

COURSE SYLLABUS

Circular Manufacturing, 2.5 credits

Cirkulär tillverkning, 2,5 högskolepoäng

Course Code:	T2CPQN	Education Cycle:	Second-cycle level
Confirmed:	May 06, 2026	Disciplinary domain:	Technology
Valid From:	Jan 18, 2027	Subject group:	Mechanical Engineering
		Specialised in:	A1N Second cycle, has only first-cycle course/s as entry requirements
		Main field of study:	Production Systems

Intended Learning Outcomes (ILO)

On completion of the course the student shall:

Knowledge and Understanding

- show familiarity with fundamental concepts and principles of circular manufacturing, specifically for metallic components

Skills and Abilities

- demonstrate the ability to identify suitable circular strategies for a given metallic industrial product or production context
- demonstrate the ability to apply tools and methods for circular manufacturing

Judgement and Approach

- demonstrate the ability to discuss and assess different circular manufacturing strategies with respect to environmental and economic considerations in an industrial context

Content

This course provides an overview of circular manufacturing with a focus on industrial applications. The course introduces fundamental concepts and principles of circular manufacturing and explores how circular strategies can be applied to production systems, particularly for metallic components. Participants will learn to identify suitable circular strategies for industrial contexts and to apply tools and methods used in circular manufacturing of metallic components.

The course includes the following elements:

- Circular manufacturing fundamentals
- Closed loop & value retention
- Strategies for circular manufacturing (e.g. 10Rs, remanufacturing)
- Tools and methods for circular manufacturing (e.g. Design for X, introduction to Lifecycle Analysis)

Type of Instruction

Lectures, seminars and assignments.

Language of instruction is English.

Entry Requirements

Academic degree of at least 180 ECTS credits within Engineering and/or Technology or passed courses of at least 40 credits in the main field of study within Engineering and/or Technology and at least 1 year of work experience in the manufacturing industry or at least 4 years of work experience in the manufacturing industry. Proof of English proficiency is required.

Examination and Grades

The course is graded Pass (G) or Fail (U).

The final grade will be issued after satisfactory completion of all mandatory examination elements.

Registration of examination:

Name of the Test	Value	Grading
Seminar	1.5 credits	G/U
Assignment	1 credit	G/U

Course Literature

Please note that the course literature may be revised up to eight weeks before the start of the course.

Lecture slides and additional course literature will be provided on Canvas.