

# BACHELOR OF SCIENCE (BSC) IN ENGINEREING (IT, COMMUNICATION AND NEW MEDIA), 2018

BACHELOR OF SCIENCE (BSC) IN ENGINEERING COPENHAGEN

Link to this studyline

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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 Bachelor's program in IT, Communication and New Media is established. The program also follows the Joint Programme Regulations and the Examination Policies and Procedures for The Technical Faculty of IT and Design, The Faculty of Engineering and Science, and The Faculty of Medicine.

#### § 2: BASIS IN MINISTERIAL ORDERS

The Bachelor'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. 110 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 programmes is offered in Copenhagen.

#### § 4: FACULTY AFFILIATION

The Bachelor's program falls under The Technical Faculty of IT and Design, Aalborg University.

#### § 5: STUDY BOARD AFFILIATION

The Bachelor's program falls under the Study Board of Electronics and IT at School of Information and Communication Technology.

#### § 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Bachelor's program falls under the Body of External Examiners for Engineers (electronic engineering).

#### § 7: ADMISSION REQUIREMENTS

Admission to the Bachelor's program in IT, Communication and New Media requires an upper secondary education.

According to the Admission Order, the program's specific entry requirements are:

- English B or an acceptable IELTS
- Mathematics A
- Physics B

The University can stipulate requirements concerning conducting additional exams prior to the start of study.

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

The Bachelor's program entitles the graduate to the designation Bachelor (BSc) i teknisk videnskab (IT, kommunikationsog medieteknologi). The English designation is Bachelor of Science (BSc) in Engineering (IT, Communication and New Media).

#### § 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS

The Bachelor's program is a 3-year, research-based, full-time study program. The program is set to 180 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 Bachelor'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: <a href="https://www.studieservice.aau.dk/Studieleqalitet/">https://www.studieservice.aau.dk/Studieleqalitet/</a>

# § 13: RULES CONCERNING WRITTEN WORK, INCLUDING THE BACHELOR'S PROJECT

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 Bachelor's project 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 can read academic texts in his og her native language as well as in 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 graduate of the Bachelor's programme has competencies acquired through an educational programme that has taken place in a research environment.

A graduate of the Bachelor's programme has fundamental knowledge of and insight into his/her subject's methods and scientific foundation. These properties qualify the graduate of the Bachelor's programme for further education in a relevant Master's programme as well as for employment on the basis of the educational programme

#### § 16: COMPETENCE PROFILE OF THE PROGRAMME

#### Knowledge:

- possess knowledge about theories, methodologies and practice in the areas of IT, communication and new media
- are able to understand and reflect on theories, methodologies and practice within these subject areas
- have knowledge in design and planning processes in relation to development of ICT applications

#### Skills:

- are able to apply selected methodologies and tools within IT, communication and new media
- are able to analyse and evaluate theoretical and practical issues within IT, communication and new media in a broader socio-economic context
- are able to develop and implement ICT based services and applications using programming and system development skills

- are able to explain the reasons for and choose relevant solution models
- are able to communicate academic and technical issues and solution models to peers and non-specialists or collaboration partners and users from an interdisciplinary perspective

#### Competencies:

- are able to handle complex and development-oriented situations in study or work contexts
- are able to solve problems using mathematical tools
- are able to combine technology, user, economy, and policy perspectives
- are able to independently participate in discipline-specific and interdisciplinary cooperation with a professional approach
- are able to identify their own learning needs and organize their own learning in different learning environments

#### § 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The program is structured in modules and organised 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. The examinations are defined in the curriculum.

All projects are to be conducted in English. The study board may, in some cases, exempt from this.

The program 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)
- project work and exercises in labs
- \_ teacher feedback
- reflection
- portfolio work

The BSc in IT, Communication and New Media is taught in English. All activities, including the above stated, are carried out in English. All exercise work and deliverables, project-work (as well as any documentation in connection to these) delivered by the student must be written in English and all exams are carried out in English. In accordance with the current Joint Programme Regulations, The Study Board of Electronics and IT may choose to exempt from this rule in extra-ordinary cases, which in principle requires a well-documented application from the student and/or teacher.

#### Rules concerning the progress of the Bachelor's program

The student must participate in all first year examinations by the end of the first year of study in the Bachelor's program, in order to be able to continue the program. The first year of study must be passed by the end of the second year of study, in order that the student can continue his/her Bachelor's program.

In special cases, however, there may be exemption from the above.

#### § 18: OVERVIEW OF THE PROGRAMME

#### Offered as: 1-professional

Module name  Project in Conceptual Design of an ICT			Applied grading scale	Evaluation method	Assessment method						
Project in Conceptual Design of an ICT	Object-or										
Project in Conceptual Design of an ICT	· ·	iontoo	1 SEMESTER								
Project in Conceptual Design of an ICT	Project	Object-oriented Programming									
Application (P0)		5	Passed/Not Passed	Internal examination	Oral exam based on a project						
Project in Object-oriented Programming (P1)	Project	10	7-point grading scale	Internal examination	Oral exam based on a project						
Problem Based Learning in Science, Technology and Society	Course	5	Passed/Not Passed	Internal examination	Written or oral exam						
Linear Algebra	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Object-oriented Programming 1	Course	5	7-point grading scale	Internal examination	Written or oral exam						
2 SEMESTER											
System Development											
Project in System Development	Project	10	7-point grading scale	External examination	Oral exam based on a project						
Software Engineering	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Object-oriented Programming 2	Course	10	7-point grading scale	Internal examination	Written or oral exam						
Discrete Mathematics	Course	5	7-point grading scale	Internal examination	Written or oral exam						
3 SEMESTER Distributed Systems and Users											
Project in Distributed Systems and Users	Project	15	7-point grading scale	Internal examination	Oral exam based on a project						
Distributed Systems	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Digital Signal Processing	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Interaction Design	Course	5	7-point grading scale	Internal examination	Written or oral exam						
4 SEMESTER											
Com			Media Technolog	jies							
Project in Communications and Media Technologies	Project	15	7-point grading scale	External examination	Oral exam based on a project						
Communication and Media Technologies	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Introduction to economics	Course	5	7-point grading scale	Internal examination	Written or oral exam						
Introduction to Probability Theory and Statistics	Course	5	7-point grading scale	Internal examination	Written or oral exam						
5 SEMESTER											
Application Development and Security											

Project in Application Development and Security	Project	15	7-point grading scale	External examination	Oral exam based on a project		
Network and Application Security	Course	5	7-point grading scale	Internal examination	Written or oral exam		
Computer Networks and the Internet	Course	5	7-point grading scale	Internal examination	Written or oral exam		
ICT in Organizations	Course	5	7-point grading scale	Internal examination	Written or oral exam		
6 SEMESTER Communication and New Media							
BSc Project	Project	20	7-point grading scale	External examination	Oral exam based on a project		
6th Semester Elective courses Choose 2 elective courses	Course	10					

6th Semester Elective courses Choose 2 elective courses						
Module name	Course type	ECT S	Applied grading scale	Evaluation Method	Assessment method	
Physical Interface Design	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Audio Processing	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Design and Analysis of Experiments	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Ethnographically Informed Design	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Real-time Interfaces and Interactions	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Theory and Practice of Game Design and Development	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Artificial Intelligence Programming	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Internet of Things	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Technology and Society	Course	5	7-point grading scale	Internal examination	Written or oral exam	
Business Law	Course	5	7-point grading scale	Internal examination	Written or oral exam	

#### 1st Semester: Commencement of Studies Exam (Studiestartsprøve)

#### Size

The commencement of studies exam does not yield ECTS credits and will not appear on the diploma

The purpose of the commencement of studies exam is to ascertain whether students have actually commenced their studies. The students must participate in and pass the commencement of studies exam in order to continue on their studies. If the students do not participate in or pass the commencement of studies exam or re-exam, the students' enrollment at their studies will be terminated immediately after the re-exam.

The commencement of studies exam will be held within the first weeks of the semester.

#### Contents:

The commencement of studies exam is based on the instruction course and contains for instance general questions about the students' expectations and motivation for their choice of studies.

#### Re-exam:

There will be only one commencement of studies re-exam. If the students do not participate in or do not pass the commencement of studies exam or re-exam, the students' studies will be terminated before 1 October. The Study Board can grant exemption from the rules regarding the commencement of studies exam if there are unusual circumstances.

#### **Examination format:**

Written exam

#### **Assessment:**

Internal assessment. The students receive the assessment "Approved" or "Not approved" based on their answers to the written exam. The students receive the assessment "Approved" when the written exam is answered and handed in.

#### Appeal:

The students can complain about the commencement of studies exam to the University. The complaint must be submitted to the University within two weeks from the result of the commencement of studies exam is announced. If the University rejects the complaint, the decision may be appealed to the Danish Agency of Science and Higher Education, if the appeal concerns legal issues.

#### § 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

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 Schools website.

#### § 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the Dean of The Technical Faculty of IT and Design and enters into force as of September 2018 for students commencing 1st, 3rd semester and 5th.

Students who wish to complete their studies under the previous curriculum must conclude their education by the summer examination period 2020 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 made in connection with the digitisation of the study curriculum.