



# Master in Life Sciences

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

<b>Module</b>	<b>Climate Change and Land Systems</b>
<b>Module Code</b>	MCLs415
<b>Module</b>	AF-54
<b>ECTS Credits</b>	5
<b>Workload</b>	150 h: Contact 70 h; Excursions 20 h; Case Study and self study 60 h
<b>Module Coordinator</b>	<p><b>Name</b> Jean-Jacques Thormann</p> <p><b>Phone</b> +41 31 910 47 21</p> <p><b>Email</b> <a href="mailto:jean-jacques.thormann@bfh.ch">jean-jacques.thormann@bfh.ch</a></p> <p><b>Address</b> Berner Fachhochschule, Hochschule für Agrar-, Forst- und Lebensmittelwissenschaften, Länggasse 85, 3052 Zollikofen</p>
<b>Lecturers</b>	<ul style="list-style-type: none"> <li>• Dr. Sébastien Boillat</li> <li>• Jean-Jacques Thormann</li> <li>• Guest Lectures</li> </ul>
<b>Entry Requirements</b>	<i>None</i>
<b>Learning Outcomes and Competencies</b>	<p>After completing the module, students will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the main elements and events related to climate and its changes globally and locally</li> <li>• Understand the mechanisms, causes and consequences of the ongoing anthropogenic climate change</li> <li>• Understand the differentiated responsibilities and effects of climate change on society, particularly on mountain regions in Switzerland and abroad</li> <li>• Understand climate change mitigation and adaptation policies and their instruments in the context of land use (forestry, agriculture)</li> <li>• Highlight the disputed aspects of land-based climate actions and develop socially acceptable solutions</li> <li>• Assess the impact of climate change on agriculture and forestry in Switzerland and the neighbouring Alpine region and develop sustainable solutions.</li> </ul>
<b>Module Content</b>	<p>Lecturers give an introduction of the selected topic and contributions to approach key issues related to climate change, including:</p> <ul style="list-style-type: none"> <li>• Basics of climate variability, history and anthropogenic climate change</li> <li>• Basics of climate-land interactions, carbon cycles and land use impacts</li> <li>• Climate change effects on society, with focus on agriculture and forestry</li> <li>• Climate change mitigation and adaptation policies in the agricultural and forestry sectors</li> <li>• Politics of land-based climate solutions, actors, discourses and networks.</li> </ul>
<b>Teaching and Learning Methods</b>	<ul style="list-style-type: none"> <li>• A combination of lectures, individual work and teamwork</li> <li>• Developing a case study in groups</li> </ul>

<b>Assessment of Learning Outcome</b>	1) Presentation and documentation of the case study (1/3) 2) Oral exam (2/3)
<b>Bibliography</b>	An updated list of selected references and readings will be made available one month before the start of the course, students are expected to complement these sources with their individual research of literature and other information.
<b>Language</b>	English
<b>Comments</b>	
<b>Last Update</b>	January 2026