FAG5129 Theory of Errors 7.5 credits

Felteori

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 FAG5129 valid from Spring 2019

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Mathematical statistics. Linear algebra.

Language of instruction

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

Intended learning outcomes

After completing this course, students should have obtained theoretical insight on measurement errors, be able to apply and evaluate different adjustment methods.

Course contents

Errors and data quality. Error propoagation. Error ellipse and error ellipsoid. Optimal estimation and least squares principle. Condition adjustment. Condition adjustment in groups. Adjustment by elements. Adjutsment by elements with constraints. Sequential adjustment by element.

Course literature

Bjerhammar (1973). Theory of errors and least squares adjustment. Fan (1997). Theory of errors and least squares adjustment.

Examination

 • TEN1 - Written exam, 7.5 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.

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.