



MJ2485 Introduction to Unsteady aerodynamics 7.5 credits

Introduktionskurs instationär aerodynamik

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 MJ2485 valid from Autumn 2011

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Engineering mathematics, BSc level

Turbomachinery MJ2429

Language of instruction

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

Intended learning outcomes

The objectives of this course is to give a general introduction into the field of unsteady aerodynamics with the focus on turbomachinery. Unsteady aerodynamic phenomena are of paramount interest in the field of aeromechanics in which they appear on the aerodynamic forcing side as well as the aerodynamic damping side. The present course will address both issues as well as set these into contexts with mechanical damping phenomena encountered in turbomachines.

Course contents

The following points are covered in the course:

- General aspects of unsteady aerodynamics
- Aerodynamic damping
- Aerodynamic forcing
- Non-linear damping

Examination

- TENA - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TENB - Examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- TENC - Examination, 3.0 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.

TEN A, 3 ECTS, A-F

TEN B, 1,5 ECTS, A-F

TEN C, 3 ECTS, A-F

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.