SF1821 Optimization, Specialized Part of the Basic Course 1.5 credits

Optimeringslära, fördjupad grundkursdel

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

Establishment

Grading scale

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

Education cycle

First cycle

Main field of study

Mathematics, Technology

Specific prerequisites

SF1811 Optimization for F
SF1604 Linear algebra
SF1602 + SF1603 Calculus

Language of instruction

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

Intended learning outcomes

The overall purpose of the course is that the student should get deeper acquainted with some fundamental theoretical concepts and results in optimization theory. It is intended for students with a pronounced interest for mathematical theory.

Course contents

Continuous functions on compact sets.

Separation theorems for convex sets.

Farkas lemma and linear optimization duality.

More on Karush-Kuhn-Tucker optimality conditions and Lagrangean relaxation.

Min-max problems, sadle points, primal and dual problems.

Course literature

The material from SF1811.

Examination

 • HEM1 - Assignments, 1.5 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.

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

Other requirements for final grade

Passed written exam in SF1811 and special home assignments in SF1821.

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.