course	5	7-point grading scale	Internal examination	Written or oral exam
Operations, Innovation and Organizational Configuration	Course	5	7-point grading scale	Internal examination	Written or oral exam
Operations Management and Supply Chain Configuration – an Integrative Approach	Project	15	7-point grading scale	External examination	Oral exam based on a project
2 SEMESTER					
Supply Chain Technologies	Course	5	7-point grading scale	Internal examination	Written or oral exam
Operations, Innovation and Organizational Improvement: Implementation Models and Tools	Course	5	7-point grading scale	Internal examination	Written or oral exam
Management Systems	Course	5	7-point grading scale	Internal examination	Written or oral exam
Integrating Operations Management and Supply Chain Methods	Project	15	7-point grading scale	Internal examination	Oral exam based on a project
3 SEMESTER Option A					
Operations and Supply Chain Management	Project	30	7-point grading scale	Internal examination	Oral exam based on a project
3 SEMESTER Option B					
Academic Internship	Project	30	7-point grading scale	Internal examination	Oral exam based on a project
3-4 SEMESTER					
Long Master's Thesis	Project	60	7-point grading scale	External examination	Master's thesis/final project
4 SEMESTER					
Master's Thesis	Project	30	7-point grading scale	External examination	Master's thesis/final project

§ 19: ADDITIONAL INFORMATION

The current version of the curriculum is published on the study board's website, including more detailed information about the programme, 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.

§ 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 2015 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.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

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