

Resource Recovery II Resursåtervinning II

5 credits

5 högskolepoäng

Ladok Code: FRRRR02

Version: 1.0

Established by: The Research education committee in Resource Recovery 2022-03-30

Valid from: Autumn 2022

Education Cycle: Third cycle

Research Subject: Resource Recovery

Prerequisites: The student has to be admitted to a PhD programme. The examiner can make exceptions to this rule. The student should have connections to the subject Resource Recovery. This must be approved by the examiner.

Grading Scale: Fail (U) or Pass (G)

Content

The course focuses on research and trends in Resource Recovery where the focus is on new material recycling processes for e.g. biomaterials and textiles. The course also focuses on how to make technology and society work together, different incentives that can be used to create the changes required and how knowledge and financial resources are best used to reach a circular society. In connection with recycling and circular society, ethical, social, legal and economic issues are also addressed.

Learning Outcomes

After completing the course, the student will be able to:

1 Knowledge and understanding

- 1.1 explain different incentives policymakers can use to achieve different societal goals in terms of resource recovery and resource management,
- 1.2 explain the motives behind different types of sustainable processes,
- 1.3 describe how different types of recycled materials can be processed to become new products,
- 1.4 explain how different tools such as LCA can be used in the development of a circular society,
- 1.5 describe trends that are taking place in research and development in materials and resource recovery.

2 Skills and abilities

- 2.1 critically evaluate different circular systems from technical, economic, environmental, and social perspectives,
- 2.2 discuss the conditions for achieving a circular society.

3 Evaluation ability and approach

- 3.1 evaluate, reflect and problematize about different goal conflicts when switching from linear to circular economy.
- 3.2 reflect on the need for multidisciplinary research to develop a circular society.

Forms of Teaching

The teaching consists of lectures, exercises, discussions, study visits, and project work (written report and oral presentation).

The language of instruction is English.

Forms of Examination

The course is examined through the following examination components:

- Examination Learning outcomes: 1.1-1.5, 2.1-2.2 Credits: 3.0 Grading scale: Pass/Fail

- Project work with written submission and accounting Learning outcomes: 2.1-2.2, 3.1 Credits: 1.0 Grading scale: Pass/Fail
- Project work with written assignment Learning outcomes: 1.4, 2.1-2.2, 3.2 Credits: 0.5 Grading scale: Pass/Fail
- Study visits or written assignments Learning outcomes: 1.2-1.3 Credits: 0.5 Grading scale: Pass/Fail

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Methods

Material provided during the course and selected scientific articles.

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

This syllabus is a translation from the Swedish original.