



AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAMME IN DIGITAL COMMUNICATION LEADERSHIP, 2019

MASTER OF SCIENCE (MSC) IN INFORMATION
TECHNOLOGY
COPENHAGEN

[Link to this studyline](#)

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§ 1: PREFACE

Pursuant to consolidation Act 172 of February 27, 2018 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) with subsequent changes, Ministerial Order no. 247 of March 13, 2015 on International Programmes at Universities (the Ministerial Order of International Study Programmes) and Ministerial Order no. 1062 of June 30, 2016 on University Examinations (the Examination Order) with subsequent changes. Further reference is made to Ministerial Order no. 106 of February 12, 2018 (the Admission Order) and Ministerial Order no. 114 of February 3, 2015 (the Grading Scale Order).

§ 3: CAMPUS

The program is offered in Copenhagen.

§ 4: FACULTY AFFILIATION

The Master's programme falls under the The Technical Faculty of IT and Design.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under the Study Board of Electronics and IT.

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the Nationwide engineering examiners/Electronics, IT and Energy (Electromagnetic direction).

§ 7: ADMISSION REQUIREMENTS

Digital Communication Leadership (DCLead) is an Erasmus+ Master's programme focusing primarily on students from non-EU countries.

Admission to the Master's programme requires a Bachelor's degree as Bachelor (BSc) in Information Technology, Bachelor (BSc) in Tele Communication, Bachelor (BSc) in Informatics or the like.

All students must document English language qualifications comparable to an 'English B level' in the Danish upper secondary school (minimum average grade 02).

Students with another Bachelor's degree will, upon application to the Board of Studies, be admitted after a specific academic assessment, if the applicant is deemed to have comparable educational prerequisites.

Selection among the students who apply for admission will be made by a committee consisting of representatives from the three involved universities. Selection criteria include educational background, grades and other relevant activities, including work experience.

§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH

In Danish:

- Cand.it. i ledelse af digital kommunikation

In English:

- Master of Science (MSc) in Information Technology (Digital Communication Leadership)

§ 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

Knowledge:

- has knowledge on information and communication technologies (ICT) that, in selected areas, is based on the highest international research
- understands the relevance of the needs of the end users, their use of ICT, and the mechanisms that influence the user experience and the acceptance of new technologies
- understands the importance of innovation, creativity and entrepreneurship for ICT solutions and services
- understands and can reflect, on a scientific basis, on the technical, organizational and market-related drivers in the convergence of ICT, as well as the interplay between technology, market and user issues
- has a holistic understanding of the environment of ICT services and solutions: Scenarios of use, target users, stakeholders, business aspects, and societal implications at large
- has knowledge about different cost concepts and different methods for investment analysis
- has in-depth knowledge and understanding of ICT-related business plan and business models
- has in-depth knowledge on economic concepts and tools relevant for preparing a market analysis

Skills:

- can identify scientific problems within the field of ICT
- can evaluate and select among scientific theories, methods, tools and general skills and – on a scientific basis – advance new analyses and solutions within applied ICT
- can efficiently communicate research-based knowledge and discuss professional and scientific problems with both peers and non-specialists
- can produce scientific writing: Articles, reports, documentation, etc.
- can apply scientific methods, tools and general skills related to employment within the field of ICT
- can identify and select among relevant standards, technologies and methods for development of ICT solutions and services
- can assess the market, ethical and regulatory framework for application of the technologies
- can develop innovative services, applications and solutions at a conceptual level, which are relevant in a user perspective
- can assess the implications and business potential of new ICT solutions and services and develop viable business models and strategies
- can prepare a business plan with a detailed financial analysis for introducing an ICT solution or service
- can assess the role of existing and emerging ICT solutions and services in relation to sustainable development and evaluate the feasibility of sustainable technologies and solutions

Competences:

- can manage 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 specialisation
- has competencies in project work and problem based learning in a global/multicultural environment
- can mediate collaboration and exchange between development- and business-related functions in organizations
- has competencies in business development with a holistic perspective, based on a thorough understanding of the interplay between technology, market and users in ICT and media
- can contribute creatively and innovatively to propose and develop new services/solutions respecting and challenging established legal rules and design principles
- has an in-depth understanding of ICT technologies enabling creative and innovative solutions and development of these
- has competencies in innovation and entrepreneurship that can be used to transform the potentials of new ICT and media technologies into new solutions and services with an engineering approach

§ 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

§ 18: OVERVIEW OF THE PROGRAMME

All students admitted to the programme, start at Salzburg (PLUS) and take the first semester in Salzburg. With respect to the second and third semester, the students, who follow the specialisation in 'Digital Technology and Management', go to AAU.

As for the last semester where the students are doing their final thesis and complete their education, students of specialization on Digital Communication and Management can choose to go to Salzburg or stay at AAU. Students in their last semester can spend three months with one of the associate partners. However, their candidate project should be supervised and examined by supervisors from PLUS and AAU in collaboration with a supervisor from the associated partner university

The structure of the programme with regards to courses is listed in table 1.

The following table gives an overview over the course and projects that constitutes the education's scientific content

Table 1: Complete semester structure.

* The elective courses must be taken amongst the elective courses listed in the elective course packages below

** The course is offered in collaboration between PLUS and AAU in accordance with AAU regulations.

Different sizes of semester or thesis projects share the same learning objectives, but if the number of ECTS exceeds the default size (15 or 30 ECTS, respectively), the increased workload must be clearly reflected in the report, e.g. in terms of the complexity, the scientific level, the experimental work and documentation details.

In the following we only give details about courses and projects taken at AAU. For courses and projects offered at PLUS please refer to the PLUS' study plan.

Following table shows the AAU course and projects concerning the grading and internal/external censor. Furthermore, elective courses are listed in the table.

Second semester is composed of three courses of 5 ECTS and a project of 15 ECTS. The third semester is composed of four courses of 5 ECTS and a project of 10 ECTS.

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

| PLUS | | | | | | |
|---|---------|----|-----------------------|----------------------|------------------------------|---------|
| 2 SEMESTER AAU | | | | | | |
| Governance and Strategies (ESNDCLK2P1) | Project | 15 | 7-point grading scale | External examination | Oral exam based on a project | English |
| Internet Services and Governance (ESNICTEK2K6N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| User Experience and Computer Ethics (ESNICTEK2K8N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| 2nd Semester Elective course package Choose 1 course | Course | 5 | | | | |
| 3 SEMESTER PLUS / AAU | | | | | | |
| Summer Symposium II (ESNDCLK3K1) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Design and Markets (ESNDCLK3P1) | Project | 10 | 7-point grading scale | Internal examination | Oral exam based on a project | English |
| Managerial Economics and Entrepreneurship (ESNICTEK3K8N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Innovation and Business Models (ESNICTEK1K5N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| 3rd Semester Elective courses package Choose 1 course | Course | 5 | | | | |
| 4 SEMESTER AAU | | | | | | |
| Master's Thesis (ESNDCLK4P1) | Project | 30 | 7-point grading scale | External examination | Oral exam based on a project | English |

| 2nd Semester Elective course package Choose 1 course | | | | | | |
|---|-------------|------|-----------------------|----------------------|----------------------|----------|
| Module name | Course type | ECTS | Applied grading scale | Evaluation Method | Assessment method | Language |
| Identity and Access Management (ESNICTEK2K2) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Machine Learning (ESNICTEK2K7N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |

| 3rd Semester Elective courses package Choose 1 course | | | | | | |
|--|-------------|------|-----------------------|-------------------|-------------------|----------|
| Module name | Course type | ECTS | Applied grading scale | Evaluation Method | Assessment method | Language |

| | | | | | | |
|---|--------|---|-----------------------|----------------------|----------------------|---------|
| Communication Systems (ESNICTEK1K4N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Internet Technologies and Service Architectures (ESNICTEK1K6N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Enterprise Security and Compliance (ESNICTEK3K6) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Algorithmic Content Exposure (ESNICTEK3K6N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |
| Green ICT - Sustainable Business Development (ESNICTEK3K7N) | Course | 5 | 7-point grading scale | Internal examination | Written or oral exam | English |

§ 19: ADDITIONAL INFORMATION

As the DCLead education is based on PBL, the teaching on PBL and scientific methods takes place within the introductory course in the first semester. The teachers from AAU participating in the introductory course will give introduction to the PBL learning/teaching method. Furthermore, when the students come to Aalborg in the beginning of the semester there will be common project meeting/seminars with all DCLead students where different aspects of PBL will be discussed in more details.

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the dean and enters into force as of 01.09.2019.

The Study Board does not offer teaching after the previous curriculum from 2018 after the summer examination period 2020.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

On 25th March 2022 the Vice-Dean of Education has approved, that the module "*Cyber Security and Trust*" is replaced with the module "*Enterprise Security and Compliance*" on the 3rd Semester. The amendment is valid from Autumn 2022.