



# **Presentation of the MSc in Life Sciences**

**Urban Frey**

**Head of Master of Sciences in Life Sciences, HES-SO**

**Open day, 02.12.21**

**Start: 18:30**

# For people who are attending online:

Please...

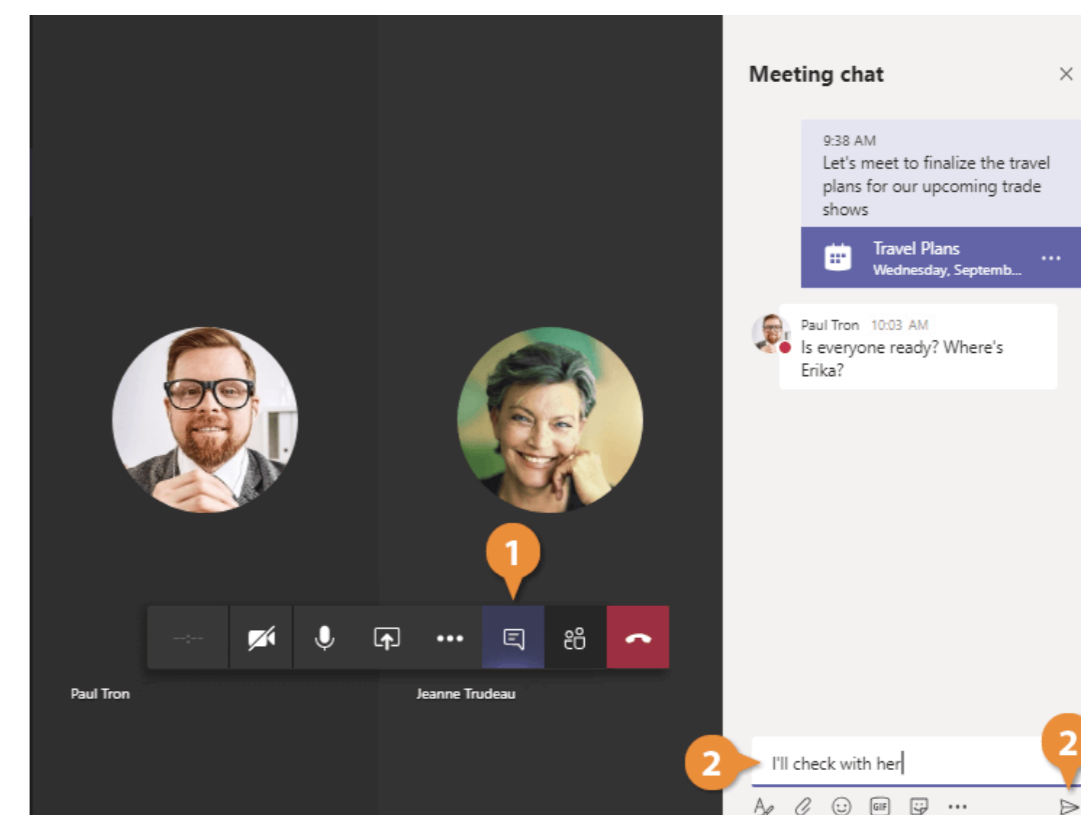
switch off your microphone



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For your questions, use the chat on the right:



# Master of Science HES-SO in Life Sciences MSLS

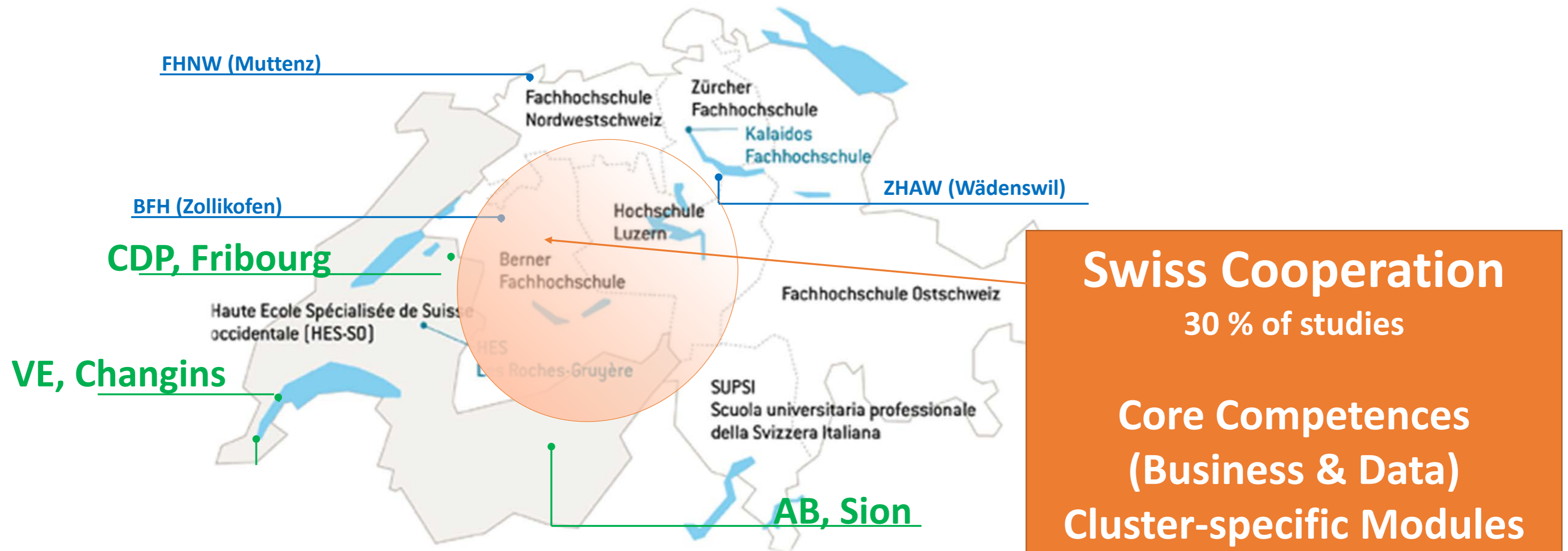
- Cooperation between BFH, FHNW, HES-SO, and ZHAW

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University of Applied Sciences and Arts  
Western Switzerland



# Master of Science HES-SO in Life Sciences MLS

## ■ **MLS offers 3 majors:**

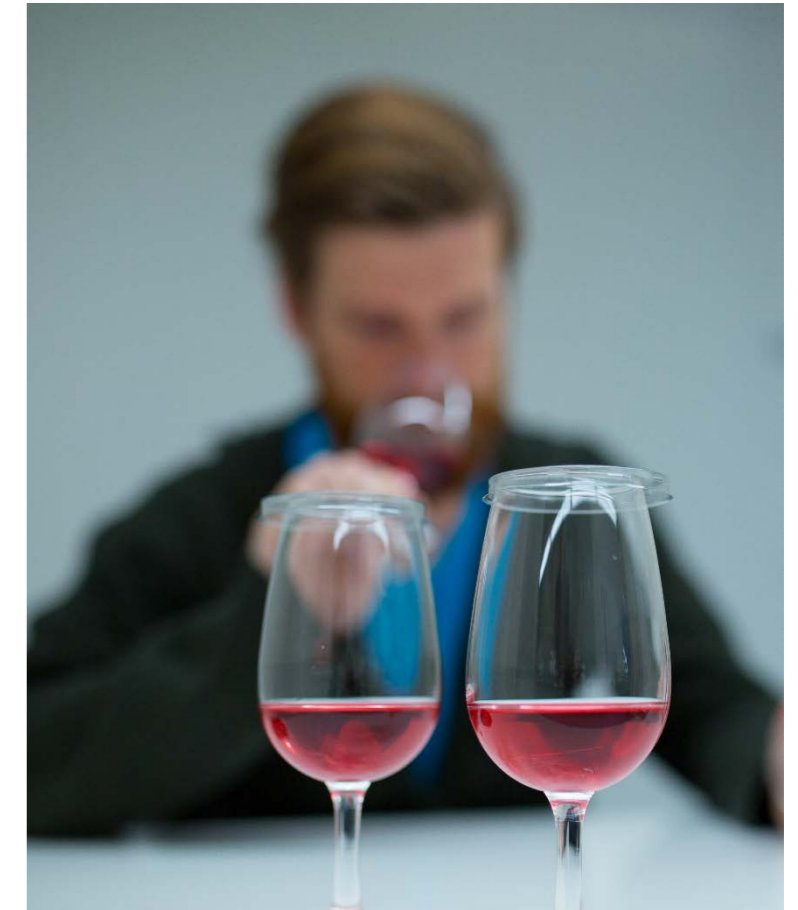
- Applied Biosciences (AB, Sion)
- Chemical Development & Production (CDP, Fribourg)
- Viticulture & Enology (VE, Changins)

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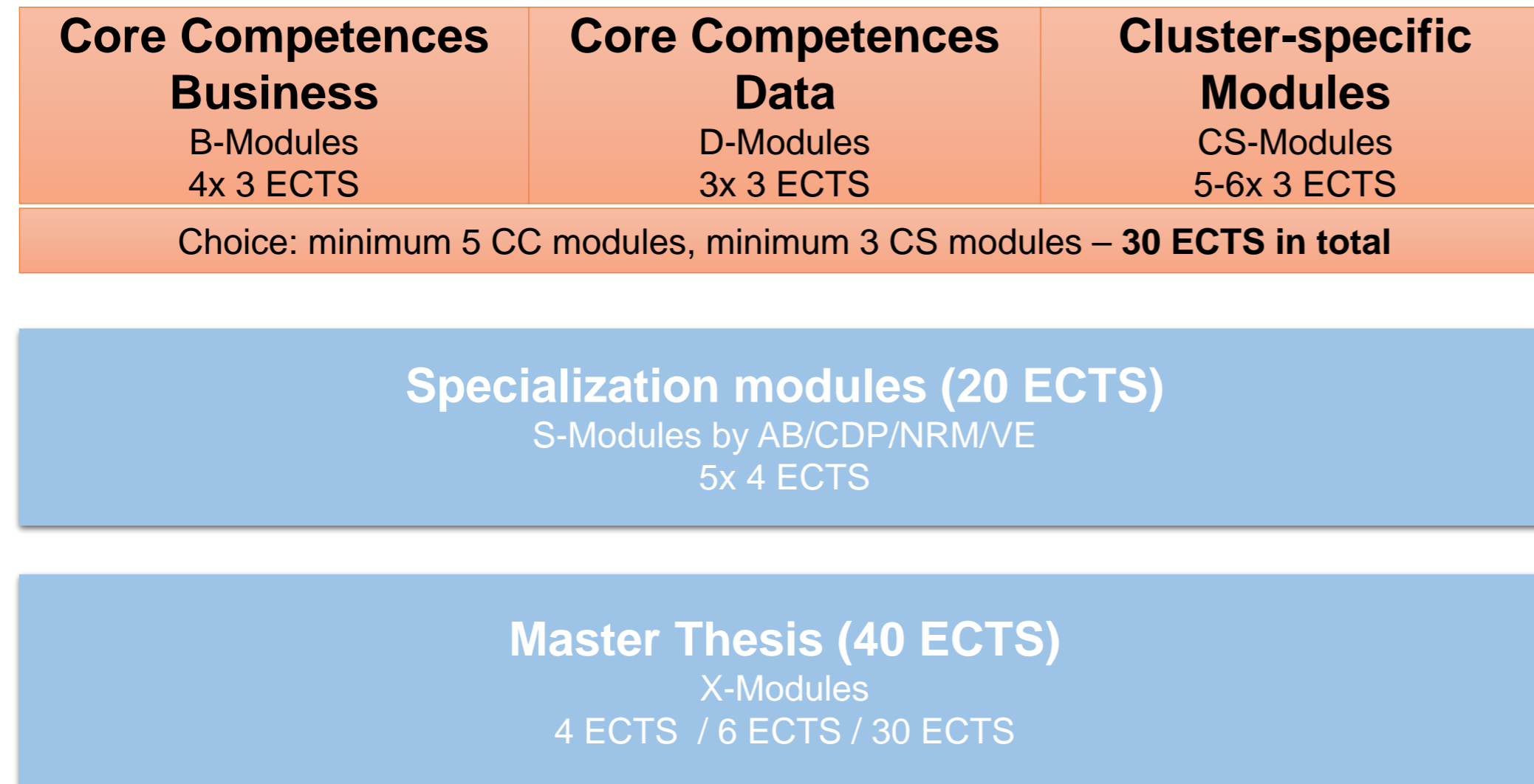
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# Structure of the Master Study Programme

## ■ Overview of the Curriculum 2020:



### 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

# Major: Applied Biosciences

- **5 specialization modules:**

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

- **Local Information**

- Contact: [urban.frey@hes-so.ch](mailto:urban.frey@hes-so.ch)

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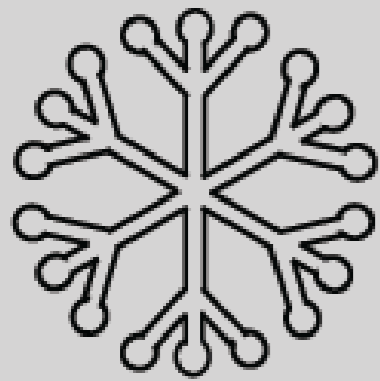
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## ▪ Example of a Master Thesis

Master of Science HES-SO in Life Sciences

## Diagnostics: Paper-based diagnostic device “SafeTest”

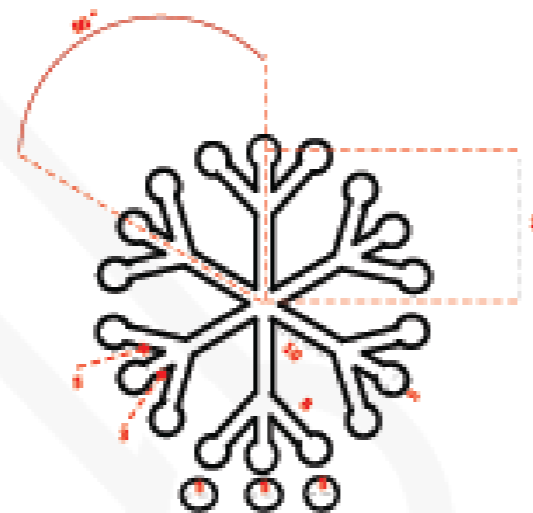
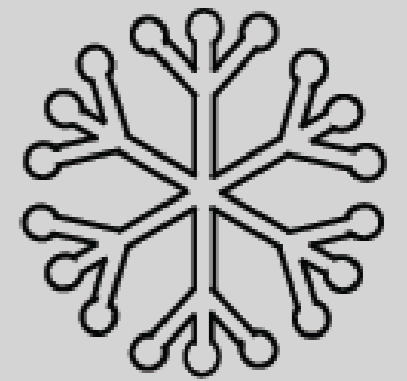


**Stornetta Tom**

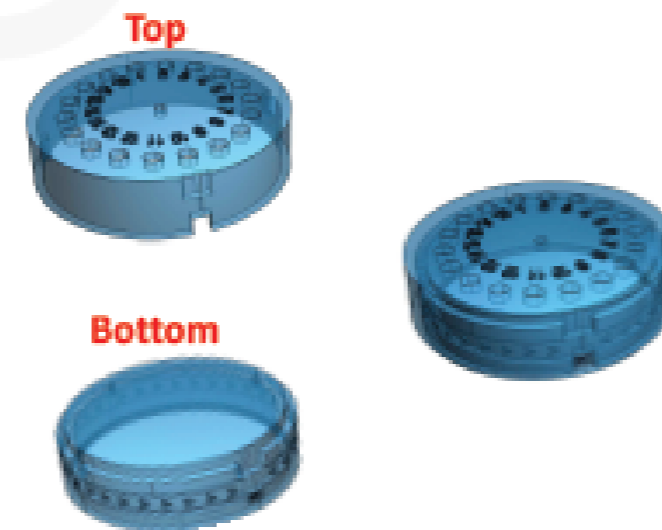
Applied Biosciences

*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*

# Major: Chemical Development and 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**
  - Contact: [olivier.nicolet@hefr.ch](mailto:olivier.nicolet@hefr.ch)

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# Major: Chemical Development and Production

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## ▪ Example of a Master Thesis

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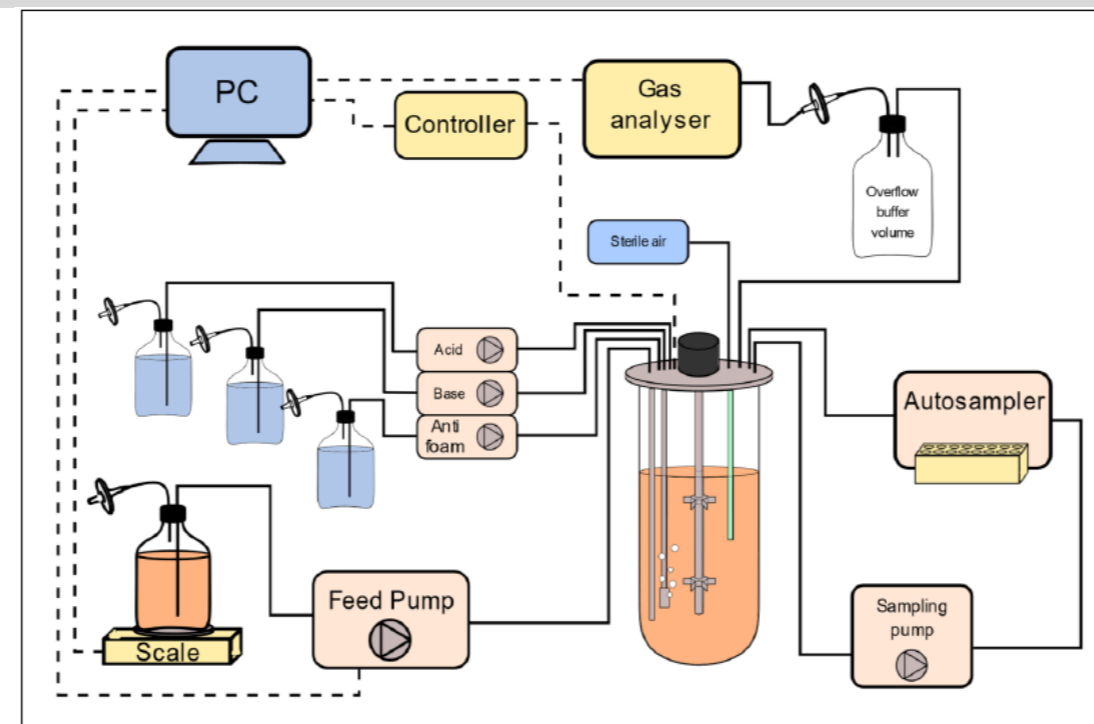
# Development and optimisation of a fed-batch culture of a *S. Cerevisiae* ale strain for the brewing industry

**Lucien Blanchard**

**CHEMICAL DEVELOPMENT & PRODUCTION**

**HEIA-FR**

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



# Major: Viticulture and Enology

- **Master with double diploma 120 ECTS (2 years)**

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

and

- **EuroMaster Vinifera (second year)**

France, Germany, Italy, Spain, Portugal

- **Local Information**

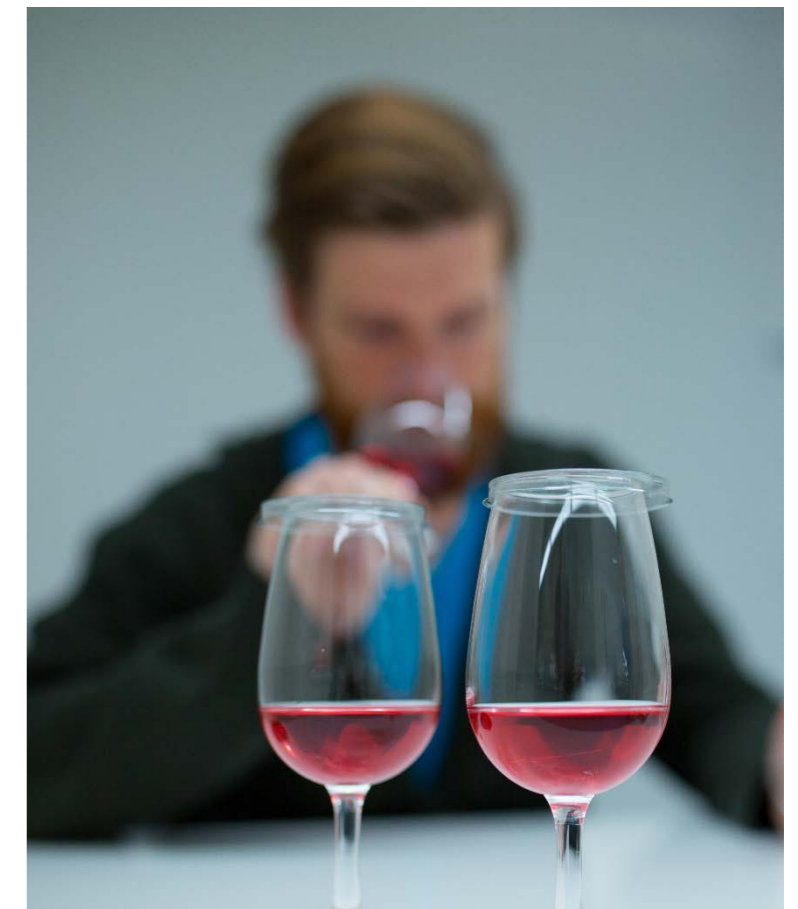
- Contact: [melanie.weikert@changins.ch](mailto:melanie.weikert@changins.ch)

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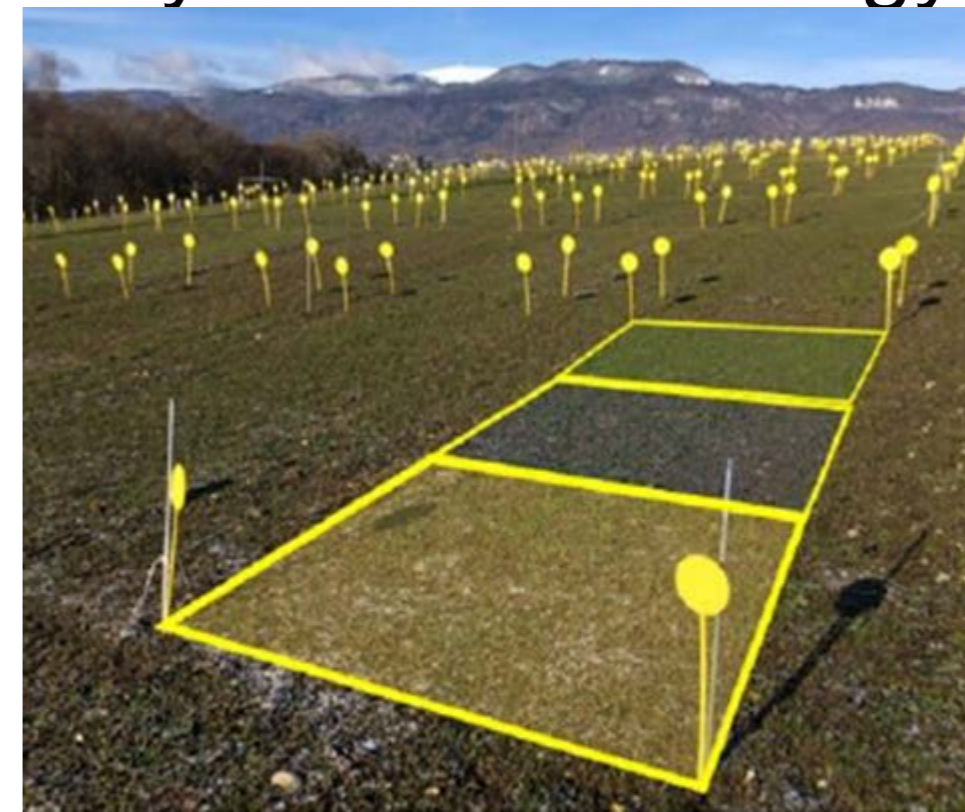
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# Specialization: Viticulture and Enology

## ▪ 5 specialization modules:

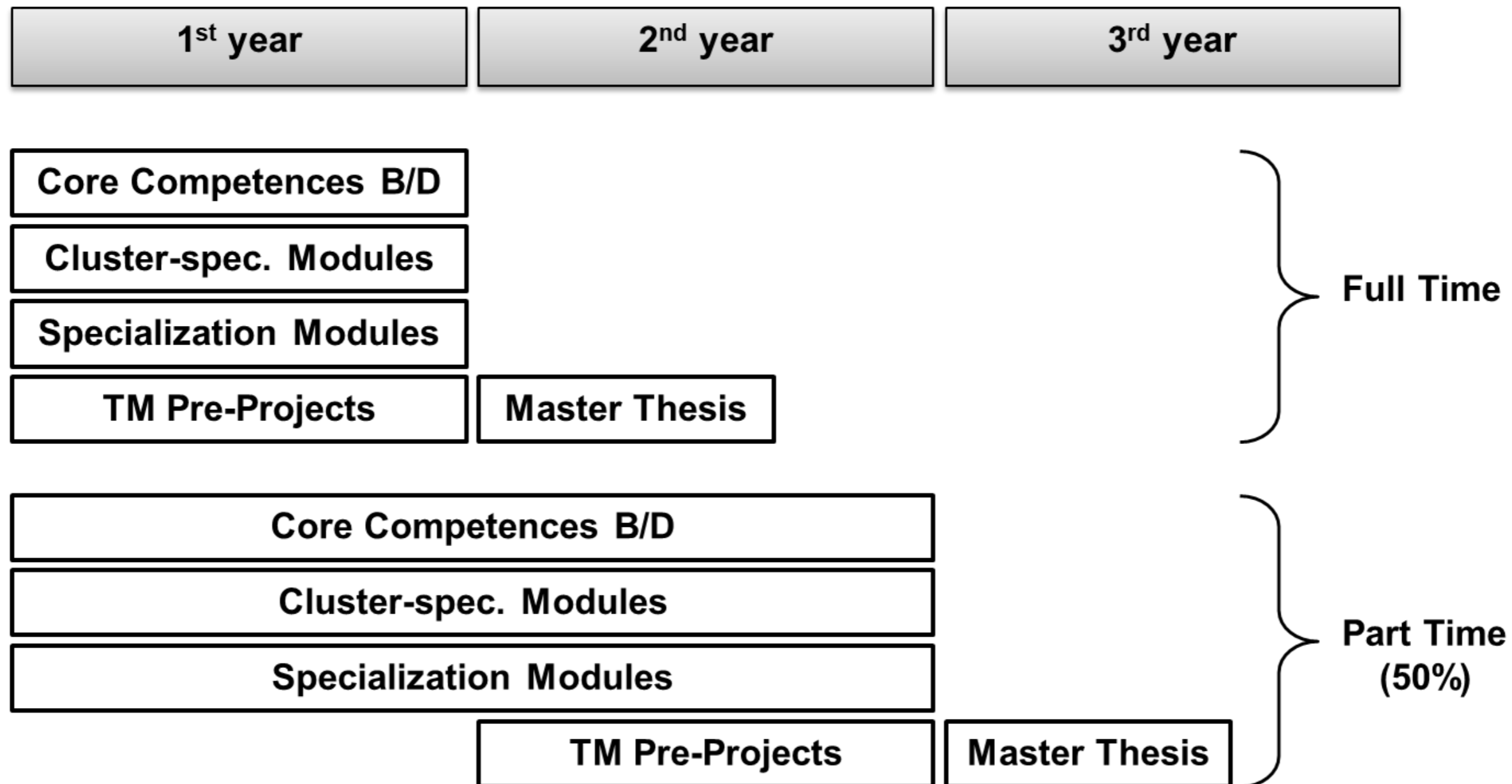
- Grapevine Environment - Sustainable Viticulture
- Genetic Resources and Grapevine Production
- Winery Design
- Fermented Beverages Technology, Chemistry and Microbiology
- Wine Economics and Management



Alternative to herbicide use:  
functional traits characterization of  
promising plants for vine row sowing

# Full Time vs. Part Time Studies 90 ECTS (AB, CDP)

- Full time → 3 semesters
- Part-time → 5 semesters



# Full Time VE

- Full time → 4 semesters 120 ECTS

## AB, CDP, NRM, VE

1<sup>st</sup> semester  
30 ECTS

Core  
competences

Major modules  
related to  
specialisation

Research  
Project

2<sup>nd</sup> semester  
30 ECTS

Core  
competences

Major modules  
related to  
specialisation

Research  
Project

3<sup>rd</sup> semester  
30 ECTS

## VE

Major modules  
Vinifera  
Euromaster

4<sup>th</sup> semester  
30 ECTS

Master  
Thesis

# Admission

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

## More information:

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

Admissions: open from 01.12.2021 to...

- **20.02.2022** (for students who need a visa)
- **30.04.2022**

Questions?

- [master.mls@hes-so.ch](mailto:master.mls@hes-so.ch) (general questions and admissions)
- [urban.frey@hes-so.ch](mailto:urban.frey@hes-so.ch) (Major Applied Biosciences)
- [olivier.nicolet@hefr.ch](mailto:olivier.nicolet@hefr.ch) (Major Chemical Development and Production )
- [melanie.weikert@changins.ch](mailto:melanie.weikert@changins.ch) (Major Viticulture and Enology)