

424102.0 Principles of process engineering

Level: Compulsory course.

Organizing laboratory: Thermal and Flow Engineering Laboratory, Department of Chemical Engineering, Åbo Akademi University.

Contents: To introduce the concept of macro-balance modelling in thermodynamics, with applications to energy and engineering problems. General principles of process modelling using mass, elemental, energy and entropy balances. Thermodynamic state variables and state diagrams. Production of energy, principles of refrigeration processes, energy and entropy in chemically reacting systems. Gas flow under expansion. The exergy concept.

Schedule and practical details: The course is given in period 1.

Video lectures:

http://www.abo.fi/student/en/Content/Topic/topic/kt_energitekniklinjen/?setlanguage=sv

Literature: Lecture notes: www.abo.fi/~mihelle/PPE_lecture_notes_part1.pdf

Prerequisites: Basic knowledge in process engineering.

Assessment: Assignments and exam.

Lecturer: prof. Henrik Saxén, hsaxen@abo.fi.

Course assistant: Mikko Helle

How to enroll: Please contact Henrik Saxén