AH2923 Global Navigation Satellite Systems (GNSS) 7.5 credits

Globala satellitnavigeringssystem (GNSS)

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 AH2923 valid from Spring 2009

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

AH1815 Introduction to GPS

Language of instruction

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

Intended learning outcomes

Theoretical and practical basics of satellite positioning by the global systems: GPS, GLONASS, Galileo, etc. An introduction also to other geodetic satellite methods.

Course contents

• History of satellite geodesy

• Satellite orbit computation and   representations

• Signal propagation in the atmosphere

• Satellite positioning: systems, observables and computations

• Statistical concepts including Kalman filtering and smoothing

• Applications of GNSS. Other geodetic satellite systems

Disposition

Lectures 24h

Laborations 48h

Course literature

Sjöberg, LE (2007) Theory of satellite geodesy, KTH

Examination

 • LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F
 • TEN1 - Examination, 4.5 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.

Other requirements for final grade

Written exam (TEN1, 4.5 credits)
Approved laboratory reports (LAB1, 3 credits)

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.