Master of Science
Circular Innovation and Sustainability

Bern University of Applied Sciences
▸ School of Architecture, Wood and Civil Engineering
▸ School of Agricultural, Forest and Food Sciences
▸ Business School

Module Title	Research Methods 3: Transdisciplinary Approaches
Code	MCCf433
Degree Programme	Master of Science – Circular Innovation and Sustainability
ECTS Credits	3
Workload	90 hours
Module Coordinator	Name: Dr. Christine Jurt Phone: +41 (0) 31 910 29 50 E-Mail: christine.jurt@bfh.ch Address: BFH – HAFL, Länggasse 85, 3052 Zollikofen
Lecturers	• Dr. Maria Franco Mosquera; TI
Entry Requirements	Prerequisite: • MCCf413 Research Methods 1: Qualitative Approaches
Competencies upon Completion	After completing the module, students will be able to: • reflect on transdisciplinary research, its principles, ethical implications and its quality; • recognize when and which transdisciplinary methods can be used in a meaningful way; • work competently in transdisciplinary groups building on the competencies they have built up during the course; • engage in dialogue about policy options with the public, stakeholders, and policymakers in inclusive environments; • explain and discuss the opportunities and challenges that transdisciplinary brings along in specific projects; • know different transdisciplinary methodological approaches, applicable to the different stages of a transdisciplinary project; • recognize, analyse, and present the different perspectives of diverse actors involved in specific questions that need to be tackled in particular transdisciplinary projects; • set up a process of knowledge co-creation among the diverse actors involved to contribute to the solution of wicked problems; • design a transdisciplinary research project and know how to select suitable methods for dealing with wicked problems, especially in the sustainability realm.
Content	The complex global challenges around sustainable development – including the environmental, social, cultural, political, and financial issues linked to the circular economy paradigm – demand expertise and collaboration across academic disciplines and different non-academic sectors of society. While scientific and technological solutions are needed to tackle complex challenges, they must be linked to social change and economic development if they are to be considered transformative innovations. Transdisciplinary research therefore aims to understand complex issues of practical interest and is based on collaborative work between academic researchers from different unrelated disciplines (i.e., interdisciplinarity) and non-academic stakeholders such as civil society, NGOs or companies (i.e., transdisciplinarity), to create societal value. Students in this course will learn about transdisciplinarity and how to design, carry out and evaluate effective transdisciplinary projects.

Teaching and Learning Methods	• Flipped classroom • Contact teaching • Project-Based Learning • Case studies • Individual and group exercises • Group coaching
Competency Assessment	• Written report, Individual (60%) • Oral presentations, Group work (40%) 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 (100%), defined by the *Module Coordinator*, for the next resit examination session - provided the student has actively participated in the group work throughout the course. • Repeat the full module next time it is offered.
Format	2 lessons per week over 7 weeks
Attendance	Not mandatory However, active participation in group work throughout the course is mandatory. A lack of commitment and/or participation in this group work can lead to exclusion from the *Competency Assessment* and therefore to the failure of the module.
Module Type	Compulsory
Timing of the Module	Spring Semester, Calendar Weeks 17 to 23
Venue	Onsite	Brückenstrasse 73, 3005 Bern
Literature	• Brouwer, H.; Woodhill, J.; Hemmati, M.; Verhoosel, K.; van Vugt, S. (2016). *The MSP guide – how to design and facilitate multi-stakeholder partnerships*. Wageningen: Wageningen University and Research, WCDI, and Rugby, UK: Practical Action Publishing, http://dx.doi.org/10.3362/9781780446691 • Hirsch Hadorn, G. et al. (eds.) (2008). *Handbook of Transdisciplinary Research*. New York: Springer. • Pohl, C.; Hirsch Hadorn, G. (2007). *Principles for Designing Transdisciplinary Research. Proposed by the Swiss Academies of Arts and Sciences*. München: oekom Verlag. • Wibeck, V.; Eliasson, K.; Neset, T. (2022). Co-creation research for transformative times: Facilitating foresight capacity in view of global sustainability challenges. *Environmental Science & Policy, 128*, p. 290-298.
Language	English
Links to Other Modules	• MCCf313 Society and Technology • MCCf323 Society and Environment • MCCf413 Research Methods 1: Qualitative Approaches • MCCf423 Research Methods 2: Quantitative Approaches
Last Update	June 2024