CONNECT WITH YOUR FUTURE

30.11.23

Online presentation of the Master in Life Sciences
For people who are attending online

Please…

switch off your microphone

switch off your camera

For your questions, use the chat on the right:
Cooperation Master of Science in Life Sciences MSLS

Cooperation MSLS of BFH, FHNW, HES-SO, and ZHAW

Swiss Cooperation
30% of studies
Core Competences (Business & Data)
Cluster-specific Modules

ZHAW (Wädenswil)
FHNW (Muttenz)
BFH (Zollikofen)
CDP, Fribourg
VE, Changins
AB, Sion
MLS HES-SO: three majors

**Applied Biosciences**
AB, Sion

**Chemical Development & Production**
CDP, Fribourg

**Viticulture & Enology**
VE, Changins
### Structure of the Master Study Programme

#### Overview of the curriculum

<table>
<thead>
<tr>
<th>Core Competences</th>
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<th>Cluster-specific Modules</th>
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</thead>
<tbody>
<tr>
<td>Business</td>
<td>Data</td>
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</tr>
<tr>
<td>B-Modules 4x 3 ECTS</td>
<td>D-Modules 4x 3 ECTS</td>
<td>CS-Modules 5-6x 3 ECTS</td>
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Choice: minimum 4 CC modules, minimum 3 CS modules – **30 ECTS in total**

#### Specialization modules (20 ECTS)

S-Modules by AB/CDP/VE  
5x 4 ECTS

#### Master Thesis (40 ECTS)

X-Modules  
4 ECTS / 6 ECTS / 30 ECTS

#### Project Manager
- Achieve the state of the art
- Defend an idea
- Analyze the feasibility
- Schedule work-packages
- Use the resources available
- Write a scientific report
- Present results
Prepare for the challenges originating from the job market (big data, Digitalization, Industry 4.0) and addressing the need to understand the concepts of entrepreneurship, innovation and business.

- Offered via the cooperation MSLS

- Distant learning and local teaching in presence (Changins, Fribourg and Sion)
Cluster-specific modules

- Cluster-specific modules offer specialized, in-deep courses Presence/online/mix

- Each specialization is partner of a cluster:
  - AB  → BioPharma BP
  - CDP → Chemistry C
  - VE  → Food/ Environment F + E

- Each Cluster offers 5-6 cluster-specific modules
- Additional offers from other clusters (3-5 modules)

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Choice: minimum 4 CC modules, minimum 3 CS modules – 30 ECTS in total
MAJORS
Majors: specialization modules and Master thesis

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Choice: minimum 5 CC modules, minimum 3 CS modules – **30 ECTS in total**

- **Specialization modules (20 ECTS)**
  - S-Modules by AB/CDP/VE
  - 5x 4 ECTS

- **Master Thesis (40 ECTS)**
  - X-Modules
  - 4 ECTS / 6 ECTS / 30 ECTS
Applied Biosciences

5 specialization modules

- Sustainable Biotechnology
- Genomics + Genome analysis
- *In vitro* Diagnostics
- Pharmaceutical sciences
- Quality and Regulatory affairs

Local Information

- urban.frey@hes-so.ch
AB – Example of a Master thesis

Master of Science HES-SO in Life Sciences

Diagnostics: Paper-based diagnostic device “SafeTest”

Stornetta Tom
Applied Biosciences
HES-SO Valais
Advisor: Pr. Dr. Jean-Manuel Segura

μPAD for the simultaneous detection of 6 biomarkers

Device allowing the uniform deposition of the reagents on the sample
Chemical Development & Production

5 specialization modules

- Process Chemistry and Development
- Process Design and Optimization
- Chemical Engineering & Process Intensification
- Safety, Production and Quality
- Analytics and Characterization

Local Information

- michal.dabros@hefr.ch
- olivier.nicolet@hefr.ch
Master of Science HES-SO in Life Sciences

Development and optimisation of a fed-batch culture of a S. Cerevisiae ale strain for the brewing industry

Lucien Blanchard
CHEMICAL DEVELOPMENT & PRODUCTION
HEIA-FR

Advisor: Michal Dabros & Brian Freeland // In collaboration with Dublin City University
Viticulture & Enology

Master with double diploma 120 ECTS (2 years)

- Master of Sciences in Life Sciences (first year)
  - Changins

AND

- EuroMaster Vinifera (second year)
  - Germany, Italy, Spain, Portugal
Viticulture & Enology

5 specialization modules

- Grapevine Environment - Sustainable Viticulture
- Genetic Resources and Grapevine Production
- Winery Design
- Fermented Beverages Technology, Chemistry and Microbiology
- Wine Economics and Management

Local Information

- melanie.weikert@changins.ch
- liming.zeng@changins.ch
ORGANISATION
Full Time vs. Part Time Studies 90 ECTS (Applied Biosciences AB, Chemical Development & Production CDP)

Full time → 3 semesters

- 1st year
  - Core Competences B/D
  - Cluster-spec. Modules
  - Specialization Modules
  - TM Pre-Projects

- 2nd year
  - Master Thesis

- 3rd year
  - Core Competences B/D
  - Cluster-spec. Modules
  - Specialization Modules
  - TM Pre-Projects
  - Master Thesis

Part-time → 5 semesters

- Full Time
- Part Time (50%)
Full Time (Viticulture & Enology VE)

1st semester
30 ECTS

Core competences

Major modules related to specialisation

Research Project

2nd semester
30 ECTS

Core competences

Major modules related to specialisation

Research Project

3rd semester
30 ECTS

4th semester
30 ECTS

Major modules Vinifera Euromaster

Master Thesis
Admissions

Admission is decided on the basis of the candidate’s portfolio. Requirements are as follows:

- UAS Bachelor’s degree in a related field of the chosen major

- Bachelor’s degree in a related field from a University or Institute of Technology, subject to completing a practical internship

- Other applications are judged on the academic curriculum and the practical experience

- Candidates must hold a B2 level in English

- People with a long industrial experience can ask a validation of this experience (email mls@hes-so.ch for more information)
More information

Study plans, module descriptions, etc., and admissions: hes-so.ch/mls

Admissions: open from 01.12.2023 to...
- 15.02.2024 (for students who need a visa)
- 30.04.2024

Questions?

- mls@hes-so.ch (general questions and admissions)
- urban.frey@hes-so.ch (Major Applied Biosciences)
- olivier.nicolet@hefr.ch (Major Chemical Development and Production)
- liming.zeng@changins.ch (Major Viticulture and Enology)