

INTERNATIONAL
PROGRAMME

RISK AND SAFETY MANAGEMENT

2-YEAR MASTER OF SCIENCE IN TECHNOLOGY PROGRAMME
(CAND.TECH.)



AALBORG UNIVERSITY
ESBJERG



BECOME AN EXPERT IN RISK AND SAFETY MANAGEMENT

Do you dream about becoming an expert in advising companies in Risk and Safety Management? With a Master of Science in Technology in Risk and Safety Management, you will be prepared to help private as well as public companies to create an overview of both risk and safety.

Through the study programme, you will gain knowledge about data collection within risk assessment analysis, about those social conditions that exist in connection with risk regulation and management, and about fundamental probability calculation. You will also be introduced to theoretical methods and strategies which apply in risk perception and communication.

Graduating in Risk and Safety Management you will be able to identify the critical situations that can arise in connection with a project in a company. You will learn to work out plans for managing the project and gain insight in methods for implementation, reporting methods as well as ways of making routine testing.

You can contribute to ensuring a good start for companies and help them reach their goals safely.

The study programme is carried out in English and is offered at Aalborg University's campus in Esbjerg.

Some of the courses are taught in collaboration with the University of Southern Denmark.



ACADEMIC CONTENT

During the Master of Science in Technology in Risk and Safety Management, you will work with engineering subjects within risk and safety management. Among other things, you will work with probability calculation, risk assessment analysis, simulation, and management of emergency situations and safety and health at workplaces.

Each semester consists of a number of courses and a project. In the projects, you will go into depth with complex and often interdisciplinary problems. Usually, the projects are carried out in close collaboration with companies within different sectors such as the maritime, offshore, energy, transportation, chemical or societal health sectors.

The study programme is offered internationally, and all teaching will therefore be carried out in English.



1ST SEMESTER

1st semester focuses on the legislation that projects are subject to, and the different industry standards that are in force in the given area. Through the project work, you will work with how the different statutory requirements have influence on the project, including the possibilities and restrictions they cause.

Semester structure:

- Systems Engineering (5 ECTS course)
- Applied Statistics and Probability Theory (5 ECTS course)
- Risk Analysis (5 ECTS course)
- Industry Standards and Legislation (15 ECTS project)

2ND SEMESTER

During the 2nd semester, you work with risk and safety management. Through the courses, you learn about risk management and decision making. In addition to that, there is an opportunity to choose courses in maintenance management and risk communication. The content of the courses are integrated into the project work. For instance, based on risk analysis, you can work with how you outline and choose between alternatives to a current solution.

Semester structure:

- Risk Management (5 ECTS course)
- Decision Making (5 ECTS course)
- Choose between Risk Communication and Maintenance Management (5 ECTS course)
- Risk Analysis and Management (15 ECTS project)



3RD SEMESTER

During the 3rd semester, the operative part of risk management in connection with projects will be in focus. Through the project work, you will work with how you can use risk management to prevent and handle the emergencies that can occur in connection with carrying out a project.

Semester structure:

- Simulation of Emergencies (5 ECTS course)
- Emergency Management (5 ECTS course)
- Choose between Risk and Reliability in Engineering and Health and Safety Management (5 ECTS course)
- Operational Risk Management in Projects (15 ECTS project)

4TH SEMESTER

You will finish the study programme with a final academic thesis – the Master's thesis (30 ECTS). The level of detail in this project is higher compared to the projects you have carried out so far. When carrying out the thesis, you have the opportunity to combine all the knowledge and skills you have acquired throughout the study programme. The Master's thesis can be in nature of industrial development, further development of a project, or actual research.



FOTO: LARS HORN



CAREER OPPORTUNITIES

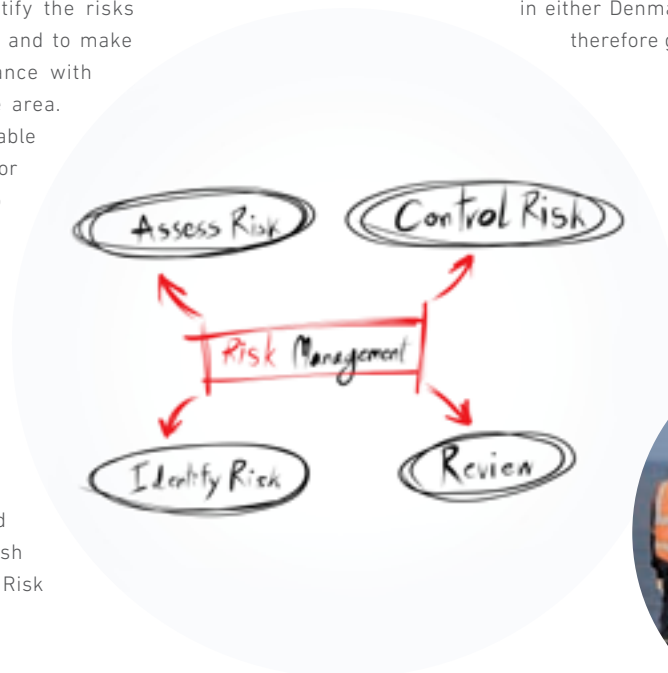
With a Master of Science in Technology in Risk and Safety Management, you have various job opportunities. You can for instance work as a risk analyst, a work environment coordinator, or as a project manager in sectors such as wind, oil and gas, structural and civil engineering, transportation or the public sector.

You will obtain competences that enable you to identify the risks connected to a company's operations, to analyse risks, and to make suggestions for reducing or avoiding risk in accordance with both the legislation and relevant standards within the area. Furthermore, in connection with operations, you will be able to set up possible crisis scenarios and work out plans for coping with such situations. Moreover, you will be able to work with preparation and implementation of procedures for managing health, safety and quality (HSEQ) in risky operations.

In the future, it is expected that the area of risk and safety management will be characterised by remarkable growth. In a recent market survey among companies in the industries mentioned above, 94% of the respondents answered that they were expecting a rise in the number of employees within the field. This is supported by announcements from trade organisations such as Danish Industry: "The industry is increasingly being challenged in Risk

and Safety Management which is why we see a need for more knowledge and competence development in this field."

With a degree in Risk and Safety Management, you will become part of a field which will be marked by growth and development in the future. The possibilities of making a career for oneself in either Denmark or overseas are therefore great.



EXAMPLES OF RISK SCENARIOS



PROBLEM BASED LEARNING

As a student at Aalborg University, you will work closely together with your fellow students by way of problem based project work.

Aalborg University is host to a successful UNESCO Chair in Problem Based Learning in Engineering Education and a Centre for PBL and Sustainability approved by UNESCO. The Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability under the auspices of UNESCO will build upon and develop the work of the UNESCO Chair and Centre for PBL and Sustainability, and is keenly supported by Aalborg University and the Danish Ministry of Science, Innovation and Higher Education.

When writing your problem based project, you will typically be part of a group consisting of 4-5 students. Once you have formed a project group, you need to define a problem together that you want to examine. The problem forms the basis of your project, and you are to a great extent responsible for defining it yourselves within an often very broad theme frame. The group work ensures a great variety of approaches and perspectives, which results in a sound and thoroughly prepared project. Together, you are able to discuss the details thoroughly. At the same time, you are able to solve larger and more complex problems than if you were studying on an individual basis.

With group work, you will quickly realise that you might have different opinions about how to solve a problem. Group work means that you have to compromise, and you will learn a lot about how to cooperate. Group work is very popular in the modern labour market so both you and your

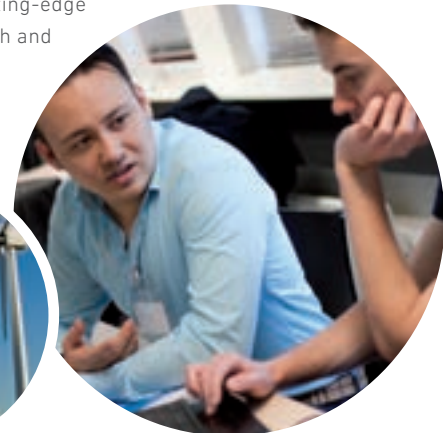
future workplace will benefit from the skills in cooperation you have acquired at Aalborg University.



RATED FOR EXCELLENCE

Aalborg University is rated for excellence in the QS-ranking system. Aalborg University has received five stars certifying the world-class position of the university based on cutting-edge facilities and internationally renowned research and teaching faculty.

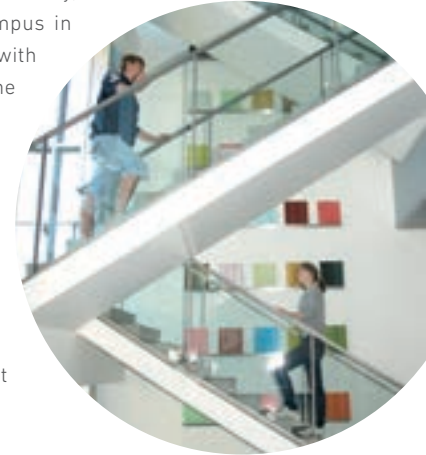
Within Engineering and Technology, Aalborg University ranks as number 79 in the world.



STUDY IN ESBJERG



Situated by the sea, Esbjerg is a town with more than 70.000 inhabitants. The town is characterised by wind energy, the oil industry, and shipping. As a student at Aalborg University's campus in Esbjerg, you can enjoy the city's many opportunities with regard to cultural experiences, sports, and spare time activities. Aalborg University Esbjerg is located only around 3 kilometres from Esbjerg town centre and transport options, such as bus or bike, are great between the town centre and campus. Therefore, you have easy access to the many experiences and activities that Esbjerg is able to offer. Moreover, the environment at Aalborg University Esbjerg is characterised by a strong sense of community and a unique atmosphere which allows you to quickly get to know your fellow students as well as the staff.



ACCOMMODATION IN ESBJERG

As an international student at Aalborg University in Esbjerg, you have great opportunities of finding accommodation, and the price level is lower than in most other university cities in Denmark. In recent years, we have succeeded in providing accommodation for all international students, and we continue to strive for this.

PRACTICAL INFORMATION

APPLICATION AND REQUIREMENTS

Admission to the Master of Science in Technology in Risk and Safety Management presupposes one of the following:

- BSc degree in Chemistry
- BSc in Structural and Civil Engineering
- BSc in Mechanical Engineering
- BSc in Public Health Science
- Bachelor's degree in Business Economics
- Bachelor of Architectural Technology and Construction Management
- PBA Technology Management and Marine Engineering
- PBA Technical Manager Offshore

All applicants are evaluated individually. Students with another Bachelor's degree may be admitted following an academic assessment if the applicant is considered to have comparable educational prerequisites.

In order to apply you must document basic written and spoken English. The official language requirements for international students applying to Aalborg University are:

- IELTS (academic test): 6.5 or ielts.org
- TOEFL (paper-based): 560 or ets.org/toefl
- TOEFL (internet-based): 88 or ets.org/toefl
- Cambridge Certificate of Proficiency (CPE) cambridgeenglish.org
- Certificate in Advanced English (CAE) cambridgeenglish.org
- Cambridge First Certificate with the grade B cambridgeenglish.org

You do not have to submit an official English test if one of the following criteria applies to you:

- Have a complete bachelor degree done in English from either Australia, the UK, Ireland, Norway, Sweden, Finland, Iceland, USA, New Zealand, South Africa or Canada.
- Have a complete bachelor degree from a Danish University.
- Have a complete bachelor degree from a Danish academy of professional higher education.
- Have a complete bachelor degree from a Danish university college.
- Have a major/minor in English, i.e. the English language is the field of study and not only an elective course or medium of instruction.

For more information, please refer to apply.aau.dk

TUITION-FREE STUDIES

Students from EU/EEA countries are not required to pay a tuition fee. However, all students must pay all other costs related to studying in Denmark: for example costs related to books, living expenses, and accommodation. With the exception of students from partner universities outside the EU/EEA, an international student from a non-EU/EEA country will need to pay a tuition fee.





DEADLINE

THE PROGRAMME STARTS IN FEBRUARY

DEADLINE FOR APPLICATION FOR
INTERNATIONAL STUDENTS:

1 OCTOBER

PLEASE GO TO [APPLY.AAU.DK](https://apply.aau.dk)

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CONTACT

CONTACT INFORMATION

If you have questions about how to apply or general questions about studying in Denmark and life at Aalborg University, please contact:

International Office in Esbjerg
Aalborg University Esbjerg
Niels Bohrs Vej 8
DK-6700 Esbjerg
Denmark

E-mail: international@esbjerg.aau.dk

If you have questions regarding the study programme,
please send an e-mail to civil.sg@ses.aau.dk



AALBORG UNIVERSITY
ESBJERG



UNIVERSITY OF SOUTHERN DENMARK