

Course Syllabus

Introduction to Sustainable Development in Mechanical Engineering 7.5 Credits*, First Cycle

Learning Outcomes

Upon completion of the course, students will be able to:

- problematise and concretise the concept of sustainable development from various theoretical perspectives and in different contexts, from global to individual
- present and argue for different ways to influence development, and reflect upon the possibilities and challenges that come with the proposals
- describe and reflect on different methods used in product development that can contribute to development that is more sustainable
- conduct an analysis of a product and suggest ways to decrease the negative impact of the product on the environment

Course Content

The course addresses the term sustainable development and the way we use and divide resources. Laws, regulations and international treaties are studied: the extent to which they can contribute to sustainable development and the extent to which they are followed. Included in the course are studies of lifestyles, ethics, health, human behaviour and technical development, as well as the opportunities and challenges that come with the development of a more sustainable society and the ways we can influence development, ecological and social life cycles, circular economy, geoengineering, climate compensation and our complex world. An analysis is also conducted of the ways to reduce the environmental impact of a product.

Assessment

Active participation in seminars, 3,5 credits

Written report 1, 1 credit

Written report 2, 1 credit

Written exam, 2 credits

Forms of Study

Lectures, seminars, work shops.

Grades

The Swedish grades U–G.

Prerequisites

At least 90 credits from a bachelor program in Mechanical Engineering

Other Information

Students are expected to have knowledge from the previous courses in the programme so that they are better able to successfully meet the outcomes of the course.

Subject:

Mechanical Engineering

Group of Subjects:

Mechanical Engineering

Disciplinary Domain:

Technology, 100%

Progression Indicator:

G2F

Approved:

Approved 6 February 2020

Valid from 20 March 2020