

COURSE DESCRIPTION

Course code: MAP14MR01

Course name: Internal Combustion Engines

Scope: 3 ECTS

Target group: 3rd year students

Objective: After completion of the course, students are expected to have knowledge of the design of production-based internal combustion engines. They will master the thermodynamics of combustion engines and the engineering basics as well as constructive aspects of manufacturing methods, materials selection, etc. The course also deals with emissions from diesel and gas engines and the methods how to reduce them.

Content:

- Introduction
- History
- Engine components
- Mean effective pressures and other comparable measures
- Gas exchange and combustion
- Thermodynamics
- Mechanics
- Auxiliary systems
- Supercharging
- Fuels
- Emissions

Methods: Lectures and exercises

Prerequisites: -

Literature: Bengt Johansson. (2004) *Förbränningsmotorer*. Lunds Universitet

Examination: Exam
Exercises

Time: Year 3

Language: Swedish