SD2307 Rail Vehicle Technology
7.5 credits

Spårfordonsteknik

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment
Course syllabus for SD2307 valid from Autumn 2010

Grading scale
A, B, C, D, E, FX, F

Education cycle
Second cycle

Main field of study
This course does not belong to any Main field of study.

Language of instruction
The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes
The course gives a short introduction to railway systems and then focuses on rail vehicles.
The course aim is to give you the fundamentals of railway systems and, in particular, to describe the components and functions of rail vehicles as well as the various demands a rail vehicle must fulfil. The course should give you a good platform for work in the field of railway engineering.

After a completed course you should be able to:

• clarify the different parts in railway systems and their possibilities and limitations
• explain how bogies, carbody tilting, traction and brake systems work and can be improved
• calculate train performance like acceleration and braking capacity, average speed and energy consumption
• determine outer dimensions and interior design for a train at a given operational task
• discuss the trends and future potential for railway traffic

Course contents


Specific prerequisites

150 university credits (hp) In engineering and documented proficiency in English corresponding to English B/ English 6.

Course literature

Compendium on Rail Vehicle Technology, Div. of Rail Vehicles, KTH.

Examination

• PRO1 - Project Task, 3.0 credits, grading scale: P, F
• TEN1 - Examination, 4.5 credits, grading scale: P, F

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

The number of points achieved for TEN1 and PRO1 are summed. The final grade is based on this sum. Grading scale: A-F
Other requirements for final grade

Written Exam (TEN1; 4.5 hp; P/F), compulsory.

Project Task (PRO1; 3 hp; P/F), compulsory.

Ethical approach

• All members of a group are responsible for the group's work.

• In any assessment, every student shall honestly disclose any help received and sources used.

• In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.