AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER´S PROGRAMME IN SOFTWARE, 2023, COPENHAGEN

MASTER OF SCIENCE (MSC) IN ENGINEERING
COPENHAGEN

Link to this studyline

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§ 1: PREFACE

Pursuant to consolidation Act 778 of August 7, 2019 on Universities (the University Act), the following is established. The programme also follows the Examination Policies and Procedures incl. the Joint Programme Regulations for Aalborg University.

§ 2: BASIS IN MINISTERIAL ORDERS

The Master's programme is organised in accordance with the Ministry of Higher Education and Science's Order no. 2285 of December 1, 2021 on Full-time University Programmes (the University Programme Order) and Ministerial Order no. 2271 of December 1, 2021 on University Examinations (the Examination Order). Further reference is made to Ministerial Order no. 35 of January 13, 2023 (the Admission Order) and Ministerial Order no. 1125 of July 4, 2022 (the Grading Scale Order).

§ 3: CAMPUS

The programme is offered in Copenhagen.

§ 4: FACULTY AFFILIATION

The Master's programme falls under The Technical Faculty of IT and Design, Aalborg University.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under Study Board of Computer Science

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the external examiners corps on Computer Science

§ 7: ADMISSION REQUIREMENTS

Applicants with a legal right of admission (retskrav)

- Bachelor of Science (BSc) in Engineering (Software), Aalborg University (campus Copenhagen)

Applicants without legal right of admission

- Bachelor of Science (BSc) in Engineering (Software), Aalborg University (campus Aalborg)
- Bachelor of Science (BSc) in Computer Science, Aalborg University
- Bachelor (BSc) in Software Development, IT-university in Copenhagen
- Bachelor (BSc) in Software Technology, Technical University of Denmark
- Bachelor (BSc) in Software Engineering, University of Southern Denmark
- Bachelor (BSc) i Computer Science, Aarhus University, Copenhagen University and University of Southern Denmark

All applicants without a legal claim must prove that their English language qualifications is equivalent to level B (Danish level) in English.

Admission to the master's programme in Software requires that the applicant has passed a relevant qualifying bachelor's or professional bachelor's degree programme. A bachelor's or professional bachelor's degree programme is defined as relevant if the degree programme provides competencies to a minimum of ECTS within the following subject areas:

- Programming [30 ECTS]
- Human Computer Interaction [5 ECTS]
- Software Engineering [5 ECTS]

- Object Oriented Analysis and Design [5 ECTS]
- Algorithms and Data Structures [5 ECTS]
- Language Theory [5 ECTS]
- Databases [5 ECTS]

As a prerequisite for admission to the master's programme, students must have completed a bachelor programme in technical sciences, a bachelor of engineering programme or a bachelor in natural science.

§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH

The Master's programme entitles the graduate to the Danish designation Civilingeniør, cand.polyt. i software. The English designation is: Master of Science (MSc) in Engineering (Software).

§ 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.studyservice.aau.dk/rules

§ 12: RULES FOR EXAMINATIONS

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

§ 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

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's programme

Knowledge

- has knowledge within software technology which, in selected areas, is based on the highest international research in the field
- can understand and reflect on computer science knowledge on a scientific basis and identify scientific issues with software technological interfaces

Skills

- masters methods and tools within software technology as well as general skills related to computer science research and development and analysis of software solutions
- can assess and choose relevant computer science theories, methods, tools and general skills and, on a scientific basis, set up new analysis and solution models
- can convey research-based knowledge and discuss professional and scientific issues with professional colleagues as well as non-specialists

Competencies

- can manage work and development situations that are complex, unpredictable and require new solution models
- can independently initiate and implement professional and interdisciplinary collaboration and assume professional responsibility
- can independently take responsibility for own professional development and specialization

§ 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The programme is structured in modules and organized as a problem-based study. A module is a programme element or a group of programme 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 programme 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
- classroom instruction
- project work
- workshops
- exercises (individually and in groups)
- teacher feedback
- reflection

- portfolio work

The Study Board reserves the right not to offer an elective course if less than 10 students register for the course during the registration period at a given semester. Students will be offered other options if a chosen course is not offered.

§ 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	Language
1 SEMESTER						
Internet (DSNSWCK110)	Project	15	7-point grading scale	Internal examination	Oral exam based on a project	English
Programming Paradigms (DSNSWCK111)	Course	5	7-point grading scale	External examination	Written or oral exam	English
Elective courses on 1. semester Pick 2 coures	Course	10				
2 SEMESTER						
Mobility (DSNSWCK210)	Project	15	7-point grading scale	External examination	Oral exam based on a project	English
Selected Topics in Programming (DSNSWCK211)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Elective courses on 2. semester Pick 2 courses	Course	10				
3 SEMESTER						
Pre-specialisation in Software (DSNSWCK310)	Project	20	7-point grading scale	External examination	Oral exam based on a project	English
Specialisation Course (DSNSWCK312)	Course	5	7-point grading scale	External examination	Oral exam	English
Elective courses on 3. semester Pick 1 course	Course	5				
4 SEMESTER						
Master's Thesis (DSNSWCK410)	Project	30	7-point grading scale	External examination	Master's thesis/final project	English

Elective courses on 1. semester Pick 2 coures						
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method	Language

Web Intelligence (DSNSWCK112)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Industrial Test and Verification (DSNSWCK113)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Data-intensive Systems (DSNSWCK114)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Distributed Systems (DSNSWCK115)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English

Elective courses on 2. semester Pick 2 courses						
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method	Language
Software Innovation (DSNSWCK212)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Mobile HCI (DSNSWCK213)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Web Information Processing (DSNSWCK214)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Mobile Data and Location-based Services (DSNSWCK215)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English

Elective courses on 3. semester Pick 1 course						
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method	Language
Entrepreneurship (DSNSWCK311)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
IT-Law (JUR-AND-1-23)	Course	5	7-point grading scale	Internal examination	Oral exam based on a project	English

Selected modules are created to the extent that the Board of Studies assesses that there is sufficient enrollment for them. If an elective course is not created, the registered students are offered other elective courses. The specified optional modules are offered and created following a study board decision. This means that not all elective modules are created every year.

Prior to the registration period for the 3rd semester, the study board for computer science will inform the students about which specialization courses from the curriculum will be offered in the coming semester. Likewise, new specialization courses may be added as a result of current research topics.

§ 19: ADDITIONAL INFORMATION

Further information about the programme, including exams are published on the Board of Studies' website.

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 Department of Computer Science's website.

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the dean and enters into force as of September 1, 2023.
The Study Board does not offer teaching after the previous curriculum from 2022 after the summer examination 2024.

The Study Board will offer examinations after the previous curriculum, if there are students who have used examination attempts in a module without passing. The number of examination attempts follows the rules in the Examination Order.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS