

SYLLABUS

Engineering science 7.5 credits F0051T

Ingenjörsvetenskap

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-17**

Engineering science 7.5 credits F0051T

Ingenjörsvetenskap

First cycle, F0051T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Teknisk mekanik	Engineering Physics

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 Have insight into the field of engineering physics with regard to ecological and environmental sustainability and how it relates to other engineering disciplines and engineering science 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 engineering physics.

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 current research areas and research issues at the Department of Engineering Science and Mathematics (TVM) and the Department of Systems and Space Engineering (SRT).

3. Judgment and attitude

- 3.1 Have trained their ability in engineering thinking.
- 3.2 Have insight into the simplifications and assumptions that can be made in analyzes and modeling of simpler physical problems through programming.

Contents

Engineering physics and electrical engineering 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 / meetings with research groups at the Department of Engineering Science and Mathematics (TVM) and the Department of Systems and Space Engineering (SRT).

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 brackets are which of the goals that are examined. The course is examined with an oral presentation (2.3), projects (2.2, 2.3, 3.1, 3.2), and a written exam (2.1). Grading takes place according to the grading scale G U 3 4 5. All 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.

Overlap

The course F0051T is equal to R0007R, D0015E, M0009T

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0003	Oral presentation	U G#	1.5	Mandatory	A11	
0007	Project assignment	U G#	3	Mandatory	A12	
0008	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 Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

by Department of Engineering Sciences and Mathematics 2011-02-07