SYLLABUS

Theory of Relativity 7.5 credits F0017T

Relativitetsteori

Course syllabus admitted: Autumn 2011 Sp 2 - Spring 2012 Sp 4

DECISION DATE
2011-10-07

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LULEÅ TEKNISKA UNIVERSITET

Theory of Relativity 7.5 credits F0017T

Relativitetsteori

First cycle, F0017T

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 and Compulsory first-year courses in Mathematics.

Selection

The selection is based on 1-165 credits.

Examiner

Johan Hansson

Course Aim

This course introduces Einstein´s theory of relativity. The course covers general relativity, gravitation and cosmology.

Contents

The ideas behind Einstein´s general theory of relativity. Curved space-time and general tensors. The energy-momentum tensor and Einstein´s law of gravitaion. The Schwarzschild solution. Experimental tests. Black holes. The Kerr solution. Gravitational waves. Gravitation and cosmology. The curved and expanding Universe.

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 consist of lectures devoted to a basic core of the subject.

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.
Written examination/Homework assignments.

Remarks

Always given in English if non-Swedish speaking students attend.

Overlap

The course F0017T is equal to MTF130

Literature. Valid from Autumn 2007 Sp 1

Will be annonced later.

Course offered by

Department of Engineering Sciences and Mathematics

Items/credits

Number	Type	Credits	Grade
0001	Home assignements	7.5	G U 3 4 5

Last revised

by Department of Engineering Sciences and Mathematics 2011-10-07

Syllabus established

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-02-28, and remains valid from autumn 2007.