BACHELOR STUDIES IN **ENVIRONMENTAL AND RESOURCE MANAGEMENT** AT BFH-HAFL

Zollikofen (Bern, Switzerland)

Duration: 1 spring semester, 16.02.2026- 03.07.2026

Language: English

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During the 'Challenge-Based Learning (CBL)' modules (marked with an * above), you will address practical issues relevant to your future career. Learning will be driven by inspiring and engaging challenges, which you will tackle by acquiring theoretical knowledge in a partially autonomous manner.

In addition, check out the exciting range of elective modules offered in English by the BFH!

BCUf364
Environmental and resource economics

Credits: 4 ETCS

Lecturers: Bürgi Patric, Wilkes-Allemann Jerylee

Contents

Environmental economics

- Subject and purpose of environmental economics
- Economic bases: welfare economics, ecological economics, environmental economics, the solidarity economy, economy for the common good, institutional economics
- Market failure: theory and significance of externalities
- Concepts for the internalisation of externalities: requirements, certificates, negotiations (Coase Theorem), liability law
- Emissions trading (carbon allowances), Carbon Capture and Storage (CCS), carbon pricing
- Green growth
- Practical examples, case studies and exercises, with a focus on agriculture, forestry and the food sector

Resource economics

- Theory and concepts of optimal use of non-renewable resources
- Theory and concepts of optimal use of renewable resources
- Entry points for resource policy: property rights, interest rate and taxation policy, support schemes and subsidies, certificates
- Practical examples, case studies and exercises, with a focus on agriculture, forestry and the food sector

Concepts for environmental economic assessment of ecosystems

- Ecosystem Accounting (SEEA)

BCUf343
Environmental toxicology

Credits: 3 ETCS

Lecturers: Trindler Christian, Zingg Silvia

Contents

This module provides an in-depth understanding of environmental toxicology, focusing on the sources, distribution, and degradation of pollutants. Students will explore interactions of plastics, as well as the chemical, physiological and ecological effects of various other pollutants. The module covers essential chemical analysis methods and bioassays. It enables students to describe the toxicological impact of pollutants. In addition, students shall understand the basic legal foundations, limit values, and approval conditions related to environmental pollutants.

The module treats material cycles and environmental interrelationships, highlighting the impact of environmental pollution on humans and ecosystems. Overall, this module equips students with the knowledge and skills needed to address environmental pollution challenges, fostering a comprehensive understanding of environmental toxicology and its applications in real-world scenarios.

BCUf352
Industry, society and environment 4.0

Credits: 2 ETCS

Lecturers: Starke Michael, Martin Valère, Robyr Roger

Contents

At the heart of the digital transformation of society are the people who are confronted with new technologies or even increasingly demand the benefits of these.

To learn to harvest their full potential in a responsible and ethical manner, from a change-agent's perspective, and to build up basic knowledge about their range of application, use-case scenarios and dependencies are necessary.

In this lecture, new technologies, with a highlight of emerging technologies, are presented and embedded in application scenarios, which can be found in specific areas of environmental and resource management, particularly in forestry, agriculture, nature and climate conservation, or waste and energy management.

Dependencies of the presented technologies, opportunities, limitations, ethics and security are thereby core elements that can be experienced by the students over use-case presentations and basic lectures.

BCUf374
Global value chains

Credits: 4 ETCS

Lecturers: Fromm Ingrid

Contents

Over two-thirds of international trade involves global value chains (GVCs) as raw materials, components, and finished goods are moved across multiple borders before reaching the final consumer. With the emergence of GVCs, there is serious questioning of international trade and globalization, and the effect on sustainability. Increasing demands for better management and integration of environmental and social considerations is resulting in a growing landscape of trade-related policies, voluntary standards, and corporate accountability tools to address sustainability issues. In this module, students will deepen their knowledge on the nexus between GVCs, international and sustainability. During the 8-week module, concepts will be introduced and discussed in lectures, accompanied by cases which the students will have to discuss.

BCUf384
Tackling climate change with transdisciplinarity

Credits: 4 ETCS

Lecturers: Boillat Sébastien, Jurt Vicuña Muñoz Christine, Valach Alex Constantin

Contents

This module uses transdisciplinary approaches to analyze the impacts of climate change on different social groups and to co-create possible responses at expert level. The interplay of different perspectives can lead to a more holistic understanding of complex challenges, such as adaptation to climate change, and to more robust responses to climate change and its consequences.

The case study scope will be a Swiss municipality.

BCUf392
Growth dynamics & imperative

Credits: 2 ETCS

Lecturers: Frecè Jan Thomas, Harder Deane

Contents

This module looks at the opposing forces that drive and constrain growth, and their critical role in individual, organizational, and societal development. It emphasizes the need to balance these forces in order to achieve sustainable development.

The module introduces the complementary approaches of efficiency, coherence and sufficiency as catalysts for positive transformations that lead to sustainable and beneficial long-term changes for building resilient societies. Application on the example of the municipality of Zollikofen transforming to an economy of common good.

BCUl134
Species Knowledge and Biodiversity Monitoring

Credits: 4 ETCS

Lecturers: Lachat Thibault, Roth Nicolas, Schütze Anke

Contents

- Introduction to taxonomy, species groups and species occurring in Switzerland. Practical exercise using InfoSpecies and VDC to create species lists for specific areas.
- Introduction to the following main taxonomic groups, specific monitoring approaches for each group, and the use of simplified identification keys: vascular plants, arthropods, molluscs, fungi.
- Impact Monitoring: Communication of the theory and objectives of and approaches to impact monitoring using examples from Switzerland.
- Practical exercises for a variety of monitoring approaches for plants and terrestrial and aquatic arthropods.
- Data analysis with R. Introduction to data analysis using R (with sample data) on “Species richness” and “Community composition”.
- Project work: Conception, implementation, analysis and presentation.
- Formulation of a research question.
- Development of a study design for impact monitoring or comparison of habitats for plants and arthropods.
- Species survey and identification

BCUf424
Life-Cycle Assessment

Credits: 4 ETCS

Lecturers: Meier Matthias

Contents

The module builds the methodological skills needed to perform life cycle assessments for quantitative environmental evaluation at the product/process level. It also provides an introduction to the use of software and database solutions when performing life cycle assessments. The students learn to critically review the results of LCAs and assess their potential and limits as part of the development of transition pathways.