

Master in Life Sciences

A cooperation between
BFH, FHNW, HES-SO, ZFH

Module title	Sustainable Food Supply Chains
Code	F4
Degree Programme	Master of Science in Life Sciences
Group	Food
Workload	3 ECTS (workload: 90 hours comprising 32 contact hours (= 42 lessons) plus 58 h self-study)
Module Coordinator	<p>Name: Dr. Claudia Müller Phone: +41 (0)58 934 54 53 Email: claudia.mueller@zhaw.ch Address: ZHAW Life Sciences und Facility Management, Einsiedlerstrasse 34, 8820 Wädenswil</p>
Lecturers	<ul style="list-style-type: none"> • Dr. Claudia Müller, ZHAW • Dr. Marie Brechbühler Peskova, BFH • Matthias Stucki, ZHAW • Further guest lecturers
Entry requirements	<p>Knowledge of food technology and / or of agriculture, as well as basic knowledge of the principles of sustainability is highly recommended.</p> <p>Compulsory online pre-course test (for course preparation, literature about sustainable food systems will be provided on Moodle)</p>
Learning outcomes and competences	<p>After completing the module, students will be able to:</p> <ul style="list-style-type: none"> • explain sustainability in all three dimensions; • illustrate how sustainability relates to the current food system; and • develop a sustainable food system model (= concept of a sustainable supply chain) for the future – one which is economically viable, environmentally friendly and socially acceptable – using the example of a selected food product.
Module contents	<p>The main objective of the module is to understand the concept for the sustainability-driven production of healthy food using selected food products as examples. Therefore, the course will cover a holistic evaluation of the food value chain and its sustainability-performance with regard to social, economic, environmental and health aspects and will include:</p> <ul style="list-style-type: none"> • principles of process analysis; • economic basis of a sustainable business; • sustainable agriculture (conventional versus organic); • environmental assessment (Life Cycle Analysis); • social aspects and sourcing; • process optimization; and • principles of a sustainable and healthy diet.
Teaching / learning methods	Students work in groups, assessing and optimizing the supply chain of a selected food product to make it more sustainable.

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	Experts provide inputs on the different sustainability dimensions and stages of the supply chain during the course. They address the corresponding challenges with respect to sustainability.
Assessment of learning outcome	<ol style="list-style-type: none">1. Online pre-course test (20%)2. Final written exam (closed-book) (40%)3. Group work (presentation of the results on the last day of the course and short report to be handed in 1 week after the end of the module) (40%)
Format	7 weeks
Timing of the module	Spring semester, CW 15-21
Venue	Olten
Bibliography	Smith, 2008. Developing sustainable food supply chains; Philosophical Transaction of the Royal Society; 363: 849-861; https://doi.org/10.1098/rstb.2007.2187 FAO, 2018. Sustainable Food Systems – Concept and framework; http://www.fao.org/3/ca2079en/CA2079EN.pdf
Language	English
Links to other modules	Potential similarities and links to E2 'Life Cycle Assessment'
Comments	
Last Update	16.09.2020