FME3549 Sustainable Industry - Creating resilient production systems and value-chains 4.5 credits

Hållbar industri - bygga resilienta produktionssystem och värdekedjor

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 applies from Spring semester 2023 accourding to ITM School decision on 2023-03-21, M-2023-0674.

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Language of instruction

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

Intended learning outcomes

On completion of the course, the student will be able to:

- Analyse and evaluate process industry value chains with respect to technology, economy, sustainability and resilience.
- Analyse how radical and iterative developments in manufacturing processes affect sustainability and materials and by-products in the value chain.
- Position industrial trends and challenges in current research on value chains of process industries.
- Apply research relevant to the course on a project.

Course contents

The purpose of the course is to give in-depth knowledge on the value chains of process industries and how societa- and technological development affect their configuration and characteristics with respect to; technology, sustainability and resilience. Each time the course is given (yearly), the content of the course revolves around a theme. Theme is announced when the course opens for applications. The course is built around two parts. First, a two day seminar, where students participate in lectures from industrial leaders as well as researchers. Secondly, a project, where students, individually or in pairs, specialize in a specific topic. The participating industry leaders present current trends and challenges for the value chains, which are then positioned and discussed by researchers in these topics. The projects are presented during a final full day seminar.

Examination

- INL1 - Assignment, 1.5 credits, grading scale: P, F
- PRO1 - Project, 3.0 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.

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.