IT, Communication and New Media (ITCOM)

Bachelor's Degree in Technical Science (3 years program)
This education is offered at Aalborg University Copenhagen

Internet, mobile communication, interactive media and social networks like Facebook and YouTube are all areas in rapid development. If you would like to learn about these technologies and their business potential, we recommend this education.

About the Programme

We now have access to information and communication, no matter where we are. Whether we are at home, at work or en route, we can be online. Computers and mobile phones are becoming faster and more powerful, and we have access to wireless and fixed links with high capacity. New intelligent services that we previously could only dream of have become possible.

If you choose the education in IT, Communication and New Media, you will obtain a very attractive profile with competences highly in demand by employers. You will have the opportunity to work with advanced information and communication technologies enabling new applications based on Internet, mobile and broadcast (radio & TV) platforms. You will gain a profound understanding of the technologies and their potential, and you will learn how to apply technology in practice through analysis and development of innovative services, applications and solutions that target specific user needs.

The education is interdisciplinary. You will get an advanced technical understanding of software and network technologies combined with understanding of users, creativity, economic theory, organizational theory and management.

You will learn about the social, commercial and ethical frameworks for technology use, and you will become abreast of the latest developments in a global perspective.

The programme includes courses such as:

- Object-oriented Programming and Databases
- New Mobile Network Technologies
- Development of Mobile Applications
- User-friendly Solutions and Services
- Use of IT and Communications Technology within Enterprises and Organizations

Teaching

The Bachelor's degree in IT, Communication and New Media provides you with solid competences in software development and network technologies. You will learn how to develop applications for different platforms. From the start of the 1st semester, you will learn to view the technology in a broader context in order to better be able to apply it in practice. During the program, you will also learn how to develop new services and products as well as learn how to adapt the technology so that it can be applied in a business setting.

The instruction varies between lectures, classroom training and problem-oriented project work in groups. The projects must include a technical solution to an actual problem as well

as the organizational and financial considerations necessary for the solution to be applied in practice.

The instruction on the individual semesters is organised in themes that constitute the framework for courses and the particular project work undertaken on each semester:

- The theme for the 1st semester is **IT-systems in a market perspective**. Besides a general introduction to scientific methods, project work and problem-based learning, the students will gain experience in applying object-oriented programming to solve a specific problem, and to document and test it afterwards.
- In 2nd semester the theme is **System development and User Interaction**. Students will learn to apply modern system development and develop a requirement specification focusing on user needs. This semester also continues the training in mathematics and programming skills from the first semester.
- The theme for the 3rd semester is **Distributed systems and communities**. The student will here learn how to implement systems and services in a distributed environment.
- The 4th semester deals with **Communication and Media Technologies**. This semester provides the students with a basic technical understanding of information and communication technologies as well as distribution of media content.
- The theme for the 5th semester is **Application Development and Security**. The purpose is to teach students to develop and implement ICT applications, in particular mobile applications, including internal and external organizational aspects and security aspects as needed.
- The theme for the final and 6th semester is **IT, Communication and New Media**. This semester includes the final bachelor project and aims to enable the students to use their knowledge in a business environment. A choice of elective courses is given.

Carrier opportunities

With a BSc degree in ITCOM you are qualified to get a job. Among the potential target companies and industries are the major companies within the IT, telecommunications, and media sectors, equipment manufacturers, infrastructure companies, content providers, service providers, consultancies, training and research institutions and public administration. You will be able to use your skills for development of new concepts, services, and solutions, and you can act as a link between development and sales & marketing functions.

If you wish to continue your studies after your Bachelor of Science degree, we recommend you to choose the MSc program in Innovative Communication Technologies and Entrepreneurship ICTE, which is offered at Aalborg University in Copenhagen or in Aalborg.

What do the companies say?

"Convergence is more relevant than ever. We witness how well-established scientific areas like Internet technologies, telecommunications and broadcast media melt together and define a whole new palette of technologies and business opportunities – both when it comes to traditional and Open Source platforms. Never before have the opportunities for small start-up companies with the right ideas been better. Aalborg University offers an education, which on the one hand gives you the competences to create and foster innovation in a converging world and on the other gives you the business competences to get you dressed for success in the commercial world: A unique education well suited for times of change with plenty of challenges."

Karsten Vandrup, CEO, Lizard Technology.

Entry Requirements

For Danish students:

- Upper secondary level exam
- English B
- Mathematics A and Physics B
- Chemistry C and Biotechnology A

For international students one of the following international certificates is required: the Danish/French Baccalauréat (DFB), the European Baccalaureate (EB), the International Baccalaureate (IB), the Option Internationale du Baccalauréat (OIB) or another foreign qualifying examination certificate that can be equated with a Danish upper secondary school leaving certificate. In addition, documentation may be required verifying your proficiency in English at a specified level.

Enrolment

All applicants to IT, Communication & New Media meeting the admission requirements will be admitted. You must apply for admission via The Danish Coordinated Application System (KOT), see www.optagelse.dk.

Please attach documentation for examinations, official (English) translations hereof, tests and activities you have mentioned on the application form.

Tuition Fees

Please note that students from outside the EU/EEA will have to pay tuition. However, students from partner universities outside the EU/EEA will not be charged tuition fees.

For more information

You can learn more about the education and the curriculum on the websites of Aalborg University www.aau.dk and and CMI www.cmi.aau.dk. You are also welcome to contact the program coordinator: Morten Falch, falch@cmi.aau.dk.

Content of the programme

Semester 1: IT systems in a market perspective		ECTS	Type
	P0: Project in Conceptual design of an ICT application	5	Mandatory
	P1: Project in object-oriented programming	7.5	Mandatory
	Problem based learning in science, technology and society	5	Mandatory
EMATE1A	Mathematics 1	7.5	Mandatory
EPROG1	Object-oriented programming 1	5	Mandatory
Semester 2: System development and user interaction		**ECTS**	**Type**
	P2: Project in System development and user interaction	15	Mandatory
	Requirements specification, systems design and user involvement	5	Mandatory
IDISM2	Mathematics 2 – Discrete mathematics	5	Mandatory
EPROG2	Object-oriented programming 2	5	Mandatory
Semester 3: Distributed systems and communities		**ECTS**	**Type**
	Project in Distributed systems and communities	15	Mandatory
	IT in distributed organizations	5	Mandatory
INET22	Computer Networks and the Internet	5	Mandatory
IDIST3	Distributed Systems	5	Mandatory
Semester 4: Communication and media technologies		**ECTS**	**Type**
	Project in Communications and media technologies	15	Mandatory
	Communication and media technologies	5	Mandatory
	Introduction to economics	5	Mandatory
LADM	Linear algebra and data mining	5	Mandatory
Semester 5: Application development and security		**ECTS**	**Type**
	Project in Application development and security	15	Mandatory
	Development of mobile applications	5	Mandatory
ENETS	Network and application security	5	Mandatory
IDBS3	Databases	5	Mandatory
Semester 6: IT, communication and new media		**ECTS**	**Type**
	Bachelor thesis project	20	Mandatory
	Next generation networks (NGN)	5	Elective
	Technology and society	5	Elective
	Business law	5	Elective

For the 6th semester students must choose 2 out of 3 elective courses.