AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAMME IN DIGITAL COMMUNICATION LEADERSHIP (ERASMUS+), 2024

MASTER OF SCIENCE (MSC) IN INFORMATION TECHNOLOGY
COPENHAGEN

Link to this studyline

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

Curriculum for the master's programme in Digital Communication Leadership, 2023

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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 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) with subsequent changes, Ministerial Order no. 247 of March 13, 2015 on International Programmes at Universities (the Ministerial Order of International Study Programmmes) with subsequent changes and Ministerial Order no. 2271 of December 1, 2021 on University Examinations (the Examination Order) with subsequent changes. Further reference is made to Ministerial Order no. 69 of January 26, 2023 (the Admission Order) and Ministerial Order no. 1125 of July 4, 2022 (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 Civil engineering corps of external examiners.

§ 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.

Applicants for the track TECMAN or "Digital Technology and Management" of the Digital Communication Leadership master education must have a bachelor or master's degree within development and/or management of Information and Communication Technologies (i.e. computer science, engineering and/or business administration with a specific focus on information systems and/or information and communication technologies).

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.

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

§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH

The Master's programme entitles the graduate to the Danish designation Cand.it. i ledelse af digital kommunikation. The English designation is: 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.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 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 digital information and communication technologies (ICTs) that, in selected areas, is based on the highest international research
- has knowledge on theories regarding digital transformation in different business and societal contexts
- has knowledge on scientific methodology, communication theory and critical analysis

- understands the relevance of the needs of end users, their use of ICTs, and the mechanisms that influence user experience and acceptance of new technologies
- has knowledge on artificial intelligence including machine learning and other AI technologies
- has knowledge on sustainability and the potential role of digitalization including artificial intelligence
- understands how cybersecurity issues including privacy affect processes of digital transformation and sustainability
- understands and can reflect, on a scientific basis, on the technical, organizational and governance-related drivers of digital transformation and sustainability
- has a holistic understanding of the environment of ICT services and solutions: Scenarios of use, target users, stakeholders, and societal implications at large

Skills:

- can identify scientific and practical problems within the field of digital transformation including artificial intelligence
- can identify scientific and practical problems within the field of digitalization and sustainability
- can evaluate and select among scientific theories, methods, tools and general skills and – on a scientific basis – advance new analyses and solutions within digital transformation and sustainability
- can apply scientific methods, tools and general skills related to employment within the field of digitalization and digital transformation specifically with regard to sustainability and cybersecurity
- can identify and select among relevant standards, technologies and methods for development of digital solutions and services specifically with respect to digital transformation and sustainability
- can participate in the development of innovative services, applications and solutions at a conceptual level, which are relevant in a user perspective
- can identify technology leadership and management issues relating to digital transformation and sustainability
- can assess the role of existing and emerging digital solutions and services in relation to sustainable development and evaluate the feasibility of sustainable technologies and solutions
- 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.

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 specialization
- has competences in combining technology knowledge and communication theory
- 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
- can contribute creatively and innovatively to propose and develop new services/solutions specifically with respect to digital transformation and sustainability
- has a solid competence basis for continually updating and using knowledge on digital transformation including artificial intelligence
- can critically assess technology developments regarding digital transformation and sustainability

§ 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.

Semester 1	**PLUS**
	Summer symposium I - 3 ECTS Introduction to core competency I - 5 ECTS Introduction to core competency II - 5 ECTS Elective course - 2 ECTS Semester Project - 15 ECTS
Semester 2	**AAU**
	Machine Learning - 5 ECTS User Experience and Computer Ethics - 5 ECTS Elective course - 5 ECTS* Semester project: Digital Transformation and Artificial Intelligence - 15 ECTS
Semester 3	**PLUS / AAU**
	Summer symposium II - 5 ECTS**
	AAU
	Green ICT - Sustainable business development - 5 ECTS Elective course - 5 ECTS*

	Semester projekt: Sustainability and Digitalization - 15 ECTS
Semester 4	**All Universities**
	Master project - 30 ECTS

* The elective courses must be taken amongst the elective courses listed in the elevtive 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 three courses of 5 ECTS and a project of 15 ECTS.

Offered as: 1-professional						
Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method	Language
1 SEMESTER PLUS						
2 SEMESTER AAU						
Digital Transformation and Artificial Intelligence (ESNDCLK2P2)	Project	15	7-point grading scale	External examination	Oral exam based on a project	English
Machine Learning (ESNICTEK2K7A)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
User Experience and Computer Ethics (ESNICTEK2K9N)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
2nd Semester elective course Choose 1 course module	Course	5				
3 SEMESTER PLUS / AAU						
Sustainability and Digitalization (ESNDCLK3P2)	Project	15	7-point grading scale	Internal examination	Oral exam based on a project	English
Summer Symposium II (ESNDCLK3K1)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Green ICT - Sustainable Business Development (ESNICTEK3K11)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
3rd Semester elective course Choose 1 course module	Course	5				
4 SEMESTER AAU						

Master's Thesis (ESNDCLK4P2)	Project	30	7-point grading scale	External examination	Master's thesis/final project	English

2nd Semester elective course Choose 1 course module						
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
Hacker Space (ESNCYSK2K5)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Emerging Science and Technology (TBTANK22203)	Course	5	Passed/Not Passed	Internal examination	Written or oral exam	English
Perspectives in Service Design (MSNSSDM2232)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English

3rd Semester elective course Choose 1 course module						
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method	Language
Data Mining and Analysis (ESNICTEK3K10)	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
Privacy Engineering (ESNCYSK3K7)	Course	5	7-point grading scale	Internal examination	Written or oral exam	English
Regulation of IT Security (ESNCYSK3K4)	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 1 September 2024.

The Study Board does not offer teaching after the previous curriculum from 2023 after the summer examination period 2025.

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

The Vice dean of Education has on February 12, 2025, approved that the prerequisite for enrollment for the exam is erased in the module *Sustainability and Digitalization*, valid from Spring 2025.