

SYLLABUS

Special Relativity 7.5 credits F0044T

Speciell relativitetsteori

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2022-02-14

Special Relativity 7.5 credits F0044T

Speciell relativitetsteori

First cycle, F0044T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Fysik	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, 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: Know and understand fundamental notions in relativity. Be able to describe events four-dimensional spacetime. Have an insight into how relativity is used in research and technical applications.

Contents

Spacetime, the concept invariance, inertial systems, principles of relativity, the Michelson-Morley experiment, time dilation, length contraction, lightcones, introduction to general relativity and curved spacetime.

Realization

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

Web-based course with reading assignments, interactive problems and examination assignments. Teacher available for questions and supervision through the course homepage.

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. Continuous web-examination by assigned problems and project work.

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.

Transition terms

2113

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Assignment	G U 3 4 5	7.5	Mandatory	S08	

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 Niklas Lehto, Programme Director 2022-02-14

Syllabus established

by Department of Applied Physics and Mechanical Engineering 2007-11-23