



Resource Efficiency and Management 7.5 cr

Resurseffektivitet och -hantering 7,5 hp

Set by Faculty of Engineering and Sustainable Development

Version

Set at

Valid from

12/13/21

HT2022

Level	A1F
Education level	Second cycle
Course identifier	MIA303
Credits	7.5 cr
Main field of study	Sustainability Science
Subject group	Environmental Science
Disciplinary domain	Social sciences 20.0 % Technology 80.0 %

Learning outcomes

After completion of the course, the student shall be able to

1. describe and critically discuss the environmental consequences of a linear economy and compare with the possibilities and limitations of a circular economy
2. describe visions and underlying principles of various approaches to resource efficiency and circular economy
3. critically discuss the implications of increased resource efficiency and circularity for sustainable development
4. account for actors, their options, barriers and drivers for transitioning to a more resource-efficient and circular economy
5. formulate and assess strategies towards increased resource efficiency and circularity based on relevant theories, methods and tools from multiple disciplines.

Course content

The course aims to provide a rich understanding of resource efficiency and management, opportunities and limitations as well as concrete examples of circular solutions. It covers theory, methods and tools as provided from contemporary literature. Designed for students of various disciplinary backgrounds, it aims to encourage students to combine previous and new knowledge into a comprehensive understanding of the circular economy.

The course contains many concrete examples that illustrate how technical solutions and new business models for circular economy are applied in different areas and for different products. The course covers knowledge and tools for developing and implementing circular solutions in private business and public business. The course offers both a theoretical in-depth study of central concepts and theories as well as a broad orientation with many concrete examples. The course applies both a top-down perspective in which a transformation of society in a more circular direction is problematised, and a bottom-up perspective with concrete examples and ideas on how individuals and companies can develop and apply circular business models, products and services. Different mechanisms for circularity as well as different ways of measuring circularity are included and both technical and natural cycles are discussed and problematised.

Teaching Lectures, exercises and seminars

Prerequisites Methods for Environmental Assessment 9 cr or corresponding

Examination Written examination, project assignment and individual assignment

Module 0010 Written examination 3 cr, examines learning outcomes 1-2, grades A-F
 Module 0020 Project assignment 2.5 cr, examines learning outcomes 4-5, grades Pass, Fail
 Module 0030 Individual assignment 2 cr, examines learning outcomes 2-3, grades Pass, Fail

Grade A, B, C, D, E, Fx, F

Other regulations Degree Criteria for the final grade will be handed out by the course responsible or examiner latest at the beginning of the course.

Sustainable environment The majority of the course content deals with sustainable development..

Module			
0010	Written examination	3 cr	Grade: AF
0020	Project assignment	2.5 cr	Grade: UG
0030	Individual assignment	2 cr	Grade: UG