



# Master in Life Sciences

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

<b>Module</b>	<b>Food Quality and Safety from Farm to Fork</b>
<b>Code</b>	MSLS_FNH-1
<b>Degree Program</b>	Master of Science in Life Sciences (MSLS)
<b>ECTS Credits</b>	5
<b>Workload</b>	150 h: contact 60h, self-study: 90h
<b>Module Coordinator</b>	<p><b>Name</b> Elisabeth Eugster</p> <p><b>Phone</b> +41 31 910 21 16</p> <p><b>Email</b> <a href="mailto:elisabeth.eugster@bfh.ch">elisabeth.eugster@bfh.ch</a></p> <p><b>Address</b> Bern University of Applied Sciences, School of Agricultural, Forest, and Food Sciences, Laenggasse 85, 3052 Zollikofen, Switzerland</p>
<b>Lecturers</b>	<ul style="list-style-type: none"> <li>• Dr. Wolfram Brück (HES-SO, Sion)</li> <li>• Dr. Elisabeth Eugster (BFH-HAFL, Zollikofen)</li> <li>• Guest Lecturers</li> </ul>
<b>Entry Requirements</b>	Basics in Food Sciences (food processing, food chemistry & analysis, food microbiology) – for candidates with a non-food science background please refer to chapters 2, 3, 6, 9 in (Campbell-Platt 2009)
<b>Learning Outcomes and Competences</b>	<p>After completing the module students will be able to:</p> <ul style="list-style-type: none"> <li>• Discuss the key criteria of food quality and safety</li> <li>• Analyse food value chains with respect to food quality and safety (including food fraud), and specific aspects of sustainability</li> <li>• Suggest measures to meet product specifications</li> <li>• Communicate food quality issues to key stakeholders</li> </ul>
<b>Module Content</b>	<p>Major food quality traits such as safety, shelf-life, sustainability, sensory attributes and nutritional value will be addressed. It will be discussed how these traits are affected during different stages of the food value chain in animal- and plant-based production systems. On the basis of practical food industry examples, measures that allow complying with basic quality characteristics will be elaborated along with optimization strategies. A strong focus will be put on food safety related challenges: Potential hazards and risks, legal regulations, control measures and management strategies will be covered. Practical case study assignments on food safety related aspects will help to apply learned strategies and to translate them into specific settings.</p>
<b>Teaching / Learning Methods</b>	<ul style="list-style-type: none"> <li>• Self-study</li> <li>• Lectures and expert inputs</li> <li>• Teamwork on case studies supported by coaching</li> </ul>
<b>Assessment of Learning Outcome</b>	<p>Consists of:</p> <ul style="list-style-type: none"> <li>• Case-study 40% (team assessment)</li> <li>• Written exam 60% (individual grade)</li> </ul>
<b>Bibliography</b>	<ul style="list-style-type: none"> <li>• Campbell-Platt G, 2009. Food science and technology. Wiley Blackwell, Oxford.</li> <li>• Luning PA, Marcelis WJ, 2011. Food quality management. Technological and managerial principles and practices (Reprint). Wageningen Academic Publishers, Wageningen</li> <li>• Motarjemi Y, 2014. Food safety management. A practical guide for the food industry. Elsevier, Amsterdam</li> </ul>
<b>Language</b>	English
<b>Last Update</b>	2023-02-03 Elisabeth Eugster

