AL2143 Cleaner Production and Industrial Environmental Technology 7.5 credits

Cleaner Production och industriell miljöskyddsteknik

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

Establishment

Course syllabus AL2143 valid from Spring term 2020

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering, Environmental Engineering

Specific prerequisites

TSUTM: -

Others: Open for programme students at KTH with at least 180 ECTS or a Bachelor degree for other students

Language of instruction

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

Intended learning outcomes

The overall aim of the course is to provide theoretical and applied knowledge and understanding of strategies and technologies for a cleaner industrial production.

This means that after the course the student should be able to:

- Define Cleaner Production and describe scope and barriers to Cleaner Production.

- Propose and motivate Cleaner Production strategies and actions for different industrial environmental problems, based on a system perspective.

- Describe and explain how to use different unit operations as process integrated or external cleaning stages in industrial production in order to minimize pollutions of air and water and the production of waste.

- On a fundamental level describe different industrial environmental technologies to minimize pollution of air and water and discuss their advantages and disadvantages.

- Propose and motivate the choice of different environmental technical solutions for minimizing the pollution of air and water from industry and the resource utilisation and waste production.

Course contents

- Strategies for a better environment

- Cleaner Production strategies and assessment methods

- Industrial waste treatment

- Strategies and methods to minimize waste production and resource utilisation

- Advantages and disadvantages with different technologies

- Application examples

Examination

- SEM1 - Seminars, 1.0 credits, grading scale: P, F
- PRO1 - Project, 2.0 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.

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.