Valid from 2026.FS

Module description: Design

Module Code	w.MA.XX.DES.23HS
ECTS Credits	3
Language of Instruction/Examination	English
Module Description	This module highlights the importance of the design of goods for the circular economy. Design is one of the key factors in the creation of circular systems. Parameters such as material, performance, and lifespan are considered from different perspectives. The goal is not to design goods with an ecological footprint and a small improvement, but to design goods according to the cradle-to-cradle principle. Completely new designs must therefore be considered and developed. The development of circular products goes hand in hand with the design of a circular business model. And of course, circular products must also meet market requirements and customer needs.
Organizational Unit	Zurich CTR f Sustainability Leadership
Module Coordinator	Salome Berger
Deputy Module Coordinator	Jens Baier
Program and Specialization	• Circular Economy Management
Legal Framework	Academic Regulations MSc in Circular Economy Management dated 02.06.2022, Appendix to the Academic Regulations for the degree program in Circular Economy Management, first adopted on 23.09.2022
Module Category	**Module Type** Compulsory
Prerequisite Knowledge	A general understanding of design principles and recycling in technical and natural cycles.
Contribution to Program Learning Objectives (by the concerned Module)	• Professional Competence • Methodological Competence • Social Competence • Self-Competence
Contribution to Program Learning Objectives	**Professional Competence** • Knowing and Understanding Content of Theoretical and Practical Relevance • Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance • Evaluate Content of Theoretical and Practical Relevance **Methodological Competence** • Problem-Solving & Critical Thinking • Scientific Methodology • Work Methods, Techniques, and Procedures • Information Literacy • Creativity & Innovation **Social Competence** • Written Communication • Oral Communication • Teamwork & Conflict Management • Intercultural Insight & Ability to Change Perspective **Self-Competence** • Self-Management & Self-Reflection • Ethical & Social Responsibility • Learning & Change

Module description: Design

Module Learning Objectives

Students...
- will explore and understand the cradle-to-cradle design.
- will critically analyze common design principles.
- will know and apply sustainable product and material analysis concepts.
- will know and apply lifecycle analysis concepts.

Module Content

- Design-thinking methods
- Design frameworks and methods for sustainablity
- Materials for cradle-to-cradle products
- Design measures for closing the loop
- Performance and lifetime of goods

Links to other modules

This module is linked to the following modules:
- w.MA.XX.SSEC.23HS
- w.MA.XX.LCSA.23HS
- w.MA.XX.MES.23HS

Digital Learning Resources

- Teaching Materials

Methods of Instruction

- Exercises
- Application Tasks
- Case Studies
- Project Work
- Interactive Instruction
- Lecture

Social Settings Used:
- Group Work

Type of Instruction

	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Lecture	28 h	-	
Excercise	-	-	
Project Work	-	8 h	
Seminar	-	-	
Total	**28 h**	**8 h**	**54 h**

Performance Assessment

End-of-module exam	Form	Length (min.)	Weighting
-			
Permitted Resources			

Others	Assessment	Format	Length (min.)	Weighting
Talk/oral presentation	Grade	Gruppenarbeit	0	40.00
Written Assignment	Grade	Gruppenarbeit	0	60.00

Classroom Attendance Requirement

None

Students are requested to be present during workshops.

Compulsory Reading

Recommended Reading

- Peters, S. Materialrevolution. ISBN 978-3-0346-0663-9.
- Bakker, C., van Hinte, E. & Zijlstra, Y. Design for Sustainability Survival Guide. ISBN 97 890 6369 639 9.

Comments