Learning to assess the security of existing ICT solutions, and how to develop more secure solutions for the future

Our society relies on ICT to an ever-larger degree, making cyber security a topic of growing importance. This specialisation will teach you how to contribute in the design of new security systems. You’ll be able to draw up the security requirements of an application and discover where possible weaknesses lie.

Why study this specialisation at Radboud University

- Radboud University’s research in Data Security is unique in its broad range, which is reflected in a diversity of courses.
- Internationally, we’re leading in research on smartcards and privacy-friendly identity management.
- Education is closely connected to research at the Privacy & Identity Lab, where privacy and identity are researched from a legal, technical, and social perspective.

This specialisation is offered in collaboration with the Eindhoven University of Technology (TU/e), meaning you get taught by many of the best cyber security experts in the country.
Programme outline (2 years, 120 EC)
The programme of this specialisation consists of:
• Compulsory courses (30 EC)
• Specialisation electives (15-18 EC)
• Specialisation-external electives (ca 10 EC)
• Free electives (ca 10 EC)
• Philosophy and Ethics for Computing and Information Science (3 EC)
• Seminar course (5-6 EC)
• Research internship (15 EC)
• Master’s thesis project (30 EC)

Courses
Below you can find an overview of the compulsory courses and some examples of electives. Please have a look at the online prospectus (see 'More information') for more detailed information.

Compulsory courses
• Software Security at RU (5 EC)
• Security in Organisations at RU (5 EC)
• Advanced Network Security at RU (5 EC)
• Principles of Data Protection at TU/e (5 EC)
• Cryptology at TU/e (5 EC)
• Verification of Security Protocols at TU/e (5 EC)

Specialisation electives
• Law in Cyberspace at RU (6 EC)
• Hardware Security at RU (6 EC)
• Cryptographic Engineering at RU (6 EC)
• Cryptographic Protocols at TU/e (5 EC)
• Physical Aspects of Digital Security at TU/e (5 EC)
• Applied Cryptography at TU/e (5 EC)

Research
This specialisation is focused on research. First you’ll study scientific literature in a seminar course. Next, during your research internship, you’ll participate in a research project in a scientific group. And in the Master’s thesis you’ll carry out your own research project, under the close supervision of our expert staff. You can, for example, take part in research of a group at the Institute for Computing and Information the Sciences at Radboud University (ru.nl/ics):
• Software Science (sws.cs.ru.nl)
• Digital Security (ru.nl/ds)
• Data Science (ru.nl/das)
There are also a lot of opportunities for internships in the many companies and public organisations that we have contacts with. For further information, you can confer with one of the lecturers.

Your advantages on the labour market
Upon completing this Master’s, you’ll have an in-depth knowledge of cyber security that will include theoretical and technical aspects of the field. You’ll also have a good understanding of the managerial, legal, and ethical aspects that play a role. Cyber security experts are in high demand, so you should have no problem finding a job as consultant, manager or researcher after graduating.

Admission requirements
You are required to have a Bachelor’s degree in Computing Science or a closely related discipline. You must also have a sufficient proficiency in English. Students from a University of Applied Sciences (HBO) need to follow a pre-Master’s in Computing Science. Other additional deficiency programmes are tailor-made. For details, please visit the website or contact the student advisor (see 'More information').

Application procedure
The programme starts in September. The application deadline is 1 April for students from non-EU/EEA countries and 1 May for students from within the EU/EEA.
You apply for the Master’s programme in Computing Science via www.studielink.nl. After admittance to the Master’s programme, you can enrol for the specialisation in Cyber Security.

>>> More information

Prospectus: www.ru.nl/prospectus/sciencefaculty

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www.ru.nl/masters/cybersecurity