Module Title	Circular Design
Code	MCCf453
Degree Programme	Master of Science – Circular Innovation and Sustainability
ECTS Credits	3
Workload	90 hours
Module Coordinator	Name: Prof. Dr. Aude Chabrelie Phone: +41 (0) 31 848 63 43 Email: aude.chabrelie@bfh.ch Address: BFH – AHB, Route de Soleure 102, 2500 Biel-Bienne
Lecturers	• Dr. Eigenheer Andreas; AHB • Prof. Dr. Frédéric Pichelin; AHB • Laurent Torriani; Creaholic • Hans Peter Wyss; Creaholic • Antoine Bonadei; Creaholic
Entry Requirements	Prerequisite: • MCCf443 Impact Assessment Highly recommended: • MCCf223 Circular Supply Chain
Competencies upon Completion	After completing the module, students will be able to: • apply circular design methodology and dedicated tools to a project case; • develop strategies to make sustainable alternative products, processes with a smart use of available resources; • create solutions which offer as many benefits as possible to all value chain stakeholders, while having the lowest possible environmental impact.
Content	Starting from an introduction to the circular design methodology, you will learn how to apply it to a project case for increased circularity while ensuring maximum environmental impact improvements. Initially you analyse the reference situation using ecological LCA. Then, using circular design tools including design thinking and design for X, you create and select circular ideas to improve the situation, targeting a reduction of the environmental impact to comply with the Paris agreement to maintain global warming below +1.5°C. Finally, you assess the improved situation with an ecological LCA.
Teaching and Learning Methods	• Flipped classroom • Project-Based Learning • Excursion • Coaching

Competency Assessment	• Mid-term individual report (30%) • Final individual report (70%) Students who receive an insufficient overall grade of 3.5, are given the opportunity to carry out a *subsequent improvement* of written assignments defined by the module coordinator. The maximum overall grade that can then be obtained is 4. This still counts as the first attempt.
Mode of Repetition	Should a student fail the module, they have one more attempt. They may either: • Submit a new assignment (individual report, 100%), defined by the *Module Coordinator*, for the next resit examination session. • Repeat the full module next time it is offered.
Format	2 lessons per week over 7 weeks and 1 excursion
Attendance	Not mandatory, but strongly recommended, including for the excursion.
Module Type	Compulsory-Elective
Timing of the Module	Autumn Semester, Calendar Weeks 38 to 44
Venue	Onsite | Brückenstrasse 73, 3005 Bern
Literature	• Van Doorsselaer, K, Koopmans, R: (2020). *Ecodesign a Life Cycle Approach for a sustainable future*. Carl Hanser Verlag GmbH ISBN 1569908621
Language	English
Links to Other Modules	• MCCf173 Circular Use of Materials • MCCf223 Circular Supply Chains • MCCf443 Impact Assessment
Last Update	June 2024