Master's Programme in

Security and Cloud Computing (Erasmus Mundus Joint Master Degree)

Aalto University

KTH VETENSKAP OCH KONST

DTU

TARTU ÜLIKOOL 1632 UNIVERSITAS TARTUENSIS

EURECOM Sophia Antipolis

NTNU Norwegian University of Science and Technology

SECCLO Master's Programme in Security and Cloud Computing (Erasmus Mundus)

Acquire a world-class education and a double degree in information security!

Degree:
Two MSc degrees, one from each university studied in (a double degree).

ECTS:
120 ECTS

Duration:
2 years, full-time

Language of Instruction:
English

Participation fee:
€3 000/year (EU/EEA students)

€9 000/year (non-EU/EEA students)

Erasmus Mundus scholarships:
max. €32 000-€37 000 (EU/EEA students)

max. €44 000-€49 000 (non-EU/EEA students)

SECCLO is an Erasmus Mundus double degree programme that focuses on two specific aspects of modern computing systems, cloud computing and information security. The studies offer both practical engineering knowledge and theoretical insights into

- *secure systems engineering*,
- *distributed application development*,
- *network and service architectures*, and
- *cloud and mobile platforms*

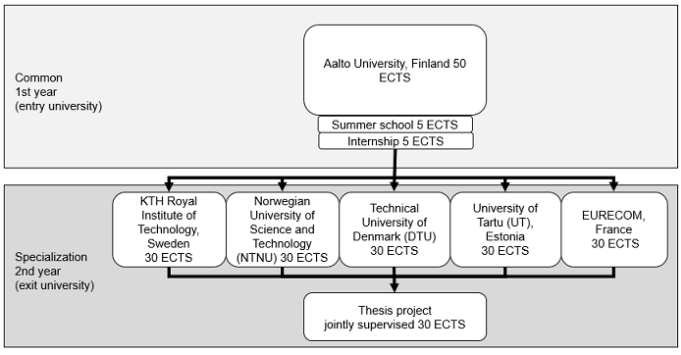
SECCLO combines practical engineering skills with a strongly research-based curriculum. This way, the programme aims to attract special talent and educate game-changing, highly professional engineers to meet both the immediate hiring requirements and the long-term needs of the European ICT industry.

Two years, two universities, double degree
During the two-year SECCLO studies, students will gain a unique experience of studying in two different countries while obtaining a broad understanding of the latest and future technologies for secure cloud and mobile computing systems.

The first year of studies (60 ECTS) is taken at Aalto University, Finland, and it concludes with a summer school and a summer internship. For the second year, students choose one of the specialization options (30 ECTS) offered by the other consortium universities:

- Communications Systems Design (KTH, Sweden)
- Information Security (NTNU, Norway)
- Reliable Distributed Systems (DTU, Denmark)
- Cryptography (University of Tartu, Estonia)
- Big Data Security (EURECOM, France)

The final semester of the SECCLO programme is dedicated to the Master's thesis (30 ECTS), jointly supervised by professors from both universities the student has studied in.



Industry and research collaboration
The *associate members* of the SECCLO programme promote the future employability of the students by offering internship and thesis positions, company visits and contributions to the course contents.

The current associate members include, e.g.:

- *Ericsson,* Finland
- *KONE Corporation,* Finland
- *Intel Labs Europe*, Germany
- *Nokia*, France/Finland
- *SAP Labs*, France
- *GuardTime*, Estonia

All SECCLO students will also become members of *Helsinki-Aalto Institute for Cybersecurity (HAIC)*, a strategic initiative set up by Aalto University and the University of Helsinki to create a network of industrial partners to support research and educational programmes in information security.

Admission requirements

The general admission criteria is a high quality Bachelor's degree in computer science, information technology or mathematics (to be completed by 31 July 2024). The required background consists of sufficient studies in:

- mathematics (liner algebra, calculus, probability theory, statistics, and discrete mathematics)
- programming skills
- algorithms and data structures
- databases
- theory of computation
- computer networks
- web software and online services
- software engineering

Knowledge of the additional relevant areas is considered an advantage.

The applicant's previous academic performance in these subjects will be evaluated based on the grade point average (GPA) and results in key courses. The programme is looking for applicants with excellent academic performance in their previous studies. For further information on student selection criteria, visit secclo.eu

English language proficiency requirements
The applicants are expected to have excellent command of English. The recognized language tests and their minimum score requirements are listed below. For exemptions to the language test requirements, see the programme website.

	Minimum total score	*Minimum writing score*
TOEFL IBT	92	22
IELTS	6.5	6.0
C1/C2	A, B, C	-
Pearson	62	54

Further information on applying
For further information on applying, required application documents and application deadlines, visit the programme website at secclo.eu. The schedule of the next application period is:

- Online application portal open: **22 November 2023 – 4 January 2024** (3 pm, GMT +2)
- Final deadline for the English language test: 18 January 2024
- March 2024: Selection results are published at the latest
- Late August/Early September 2024: 1st year studies begin

Why SECCLO?

Industry demand

- There is a shortage of professionals in Europe and worldwide who are able to develop products and services for the modern cloud and mobile computing platforms and do this in a secure way.

Innovation and R&D focus

- SECCLO differs from most information security programmes in that it links security studies with product and service development skills. The ability to innovate and develop new products and services is what has the most potential for creating new business growth.

International experience

- The programme provides its students with the profound experience of working and studying in multiple countries in an international environment. Two Master of Science degrees from two universities mean wider opportunities for employment.

Industry contacts already during studies

- Mandatory summer internship between 1st and 2nd year studies, industry involvement in courses and industry thesis projects are some of the examples of how SECCLO students are able to create industry contacts during full-time studies.

Competitive Erasmus Mundus scholarships

- The generous Erasmus Mundus scholarships offered for the best students allow you to concentrate on your studies without financial worries.

Proven success of our predecessor, NordSecMob

- Out of over 200 NordSecMob alumni, 95% had a job within 6 months after graduation. They work in all the biggest ICT companies, including Ericsson, Microsoft, Nokia, Google, Facebook, Amazon, Accenture, Skype, Siemens,…

Join us now!
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