Valid from 2026.FS

Module description: Technology Assessment

Module Code	w.MA.XX.TEAS.23HS
ECTS Credits	6
Language of Instruction/Examination	English
Module Description	Students will learn to analyze and assess technologies, products, and materials regarding their impact on the environment and society from different perspectives and from the macro to micro level. The instruments for assessing the circular economy are also part of the module. This provides students with the means to develop solutions and strategies and make decisions for the circular economy on various levels: for example, by improving products, defining standards, identifying gaps and optimization potential, and categorizing products and services (labelling). They will be enabled to derive multi-level and multi-perspective conclusions for the circular economy.
Organizational Unit	Zurich CTR f Sustainability Leadership
Module Coordinator	Corinna Baumgartner
Deputy Module Coordinator	Thorsten Busch
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 Elective
Prerequisite Knowledge	• Life cycle assessment • Scientific writing • Understanding circular strategies • Assessment methods and forecasting
Contribution to Program Learning Objectives (by the concerned Module)	• Professional Competence • Methodological Competence • Social Competence • Self-Competence

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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 Learning Objectives	Students... • systematically analyze and structure a given problem and use various methods of analysis for this purpose (material flow analysis, risk assessment, human rights impact assessment, circularity assessment, etc.). • apply the methodological knowledge they have acquired to case studies. • are able to recognize a broad spectrum of actions and their consequences. • are able to carry out an effective technology assessment using appropriate tools. • are able to apply various assessment methodologies and know their differences. • are able to recommend the best possible course of action. • can draw correct conclusions from the data, interpret the results of analyses, compare them with other technologies, and explain the differences.
Module Content	• Technology assessment: definition, historic evolution, and goals. • The basics of technological, product, and material developments. • Understanding the socio-economic framework. • Ethical and societal foundations of technical developments. • Developments and their repercussions on society. • Different technology assessment methods and forecasts: risk assessment, ethical framework analysis, scenario analysis material flow analysis, circularity assessment, resilience assessment, multi-criteria-decision-analysis, etc. • Application of technology assessment to various topics and case studies. • Evaluation and communication of results.
Links to other modules	This module is linked to the following modules: • w.MA.XX.CTH.23HS • w.MA.XX.LCSA.23HS • w.MA.XX.REEWAM.23HS • w.MA.XX.BUPAST.23HS • w.MA.XX.SYPA.23HS
Digital Learning Resources	• Reader • Teaching Videos • Case Studies (with Key)
Methods of Instruction	• Lecture • Project Work • Interactive Instruction • Application Tasks • Case Studies • Exercises Social Settings Used: • Pair Work • Group Work

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Type of Instruction

	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Lecture	34 h	-	
Excercise	8 h	-	
Project Work	6 h	8 h	
Seminar	-	-	
Total	**48 h**	**8 h**	**124 h**

Performance Assessment

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

Others	Assessment	Format	Length (min.)	Weighting
Written Assignment	Grade	Gruppenarbeit	0	80.00
Talk/oral presentation	Grade	Gruppenarbeit	20	20.00

Classroom Attendance Requirement

75%

A minimum attendance rate of 75% is required. The first and last lectures are mandatory (Introduction to module/assigments and final presentations).

Compulsory Reading

Recommended Reading

Comments