AH2029 Railway Signalling System 7.5 credits

Järnväg signalteknik - signalsystem

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 AH2029 valid from Spring 2022

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

University studies at least 120 credits and Eng B/6 according to the Swedish upper secondary school system.

Language of instruction

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

Intended learning outcomes

After the course the student shall be able to:

- Explain the need of a signaling safety system for the railway
- Explain the interaction between trains, railway and train traffic control centers
- Describe the difference between current and future signaling systems
- Explain the different design of a signaling system dependent on infrastructure
- Dimension a reliable system for a railway line with mixed traffic to minimize energy consumption of train traffic
- Calculate the cost of a designed signaling safety system
- Describe the current law and regulations in the signaling safety system

Course contents

- General principles of railway control system
- Consequenses in the society of a control system
- Basic principles of interlocking
- History
- Legislation
- Costs and expenditure
- Lifetime
- Standardisation
- Different types of ATP-systems
- The Swedish signaling system
- Rail traffic capacity
- Time tables
- Signaling systems for mass transit systems

Examination

- TEN1 - Examination, 7.5 credits, grading scale: A, B, C, D, E, FX, 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.

TEN1 - Examination, 7.5 credits, grade scale: A, B, C, D, E, FX, F

Other requirements for final grade

A mandatory written examination equivalent to 7,5 cr with grading scale A-F

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.