



AALBORG UNIVERSITET

# **CURRICULUM FOR THE MASTER'S PROGRAMME IN INFORMATION TECHNOLOGY (IT DESIGN AND APPLICATION DEVELOPMENT) 2017**

MASTER OF SCIENCE (MSC) IN INFORMATION  
TECHNOLOGY  
AALBORG

Curriculum for the Master's Programme in Information Technology (IT Design and Application Development) 2017

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[Curriculum for the Master's Programme in IT Design and Application Development, 2020](#)

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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 is established. The programme also follows the Joint Programme Regulations and the Examination Policies and Procedures for The Faculty.

## **§ 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 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 without legal right of admission**

- Bachelor of Science (BSc) in Techno-Anthropology
- Bachelor of Science (BSc) in Economics and Business Administration
- Bachelor of Science (BSc) in Sociology

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

The Master's programme entitles the graduate to the Danish designation Cand.it. i it-design og applikationsudvikling. The English designation is: Master of Science (MSc) in Information Technology (IT Design and Application Development).

## **§ 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**

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

## **§ 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 following competence profile will appear on the diploma:

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 on the basis of 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.

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

After completion of the Master's programme, the student will have acquired the following qualifications in the subject areas that are included in the education:

#### **Information Systems: Knowledge**

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- Has knowledge about research approaches in IT application design and software development
- Can understand, and on a scientific basis, reflect over knowledge in information systems and identify relevant research problems
- Has knowledge about key topics in system development and human-computer interaction based on the highest international research in these areas

### Skills

- Excels in the scientific methods and tools of the information systems discipline
- Can design software systems for complex application areas and advance new innovative solutions
- Can evaluate the qualities of software systems in relation to their use in human and social activities
- Can describe and analyse experiences from software development practice
- Is proficient in communicating research-based knowledge and discussing professional and scientific problems with both peers and non-specialists

### Database and Programming: Knowledge

- Has knowledge about imperative programming
- Has knowledge about database modelling, database queries and database management

### Skills

- Can apply programming methods and tools in a software development process
- Can implement the design of a software system by using current programming technologies

### Competencies

A Master in IT Design and Application Development can:

- Independently initiate and implement professional activities in information systems, interdisciplinary cooperation and assume professional responsibility
- Manage work and situations in software development that are complex, uncertain and require new solutions
- 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 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
- 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 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:						
Module name	Course type	ECT S	Applied grading scale	Evaluation method	Assessment method	Language
<b>1 SEMESTER</b>						
<a href="#">Development of a Software Application</a>	Project	15	7-point grading scale	Internal examination	Oral exam based on a project	Danish and English
<a href="#">Systems Development</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam	Danish and English
<a href="#">Design and Evaluation of user Interfaces</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam	Danish and English
<a href="#">Introduction to Programming</a>	Course	5	Passed/Not Passed	Internal examination	Written or oral exam	Danish and English
<b>2 SEMESTER</b>						
<a href="#">Software Engineering</a>	Course	5	7-point grading scale	External examination	Written or oral exam	Danish and English
<a href="#">Software Innovation</a>	Course	5	7-point grading scale	Internal examination	Written or oral exam	Danish and English
<a href="#">Database Development</a>	Course	5	Passed/Not Passed	Internal examination	Written or oral exam	English
<a href="#">Elective modules on 2. semester</a>						
<b>3 SEMESTER</b>						
<a href="#">Empirical Research in Software Development</a>	Project	20	7-point grading scale	External examination	Oral exam based on a project	Danish and English
<a href="#">Entrepreneurship</a>	Course	5	Passed/Not Passed	Internal examination	Written or oral exam	Danish
<a href="#">Elective modules on 3. semester</a>						
<b>4 SEMESTER</b>						
<a href="#">Master's Thesis</a>	Project	30	7-point grading scale	External examination	Oral exam based on a project	Danish and English

Elective modules on 2. semester						
Module name	Course type	ECT S	Applied grading scale	Evaluation Method	Assessment method	Language
<b>2 SEMESTER</b>						

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<a href="#">User-Centered Software Development</a>	Project	15	7-point grading scale	External examination	Oral exam based on a project	Danish and English
<a href="#">Innovative Software Development</a>	Project	15	7-point grading scale	External examination	Oral exam based on a project	Danish and English

Elective modules on 3. semester						
Module name	Course type	ECT S	Applied grading scale	Evaluation Method	Assessment method	Language
<b>3 SEMESTER</b>						
<a href="#">Specialisation Course in Human-Computer Interaction</a>	Course	5	7-point grading scale	External examination	Oral exam	Danish and English
<a href="#">Specialisation Course in Systems Development</a>	Course	5	7-point grading scale	External examination	Oral exam	Danish and English

**Problem Based Learning:**

A compulsory course in Problem Based Learning (PBL) is offered as an integrated part of the project module to students not acquainted with PBL at Aalborg University.

**§ 19: ADDITIONAL INFORMATION**

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

**§ 20: COMMENCEMENT AND TRANSITIONAL RULES**

The curriculum is approved by the dean and enters into force as of the Dean of The Technical Faculty of IT and Design and enters into force as of September, 2017

Students who wish to complete their studies under the previous curriculum from 2012 must conclude their education by the summer examination period 2017 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 the digitisation of the study curriculum