

Bern University of Applied Sciences
Swiss College of Agriculture SHL

Master of Science in Life Sciences Applied Agricultural and Forestry Sciences

The new Master's degree course at the SHL


Werner Hediger
Head of Master's Degree Programme

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Life Sciences Applied Agricultural and Forestry Sciences

MSc in Life Sciences Applied Agricultural and Forestry Sciences

Vertiefung in
angewandten
Agrar- und
Forstwissenschaften



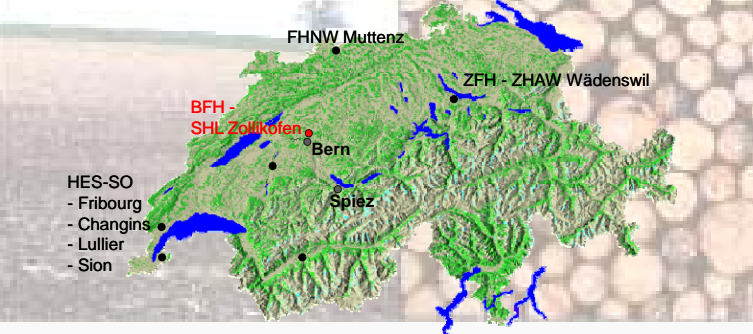
Spécialisation en
sciences appliquées
agronomiques et
forestières

<p>Dauer: 1 ½ Jahre (Vollzeit)</p> <p>Beginn: Herbst & Frühling</p> <p>ECTS-Credits: 90 EC</p> <p>Möglichkeit zum Teilzeitstudium</p>	<p>Durée: 1 ½ année (plein temps)</p> <p>Début: automne & printemps</p> <p>Crédits ECTS: 90 EC</p> <p>Études à temps partiel possibles</p>
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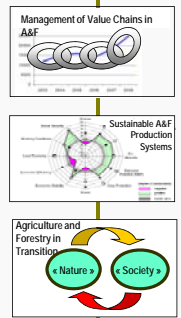
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Drei „Majors“

- Management von Wertschöpfungsketten**
(wirtschaftlicher Ansatz)
- Nachhaltige Produktionssysteme**
(Produktionstechnik)
- Land- und Forstwirtschaft im Wandel**
(Institutionen und Politik)



Trois « majors »

- Gestion de filières**
(approche économique)
- Systèmes de production durable**
(techniques de production)
- Agriculture et foresterie en transition**
(institutions et politique)

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Einige Eigenschaften

- Enger Bezug zur Forschung
- Hoher Anteil an Selbststudium mit Betreuung
- Vollzeit oder Teilzeitstudium, berufsbegleitend
- Für Studierende aus der Schweiz oder dem Ausland mit einem Bachelor-Abschluss
- Gemeinsame Veranstaltungen vorwiegend in englischer Sprache

Quelques caractéristiques

- *Un lien étroit avec la recherche*
- *Une part importante d'étude individuelle avec coaching*
- *A plein temps ou à temps partiel, en cours d'emploi*
- *Pour étudiant-e-s suisses ou étrangers avec un diplôme de bachelor*
- *Essentiellement en langue anglaise pour les sessions communes*

Recommended English language skills:
Minimum level B2 according to the European Language Portfolio / Europass Language Passport (self assessment)

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Individuelles Studium

- Starkes Gewicht auf betreutem Selbststudium und Forschungsbezug
- Persönliches Coaching durch Betreuer der Master-Thesis und weitere Fachkräften in den einzelnen Modulen
- Studierende werden vor Studienbeginn zu einem persönlichen Eintrittsgespräch aufgebeten zur Vereinbarung von:
 - individueller Studienablauf
 - Thema der Master-Thesis

Études individuelles

- *Part importante d'études individuelles et integration dans la recherche*
- *Coaching personnalisé par le responsable du travail de master et par d'autres experts dans les différents modules*
- *Les étudiant-e-s sont invité-e-s à participer à un entretien personnel d'entrée afin de définir:*
 - *déroulement individuel des études*
 - *thème du travail de master*

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Zulassung

- Bachelor-Abschluss an einer schweizerischen FH in
 - Agronomie / Landwirtschaft
 - Forstwirtschaft
 - Lebensmitteltechnologie
 - Umweltingenieurwesen
 - Holztechnik
 - Landschaftsarchitektur
 - Oenologie
- mit Note A oder B bzw. ≥ 5 .
- Studierende mit gleichwertiger Vorbildung und Berufserfahrung.
- Studieninteressierte, welche die Bedingungen weitgehend erfüllen:
 - Aufnahme „sur dossier“ bzw. Eignungsprüfung.

Admission

- *Diplôme de bachelor d'une HES suisse*
 - *Agronomie / Agriculture*
 - *Foresterie / Economie forestière*
 - *Agroalimentaire*
 - *Gestion de la nature*
 - *Technique du bois*
 - *Architecture du paysage*
 - *Oenologie*
- avec la note A ou B resp. ≥ 5 .
- *Etudiant-e-s ayant une formation équivalente et expérience professionnelle.*
- *Candidat-e-s ne remplissant pas entièrement les conditions:*
 - *admission sur dossier resp. examen d'aptitude.*

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Die Struktur des Master

- Forschungsarbeit im Unternehmen oder in einem Projekt (30 EC)
- 6 Module à 5 EC (30 EC)
- 3 Module à 4 EC
- 6 Module à 3 EC (30 EC)

Master-Thesis
Travail de master

Thematische Module
Modules thématiques

Grundlagen-Module
Modules de base

La structure du Master

- *travail de recherche en entreprise ou dans un projet (30 EC)*
- *6 modules à 5 EC (30 EC)*
- *3 modules à 4 EC*
- *6 modules à 3 EC (30 EC)*

Evtl. individuelle, methodisches und thematisches „Upgrade“, insbesondere für Studierende aus anderen Studiengängen

Evtl. mise à niveau individuelle, méthodologique et thématique, spécialement pour les étudiants provenant d'autres filières

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Basic modules

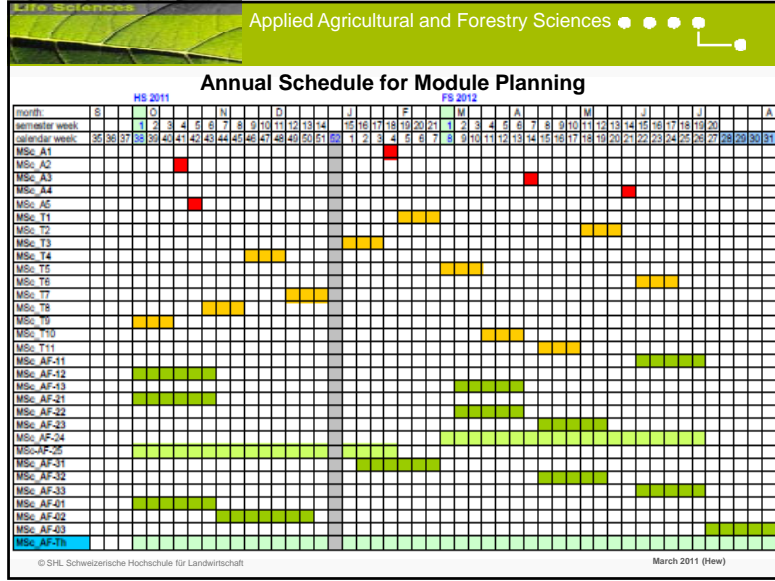
Entrepreneurial Basics:

- Innovation and Knowledge Management
- Leadership
- Business Management
- Communication and Market
- Society, Legislation and Politics

Extended Theoretical Basics:

- Quality Evolution
- Health and Nutrition
- Applied Statistics and Mathematics
- Data Management and Visualisation
- Environmental Policy and Future Models
- Socio-cultural and Psychological Aspects of Sustainable Development
- Biodiversity Assessment
- Comparative Physiology
- Industrial System Theory
- Active Natural Substances and Materials
- Fundamentals of Nanosciences

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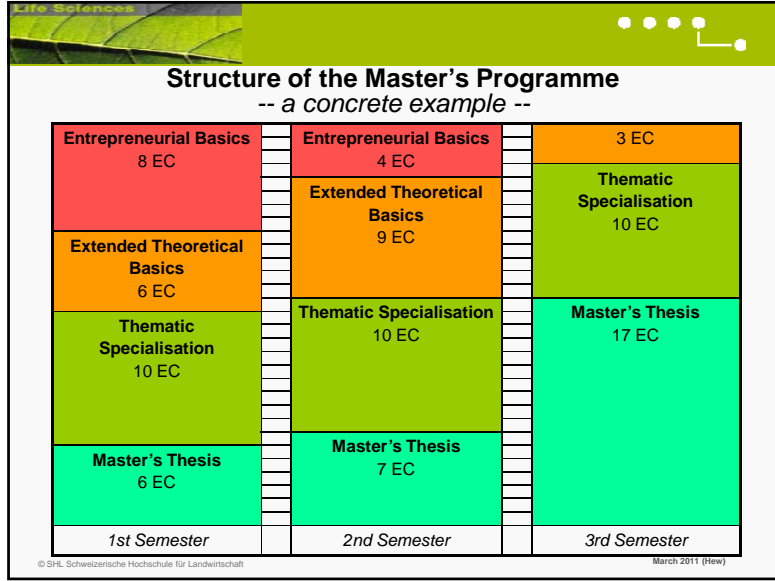


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Modules of Specialisation

<u>Management of Value Chains in A&F</u>	<u>Sustainable A&F Production Systems</u>	<u>Agriculture and Forestry in Transition</u>
Logistics, Supply Chain and Network Management	Expansion of Personal Scientific Knowledge	Transitioning Process in Rural Societies
Consumer Behaviour, Markets and Trade	Holistic Assessment of Production Systems	Rural and Regional Development in Practice
Quality Management, Traceability, and Corporate Responsibility	Optimisation of Production Systems in Agriculture and Forestry	Policies and Institutions as Drivers for Development and Innovation
Quantitative and Qualitative Approaches and Methods in Applied Research		
Knowledge Management and Transfer in Agriculture & Forestry		
Integrated Resources and Environmental Management in A&F Systems		
	Advances in Agricultural Sciences	
	Current Topics in Applied Agricultural Research	

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The Master's Thesis

The core of the degree programme

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Master's Thesis Projects at SHL

Types of Master's Thesis Projects

- Embedded in a research project or a research area of the SHL.
- At SHL or in co-operation with an external industry or research partner.
- Proposed by SHL staff, external partners or students.
- Supervision by a qualified member of the SHL academic staff (professor or experienced senior scientist).
- Time frame: 6 months of work-time equivalence (→ 30 ECTS points), while ensuring sufficient freedom for independent academic work.

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Master's Thesis Projects at SHL

What is a Master's Thesis ?

- An individual academic research project
 - on a selected topic in applied agricultural and forestry sciences,
 - addressing problem-based practical issues.
- It permits the students
 - to acquire an enhanced methodological and technical competence,
 - to sharpen the abstract view of practical problems and applications,
 - to make connections between abstraction and application,
 - two-way interaction of research and learning.

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Master's Thesis Projects at SHL

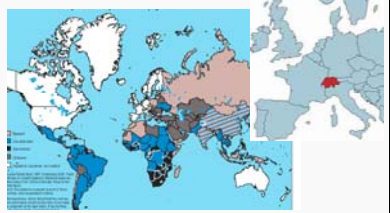
Some additional features

- Integrated research and learning.
- Presentation of individual research progress in SHL colloquium → academic discourse.
- Final presentation of the Master's thesis and oral exam about the thesis and related topics in the subject field of study.
- Additional publication and presentation of the results in an appropriate form:
 - Conferences
 - Working papers
 - Scientific articles
 - Other

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Master of Science BFH in Life Sciences Professional Competences & Career Opportunities

	Agriculture	Forestry
Management of value chains		
Sustainable production systems		
Agriculture and forestry in transition		

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Our MSc Graduates' Competences and Qualifications

Characteristic qualifications:

- Analytical skills to recognise and solve practical problems → innovation
- High competence with using scientific methods
→ profound selection and application of appropriate methods
- Ability to work in interdisciplinary teams
- High self competences
- Strong leadership capacity
- Language skills

Attitude:

- Sensitive to ethic issues, cultural differences, gender issues and minorities

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Our Graduates' Competences and Qualifications

General qualifications and career opportunities:

- Graduates will be qualified for scientific positions and responsible leadership that require profound scientific understanding (→ industry, public administration, NGOs, etc.).
- Discipline-specific competences are aimed at various professional fields and career opportunities in the different areas related to agriculture and forestry.

General approach and competence:

- Sustainable management of natural resources in primary production systems, value chains, and socio-economic realms
- A holistic and system-based perspective combined with disciplinary and problem-oriented knowledge

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Our Graduates' Competences and Qualifications: Management of value chains

Graduates of this major have in-depth competence in managing value chains with agricultural, food and forestry products:

- logistics and network management,
- strategic decision making,
- supply chain management (material, information and money flows),
- quality management, investment and financial accounting,
- international trade relations and marketing, management models, etc.

They are well prepared for management positions in SMEs and larger enterprises within value chains with agricultural, food and forestry products.

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Our Graduates' Competences and Qualifications: **Sustainable Production Systems**

Graduates of this major are specialised in applied research for

- sustainable agriculture and forestry,
- scientific experimentation,
- technical advice with regard to decision making processes in policy and to farmers, and in solving tasks of optimisation and innovation in agricultural and forestry production taking a holistic and sustainability-oriented approach.

They are well prepared for responsible and managing positions in research, consultancy and education, as well as public administration.

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Join us!



MSLS Class of 2009

Application deadlines: 30 September → start in the spring semester
31 March → start in the autumn semester

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Our Graduates' Competences and Qualifications: **Agriculture and Forestry in Transition**

Graduates of this major have enhanced analytical competences, as well as competences in developing concepts to integrate social, political, institutional and scientific interests from different disciplines and perspectives.

In a context of rapidly changing systems, they realise socio-economic studies, consumers' research, develop policy measures and conduct their implementation, work with models, etc.

They are well prepared for positions in interdisciplinary research teams, as well as for leading positions in interest groups and public administration.

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Further information



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