MENU Utrecht University NL

Computing Science

Study Programme

The Computing Science Master's programme is a two-year programme (120 EC). Every year is divided into four periods. In these periods you will follow courses related to the chosen track. Computing Science has four tracks. This way you can tailor your own study programme.

Curriculum

The programme consists of ten courses (75 EC) divided over year one and year two. In the second year, you are required to engage in a research project that is concluded with a Master's thesis (45 EC). You can find a description of the specific courses at the courses chapter on this page. The credits are in EC (European Credits), where 1 EC is equivalent with 28 hours of work.

More information about the curriculum

Course work (60 EC) - Year one

The course work for this programme consists of:

- 3 Compulsory courses (22,5 EC)
- 3 Track electives (22,5 EC)
- 4 Elective courses, divided over year one and year two (30 EC)

Feedback

You can also use elective space of up to 15 EC to do an experimentation project.

Research project and Master's thesis - Year two

The programme is completed with a Master's thesis. This is a 2- to 3-term research project, under the supervision of a staff member, that is concluded with a written Master's thesis. In addition, you also have to defend your Master's thesis.

The research project must contain a significant literature study, in which you will familiarise yourself with the subject. As part of your research training, you will also enhance your academic skills by regular attendance of various seminars.

Courses

View the extensive range of possible (elective) courses. This will give you, as a prospective student, a good idea of what to expect when putting together your own study programme.

Course overview

Compulsory courses

- Algorithms for decision support (compulsory)
- Algorithmic data analysis (compulsory)
- Concepts of programming language design (compulsory)

Track: algorithm design and analysis

- Algorithms and networks
- Geometric algorithms
- Network science
- Optimization for sustainability
- Scheduling and timetabling

Track: programming technology

- Advanced functional programming
- Domain specific languages
- Probabilistic reasoning
- Program semantics and verification

Track: operations research

- Algorithms and networks
- Data mining
- Optimization for sustainability
- Pattern recognition
- Scheduling and timetabling

Profiles

You can choose a profile to expand the thematic range of your Master's programme. This is a coherent set of courses totaling 30 EC. The courses are on a single theme that is usually not a standard part of the programme.

Educational methods

- Lectures
- Pratical and lab assignments
- Seminar
- Colloquium
- Experimentation project

Examinations

- Exams
- Lab assignments
- Presentations
- Papers

Extracurricular opportunities

Are you looking for an extra challenge?

Utrecht University offers several programmes for students looking for an extra challenge. These programmes are followed on top of your regular Master's programme and go beyond the regular curriculum. Do you want to know more about extracurricular opportunities?

READ MORE ABOUT THE OPPORTUNITIES

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