



AH2923 Global Navigation Satellite Systems (GNSS)

7.5 credits

Globala satellitnavigeringssystem (GNSS)

Course syllabus for AH2923 valid from Spring 11

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

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

Education cycle: Second cycle

Main field of study: -

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 main content

- 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

Language of instruction

Language of instruction is specified in the course offering information in the course and programme directory.

Eligibility

For Singel Course students:

At least 120 credits academic studies in Surveying, Geomatics, Science, Economics or Planning including documented proficiency in English B or equivalent (TOEFL, IELTS e g). For Students enrolled in a program at KTH:

AH1815 Introduction to GPS or equivalent.

Literature

Sjöberg, LE (2009) Theory of satellite geodesy, KTH

Hofmann-Wellenhof, et al. (2008): GNSS, Springer

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
- TEN1 - Written exam 4.5 credits, grading: A, B, C, D, E, FX, F
- LAB1 - Approved laboratory reports 3 credits, grading: P, F