



# ME2033 Industrial Dynamics and Technical Change 6.0 credits

## Industrial Dynamics and Technical Change

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

## Establishment

Course syllabus for ME2033 valid from Autumn 2012

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Industrial Management

## Specific prerequisites

Second-level course ME1032/ME2032/4D1053 from the Industrial dynamics track (or another equivalent course) plus at least another Second-level course (at least 6hp) in industrial economics/management is compulsory for attending this course. Students following other programmes (e.g. Erasmus students) may apply for exemption.

## Language of instruction

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

## Intended learning outcomes

The aim of the course is to:

- deepen the knowledge on the mechanisms behind industrial and technical change/transformation with a broad focus on the knowledge formation processes involved.
- provide the students with knowledge on the research frontier in the area of industry, engineering, innovation and technology analyses, and evolutionary industrial processes.
- provide the knowledge base for qualified analyses of policies, strategies and processes related to industrial and technical change on many systems levels

## Course contents

Assuming that the students have knowledge in industrial dynamics and are familiar with the dominant concepts and theories this course deepens the knowledge base so that students may independently analyse processes of industrial and technical change on different systems levels and relate them to their own technological activity. Innovation systems approaches are analyzed in theory and practice as are historical innovation processes as well as the development of generic technologies. Knowledge formation processes in industry and technology and related phenomena like technological paradigms, regimes and trajectories are analyzed.

The theoretical foundation for the course is innovation theory with strong connection to evolutionary and institutional economics. The course has a cross disciplinary character, however, with connection to disciplines like history and sociology of technology (like STS); economic history as well economic geography. In addition the course is based on theories of knowledge formation and learning in firms and technical systems.

The teaching consists of lectures and seminars. One seminar may be in the form of a study visit.

## Course literature

Selection of 15 – 20 research papers or book chapters related to the syllabus.

## Examination

- SEM1 - Seminars, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 4.5 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.

## **Other requirements for final grade**

Active participation in seminars and approved delivery of seminar/working papers. Approved written final examination (may sometimes be in the form of a home examination).

## **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.