



# AH2916 Integrated Navigation

## 7.5 credits

### Integrated Navigation

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

### Establishment

Course syllabus for AH2916 valid from Autumn 2010

### Grading scale

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

### Education cycle

Second cycle

### Main field of study

The Built Environment

### Specific prerequisites

- A completed Bachelor of Science in Engineering or least 180 credits academic studies in Teknik, Economics or planning.
- Documented proficiency in English B or equivalent (TOEFL, IELTS e.g).
- AH2913 Satellite positioning with GPS and AH2915 Laser scanning technologies or equivalent

### Language of instruction

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

## Intended learning outcomes

To give students theoretical and practical knowledge on the modern technologies for positioning and navigation.

## Course contents

- Basic principles of various positioning sensors: laser scanner, gyrotheodolite and inertial navigation system.
- Integration of GPS, inertial navigation system and digital cameras.
- Terrestrial and airborne laser scanning
- Processing of data from the mentioned sensors.

## Disposition

Lectures: 30 h

Laboration: 30 h

## Course literature

- Jekeli, Ch. (2001); Inertial Navigation Systems with Geodetic Applications. Walter de Gruyter, Berlin, New York.
- Lecture notes and other handouts will be distributed during the lectures

## Examination

- TEN1 - Examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 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.

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

Written exam (TEN1; 4.5 cr)  
Approved laboration (LAB1; 3 cr)

## 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.