

SYLLABUS

Engineering science and space technology 7.5 credits R0007R

Ingenjörsvetenskap och rymdteknik

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-16**

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Ingenjörsvetenskap och rymdteknik

First cycle, R0007R

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Rymdteknik	Space Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language + Swedish upper secondary school courses Physics 2, Chemistry 1, Mathematics 4 or Mathematics E.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Course Aim

After completing the course, you should:

1. Knowledge and understanding

1.1 Understand the field of space technology and how it relates to other engineering disciplines and engineering in general.

1.2 Understand how to organize, plan and carry out their own studies in both the short and long term for a successful career in the subject area of space technology.

2. Skill and ability

2.1 Be able to solve simpler technical problems with typical engineering tools.

2.2 Be able to write technical reports according to given instructions.

2.3 Be able to plan, implement and present end results in simpler technology projects.

2.4 Know the space research at LTU and the space activities at the Space Campus in Kiruna, and in Kiruna in general.

3. Judgment and attitude

3.1 Demonstrate their ability in engineering thinking.

3.2 Demonstrate insight into the simplifications and assumptions that can be made in analyzes and modeling of simpler physical problems through programming.

3.3 Demonstrate insight into national and international research issues.

Contents

Space technology as a subject; history, their role in today's technological society nationally and internationally. Working life, labor market, gender equality. Engineering. The role of the engineer in research and business; problem solving, engineering tools. Project work. Research information / meeting with research groups at the Department of Systems and Space Engineering (SRT). Meet with the space industry.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The course is conducted in the form of lectures, laboratory work, and visits to companies and institutions within LTU.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. In parentheses are which of the goals are examined. The course is examined with an oral presentation (2.3), project is examined through a written report and oral presentation (2.2, 2.3, 3.1, 3.2), and a written exam (2.1). All the examination parts must be completed for the final grade on the course.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Remarks

The course cannot be included in the degree together with M0009T, D0015E or F0051T.

Overlap

The course R0007R is equal to D0015E, F0051T, M0009T, R0009R

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Oral presentation	U G#	1.5	Mandatory	A13	
0004	Project assignment	U G#	3	Mandatory	A13	
0005	Written exam	G U 3 4 5	3	Mandatory	A14	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Jonny Johansson, HUL SRT 2021-02-16

Syllabus established

by Jonny Johansson, HUL SRT 2013-02-15