MF2066 Internal Combustion Engines Advanced Course 18.0 credits

Förbränningsmotorteknik högre kurs

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

Establishment

Course syllabus for MF2066 valid from Autumn 2018

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

A Bachelor´s degree in Mechanical Engineering or equivalent and the following or equivalent courses completed:

EL1000/1010/1120 Automatic Control, MF1017/1016 Basic Electrical Engineering, SG1216/MJ1112 Thermodynamics, MF2047 Internal combustion engines 1, SD2125 Signals and mechanical systems, MF2030 Mechatronics basic course

Language of instruction

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

Intended learning outcomes

The student should after the course be able to:

• Find and analyse relevant knowledge on internal combustion engineering for the project, and summarise it in a literature study

• Formulate new and unique research questions that build on the knowledge acquired from the literature study

• Develop and follow a project plan including handling of possible deviations

• Carry out reproducible and relevant experiments in a safe and controlled manner - the experiments can consist of tests in an engine test bed and/or theoretical computer simulation of engines

• Constructively and critically analyse the results of the performed experiments

• Report the results in a coherent and well structured written report and an oral presentation

Course contents

In this course, knowledge from the studies at KTH is applied in a project with research focus, generally commissioned by industrial partners in internal combustion engineering. The students work in an interdisciplinary and holistic manner, as true engineers. This includes to define your own project, to take your own decisions and initiative and to ensure that the project is completed on time and in accordance with the goals determined with industrial partners

Course literature

Scientific articles.

Examination

- PRO2 - Project, 12.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project, 6.0 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.

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

All reports will be checked for plagiarism.

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.