Mathematics and Operations Research

**Director of degree programme:** Professor Lasse Leskelä  
**Degree:** Master of Science (Technology), 120 ECTS

This site contains the student study guide for the master’s programme with materials and instructions on all the majors available in the programme. Here you will find the programme curriculum as well as detailed guidelines for planning your studies.

In addition to programme's pages, Aalto University uses various online services for planning and monitoring one’s studies, and for keeping up with what is going on at the university. In planning one’s studies, this programme page and the online tools complement each other and should be used side by side.

Student's most important online tools are

- WebOodi
- MyCourses

**Description of the programme**

The objective of the Master's Programme in Mathematics and Operations Research is to train experts who have broad knowledge of mathematical methods and tools as well as strong problem solving skills so that they can successfully tackle challenging scientific, industrial, economic, and environmental problems.

The students learn to think mathematically. They also learn to build mathematical models and to analyze them by developing and deploying state-of-the-art methods and algorithms. Through their choice of major, the students can focus on mathematical theory, computational methods, or modelling and problem solving skills that are needed in practice.

Graduates from the Master's Programme in Mathematics and Operations Research are in growing demand in many industries and in the public sector. This growth is partly driven by the ability to collect more data about a great variety of phenomena, which together with advances in mathematical methods and greater computational power makes it possible to apply mathematical skills ever more extensively.

There are three majors in the Master's Programme in Mathematics and Operations Research:

- Applied Mathematics
- Mathematics
- Systems and Operations Research.

All three majors provide an excellent basis for building a career in scientific research. Thus, a large share of the students will continue their studies and obtain a doctoral degree.