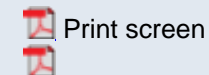


## Adjust view of Your programme syllabus

[Svenska](#)


Enrollment semester A24A23A22A21A20A19A18A17A16A15A14  
A13A12A11A10A09A08A07

Adjust Complete Compulsory courses Study schedule

(all) Atmospheric and  
Space Science,  
research oriented  
(RYSP) Space  
Technology and

Specialisation Instrumentation (RYIN)

Version 2016/2017 2015/2016

**Important! Up-to-date information about compulsory courses and study schedule are always shown in the latest version (study year) of the syllabus.**

## Syllabus Master Programme in Space Science and Technology for study year 2015/2016

*Rymdvetenskap och rymdteknik, master*

Syllabus updated on 2015-03-31 by Enhetschefen Utbildnings- och forskningsenheten.



**This is an adjusted view**

**Enrolled** A15

**View type** Compulsory courses

### Credits

The programme consists of 120 credits.

### Degree

[Degree of Master of Science \(120 credits\) - Major: Space Technology](#)

### Specialisation

Name	For admitted until
RYSP Atmospheric and Space Science, research oriented <i>Rymd och atmosfärsvetenskap, forskningsinriktad</i>	
RYIN Space Technology and Instrumentation <i>Rymdteknik och instrumentering</i>	

## Programme content and structure

In order to be eligible for the diploma in Master of Science in Space Technology with specialisations in Atmospheric and Space Sciences, Space Technology and Instrumentation the student has to obtain 120 ECTS, including courses on the advanced level for at least 90 ECTS and a Master thesis for 30 ECTS. The program is based on the Erasmus Mundus cooperation between six European and two Third-Country partner universities and combines courses in space science and technology. The program is coordinated by Luleå University of Technology.

Erasmus Mundus is an EU program that supports cooperation and exchange between universities on Master and postgraduate levels and provides European education of the highest quality.

European partner universities:

Luleå University of Technology (LTU) Sverige  
 Julius-Maximilians Universität Würzburg (JMUW) Tyskland  
 Cranfield University (CU) Storbritannien  
 Aalto University School of Science and Technology (AALTO) Finland  
 Czech Technical University Prague (CTU) Tjeckien  
 Université Paul Sabatier Toulouse (UPS) Frankrike

Third-country partner universities:

The University of Tokyo, Japan  
 Utah State University, USA

The first compulsory semester takes place at Julius-Maximilians University, Würzburg, Germany. The second compulsory semester takes place at Luleå University of Technology, Sweden. During the second semester students choose a European partner university for the second study year on the basis of their specialization. For students who take the second year at Luleå University of Technology a possibility to combine courses from two specialisations, i.e. in Space and Atmospheric Science and Space Technology and Instrumentation, is offered. The program concludes with a Master thesis in the chosen specialization at one of the partner universities.

For admission to the degree project course entry requirements specified in the Course Syllabus must be completed. Information regarding the application- and admission process is given and ensured by the responsible department.

Specialisations offered:

- Space Technology and Instrumentation (LTU)
- Atmospheric and Space Science (LTU)
  
- Automation, Control and Communication of Space Robotics (JMUW)
- Dynamics and Control of Systems and Structures (CU)
- Space Robotics and Automation (Aalto)
- Space Automation and Control (CTU)
- Space Technique and Instrumentation (UPS)
- Astrophysics, Space Science and Planetology (UPS)

All students within the educational program will be admitted to Master thesis course at LTU. All students that meet the requirements for graduation will receive Master of Science with a Major in Space Technology. Specializations given at LTU are included in the diploma.

Courses and diploma requirements for specialisations at the partner universities can be found at the respective universities or the programme website <http://www.spacemaster.eu/>.

Swedish for beginners is offered for overseas students. The course is not included in the degree, and is read in addition to the obligatory courses.

### Entry requirements

Successful completion of a basic engineering program or a Bachelor's degree with a minimum of 180 ECTS in the areas of physics, space physics, astronomy, engineering, electronics, mechatronics, space technology, computer science or equivalent. A minimum of 22.5 ECTS in mathematics at the university level is required. Applicants with earlier studies in Sweden must hold a "Kandidatexamen" in a relevant field or if the applicant is enrolled in European Diploma engineering programmes, or the equivalent, he/she must have completed at least three years of his/her studies.

Documented skills in English language.

[More information about English language requirements](#)

### Selection

The selection procedure is based on academic qualifications, quality and quantity aspects

Selection group

Academic: 100%

### Compulsory courses

#### Compulsory courses 90 credits

Course code	Name	Cr	Level		
<a href="#">E7003R</a>	Electronics in Space	7.5	S		
<a href="#">F7003R</a>	Optics- and Radar-based Observations	7.5	S		
<a href="#">P7004R</a>	Master Degree Project	30	S		
<a href="#">R7004R</a>	Spacecraft Environment Interactions	7.5	S		
<a href="#">R7017R</a>	Space Physics	7.5	S		
	Spacecraft System Design (First cycle)	8			
	Space Dynamics.(Second cycle)	5			
	Introduction to Space Physics (Second cycle)	8			
	CanSat (Second cycle)	9			

**AND**

Course offered outside the obligatory courses - not compulsory - For non Scandinavian students 0 credits

Course code	Name	Cr	Level		
<a href="#">S0046P</a>	Swedish for International Students 1	3	F	Selectable	

### Specialisation: Atmospheric and Space Science, research oriented

#### Compulsory course 7.5 credits

Course code	Name	Cr	Level		
<a href="#">R7013R</a>	Space Instruments	7.5	S		

AND

#### Selective courses 22.5 credits, within selective courses choose 22.5 credits

Course code	Name	Cr	Level		
<a href="#">F7001R</a>	Space Plasma Physics	7.5	S	Selectable	
<a href="#">F7004R</a>	Atmospheric Physics	7.5	S	Selectable	
<a href="#">F7007R</a>	Cosmology	7.5	S	Selectable	
<a href="#">F7008R</a>	The Solar System	7.5	S	Selectable	
<a href="#">P7006R</a>	Space Engineering Project 2	7.5	S	Selectable	
<a href="#">R7011R</a>	Image Processing with Space Applications	7.5	S	Selectable	
<a href="#">R7012R</a>	Remote Sensing	7.5	S	Selectable	
<a href="#">R7018R</a>	Spacecraft on board datahandling	7.5	S	Selectable	
<a href="#">R7020R</a>	Spacecraft Design	7.5	S	Selectable	

### Specialisation: Space Technology and Instrumentation

#### Compulsory courses 15 credits

Course code	Name	Cr	Level		
<a href="#">R7013R</a>	Space Instruments	7.5	S		
<a href="#">R7020R</a>	Spacecraft Design	7.5	S		

AND

**Selective courses 15 credits, within selective courses choose 15 credits**

<b>Course code</b>	<b>Name</b>	<b>Cr</b>	<b>Level</b>		
<a href="#">F7008R</a>	The Solar System	7.5	S	Selectable	
<a href="#">P7001R</a>	Space Engineering Project II	15	S	Selectable	
<a href="#">P7006R</a>	Space Engineering Project 2	7.5	S	Selectable	
<a href="#">P7011R</a>	Spacecraft Instrument Project	15	S	Selectable	
<a href="#">P7012R</a>	Spacecraft Design Project	7.5	S	Selectable	
<a href="#">R7015R</a>	Space flight orbit dynamics	7.5	S	Selectable	
<a href="#">R7016R</a>	Space flight attitude dynamics	7.5	S	Selectable	
<a href="#">R7018R</a>	Spacecraft on board datahandling	7.5	S	Selectable	