

# MSC IN MATHEMATICS\*

## SPECIALISE IN AN AREA OF YOUR CHOICE



My team comes into the picture when our customers have to comply with new EU legal requirements, for example. A typical task could involve developing a new type of billing, such as a new invoice form. Here we look at what elements should be included – what is possible, and how do we ensure that the programmes work together? I use mathematics in my job when I use logical thinking, abstraction and a structured approach. I hardly code at all, but I use my IT and domain knowledge. At the same time, this job demands both good collaboration skills and the ability to communicate with people in many different fields.

**METTE STRUDSHOLM**  
MSc in Mathematics  
IT developer, Danske Bank

Mathematics is a part of day-to-day life – of using your debit card and navigating by GPS, just as much as making calculations in physics or chemistry or working out the pot odds in an important hand of poker.

### RESEARCH AND SPECIALISATION

Teaching at the university is greatly influenced by the research conducted here, as the lecturers are active researchers. When students write their MSc thesis during the final year of the programme, they have excellent opportunities to become affiliated with a group of researchers, which allows them to participate in the group's research projects and scientific discussions. Students specialise in a subject within a broad area, including one of the three areas of mathematics in which Aarhus University is particularly strong: algebra, analysis, and geometry and topology.

### STUDENT LIFE

As a student in the programme, you are based at the Department of Mathematics, which has its own canteen, computer rooms, library, and study areas shared by students. As a Master's student, you will be given your own desk in an office shared with other Master's students. The department also has a number of student organisations such as Euler's Friends (Eulers Venner) and the Kalkulerbar (Friday bar) organising lectures on current maths topics, study excursions and social functions.

### CAREERS

Graduates from the Department of Mathematics find work across a wide range of fields and institutions including finance, communication, and the wind-power industry in the private sector. Typically, previous graduates are working in universities and research institutions, in the pharmaceutical industry, the telecommunications and finance sectors, and in insurance companies.

Graduates who pursue academic careers at universities are often involved in interdisciplinary work with doctors, biologists or chemists, analysing large amounts of data, or teaching statistics to these professional groups. In the pharmaceutical industry, graduates plan clinical trials or design methods for examining whether new drugs have unwanted side effects. In the insurance industry, graduates typically work as actuaries and may contribute to working out tariffs. Common to all these jobs is the requirement for knowledge of a number of complicated mathematical models – something the MSc in Mathematics will equip you with.



#### PLACE OF STUDY

Aarhus

#### ANNUAL TUITION FEE

EU/EEA/Swiss citizens: FREE  
Others: EUR 13,500

#### WWW

[masters.au.dk/mathematics](http://masters.au.dk/mathematics)

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## ADMISSION REQUIREMENTS

A bachelor's degree amounting to at least 60 ECTS credits in mathematics can qualify the student for admission.

## SELECTION CRITERIA

As the Master's programme admits only a limited number of students each year, meeting the admission requirements does not in itself guarantee admission to the programme. Student places are allocated on the basis of an overall assessment. In evaluating qualified applicants, the admissions committee assesses applicants according to the following criteria: academic background; overall grade level of bachelor's degree; grades achieved on relevant courses; and relevant courses (measured in credit units) included in the bachelor's degree.

Relevant courses include core courses within abstract algebra, complex analysis, differential equations, elementary differential geometry/topology and measure and integration.

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