



# FSF3828 Selected Topics in Optimization and Systems Theory

## 7.5 credits

Valda ämnen i Optimeringslära och Systemteori

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 FSF3828 valid from Autumn 2018

### Grading scale

P, F

### Education cycle

Third cycle

### Specific prerequisites

A Master degree including at least 30 university credits (hp) in Mathematics (Calculus, Linear algebra, Differential equations and transform method), and further at least 6 hp in Mathematical Statistics, 6 hp in Numerical analysis and 6 hp in Optimization.

Completed master and/or PhD courses relevant for the current theme of the course.

### Language of instruction

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

## Intended learning outcomes

After completing the course the student should

- be proficient in reading, summarizing, and presenting, in writing as well as orally to groups, various scientific articles in optimization, systems theory or systems engineering.
- be able to actively participate in discussions about articles presented by other students in the course.
- have obtained special competence within a subfield of optimization, systems theory or systems engineering.

## Course contents

The contents of the course is given by a theme within optimization, systems theory or systems engineering, which is determined by the student and the coordinator jointly.

The theme may be individual for each student or common for all.

The student should acquire special competence within the field of the theme, and present the results in writing and orally in front of the other students.

## Disposition

The course is built on individual work of the students. The teacher will give support and act as advisor.

## Course literature

Announced when the course starts. Depending on the topic, mainly research papers and text book material will be used,

## Examination

- PRO1 - Project, 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.

Projects. Seminars.

## Other requirements for final grade

Successful completion of the project, including the presentations and active participation in seminars.

## 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.