

Resource Recovery II Resursåtervinning II

7.5 credits

Ladok Code: A515TA

Version: 6.0

Established by: Committee for Education in Technology 2021-04-09

Valid from: Autumn 2021

Education Cycle: Second cycle

Main Field of Study (Progressive Specialisation): Resource Recovery (A1N)

Disciplinary Domain: Technology

Prerequisites: Degree of Bachelor of Science or Degree of Bachelor of Science in Engineering, 180 credits, or Bachelor's degree in physics or chemistry or equivalent. In addition, knowledge of English equivalent to English 6 is required.

Subject Area: Environmental Science

Grading Scale: Seven-degree grading scale (A-F)

Content

The course is a continuation course in the area of Resource Recovery with a focus on circular economy. Here, research and trends in resource recovery are central as well as new recycling processes for e.g. biomaterials, textiles, etc. The course also deals with how to make technology and society work together, the importance of multidisciplinary research, various incentives that can be used to bring about the changes required, and how knowledge and financial resources are best used to reach a circular society. In connection with recycling and circular society, social, economic, and ethical issues such as "Agenda 2030" are discussed, which are important parts of the course.

Learning Outcomes

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

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 what is meant by "Circular Economy",
- 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.

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.

Evaluation ability and approach

- 3.1 reflect and problematise on how to accelerate the transition 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). Teaching is conducted in English.

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 4.0
Grading scale: Seven-point grading scale (A-F)
- Project work with written submission and accounting
Learning outcomes: 2.1-2.2, 3.1
Credits: 2.0
Grading scale: Pass/Fail
- Project work with written assignment
Learning outcomes: 1.4, 2.1-2.2, 3.2
Credits: 1.0
Grading scale: Pass/Fail
- Study visits
Learning outcomes: 1.2-1.3
Credits .5
Grading scale: Pass/Fail

Study visits can be changed out for written assignments.

The examination component “Examination” determines the final grade of the course, which is issued only when all components have been passed. Grading scale for the course is: Seven-point grading scale.

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 Materials

Provided during the course.

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