

01. Studies

SpaceMasters' Degree Structure at School of Electrical Engineering

[Official Degree Requirements for the Erasmus Mundus Master's Programme in Space Science and Technology 2017-2018](#)

[Official Degree Requirements for the Erasmus Mundus Master's Programme in Space Science and Technology 2018-2019](#)

Degree structure in Aalto	
Description	credits
Courses from UW	30
Courses from Kiruna	30
Aalto Major	25
Aalto language courses	5
Aalto Thesis	30
Total	120

Personal Study Plan

Please fill in your Personal Study Plan (HOPS in Finnish) [using this form](#).

- you can use only the first page, titled Major

Consult Pekka Forsman regarding the selection of courses. Once you have filled in your study plan, please return it to Annika Salama, at the Study office.

Major in Space Robotics and Automation, ELEC3047;

Curriculum for 2018-2019 Round 13

Compulsory Courses (20 ECTS)

Major studies

- ELEC-C1320 Robotics (Fall Periods I-II) 5 ECTS
- ELEC-E8103 Modelling, Estimation and Dynamic Systems (Fall Period II) 5 ECTS
- ELEC-E8001 Embedded real-time systems (Fall Periods I-II) 5 ECTS

Language studies

- [LC-7311](#) Finnish 1A (Fall Period I) 2 ECTS
- [LC-1320](#) Thesis Writing for Engineers (Spring Periods III-IV) 3 ECTS

[Preliminary Study schedule for Fall of 2017](#) 2018 will be updated soon

In addition, select 10 credits from Optional major courses (10-11 ECTS)

Autumn periods:

- LC-7009 Get to know Finland (Fall Periods I-II) 1 ECTS
- ELEC-E8104 Stochastics models and Estimation (Fall Period I) 5 ECTS
- ELECE8125 Reinforcement learning (Fall Period I-II) 5 ECTS
- KON-C2004 Mechatronics Basics (Fall Periods I-II) 5 ECTS
- ELEC-E4130 Electromagnetic Fields (Fall Periods I-II) 5 ECTS

- CSE4850 Computer Vision (Fall Period I-II) 5 ECTS
- ELEC-E4220 Space instrumentation (Fall period I-II) 5 ECTS

Spring periods:

- ELEC-E8111 Autonomous Mobile Robots (Spring period IV) 5 ECTS
- ELEC-E8115 Micro and Nano Robotics (Spring periods III-IV) 5 ECTS
- ELEC-E4210 Introduction to Space (Spring periods III-IV) 5 ECTS
- ELECE8126 Robotic Manipulation (Spring periods III-IV) 5 ECTS
- ELEC-E4240 Satellite Systems (Spring periods IV-V) 5 ECTS
- ELEC-E4520 Space Physics (Spring periods IV-V) 5 ECTS

Freely elective:

- LC-7009 Get to know Finland (Fall Periods I-II) 1 ECTS

Total ECTS number 30-31

Thesis work , January - August, Spring 2018, 30 credits.

Weekly course schedule

NOTE: The study schedule above is draft with the compulsory courses. Use this to do your own study schedule. Check for the groups for Finnish 1A to find the one suitable for you. Because of the timing of the lectures, not all course combinations may be feasible.

NOTE: Some of the elective courses take place during the spring period, in parallel with your Thesis work. The student needs to carefully consider which courses, if any, he/she is willing and capable of taking along with the Thesis research and writing. The academic coordinator at Aalto is available for counselling with the issue.

Course descriptions

Follow the link [mycourses](#), copy-paste the course code in 'search course' field, select 'course overview' on the left and then 'course description' in the middle of the screen .

Finnish Language

SpaceMaster program includes Finnish basic course Finnish 1A, and as an elective course an introduction to Finnish culture. (<http://kielikeskus.tkk.fi/fi/opetus/kurssit/suomi/>). Finnish students may continue some other foreign languages at advanced fifth level.

NOTE: Language classes usually get filled very quickly and you need to roll in via Internet-based WebOodi-system two weeks beforehand, preferably during first hours after opening the site.

English Language Support

The SpaceMaster programme includes the Thesis Writing for Engineers -course given by an English teacher.

Thesis

For every student the topic will be selected and modified individually considering the interests and background of the student. The topics will be available after student interviews in October-November.

Examples from previous years' SpaceMaster Theses can be found behind the links '[Previous Years](#)' -> (Select year) ->'Theses'.