Cover Picture:
Nuria tests a smart textile that scans a foot in order to help orthotists design better fitting orthoses.
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A coordinated MSc / Master’s programme in Life Sciences conducted by the Swiss Universities of Applied Sciences

Designed for motivated students interested in applied research

Opens the door to outstanding career opportunities in research, development and production

Specialisations offered by the University of Applied Sciences and Arts Northwestern Switzerland:

- Analytical Chemistry
- Applied Cell Biology
- Bioanalytics
- Biomedical Engineering
- Biotechnology
- Chemical Engineering
- Environmental Technologies
- Organic and Supramolecular Chemistry
- Pharmatechnology

Three semesters full-time study, 90 ECTS credits; part-time studies possible

MSc / Master’s thesis: 40 ECTS credits, modules: 50 ECTS credits

Admission: good BSc degree in a relevant subject

Admission deadlines: April 30th (autumn semester) and November 30th (spring semester)

Start of studies: mid-September and mid-February

Tuition fees: CHF 700.– per semester (Swiss, Liechtenstein), CHF 1000 (EU), otherwise CHF 5000.–
The FHNW School of Life Sciences
Introduction

The FHNW School of Life Sciences (HLS) is a leading Swiss School for education and application-oriented research in Life Sciences. With a network of industry and research partners, the HLS is a unique university centred around technology development in medical, natural, environmental and engineering sciences. The state-of-the-art infrastructure facilitates translating cutting-edge research into practice. Benefits for patients, innovative products, intelligent solutions and environmentally friendly technologies are the ultimate goal.

The Master's study programme combines lectures on applied life sciences with practical experience in an eight month Master's thesis. The core of the life sciences study programme consists of scientific knowledge for research and development, coupled with practical experience. Students may assemble their own curriculum from available modules. In order to prepare optimally for a professional career, the course also covers essential management skills. Graduates are ultimately expected to prove their abilities in a competitive and international life sciences environment.
The School of Life Sciences FHNW in Muttenz (Canton Basel-Land) is situated in one of the global centres of the life sciences industry. Several international companies have their headquarters in the Basel area, e.g. Roche, Novartis, Clariant, Straumann and Syngenta, to name just a few. Apart from these, around 600 other companies in the life sciences sector conduct development, research or production in the Basel area. Together they offer approximately 30,000 high-powered jobs.

The lecturers of the School of Life Sciences cooperate closely with local industry in joint projects. In addition, the majority of Bachelor’s and Master’s theses are completed with a partner in industry. And the Basel area is not only attractive with regard to job opportunities but is also part of the vibrant Rhine valley region where Switzerland, France and Germany meet and which offers many options for entertainment and leisure activities.
The MSc study programme gives graduates specialist knowledge enabling them to integrate quickly and effectively into the global industrial life sciences sector and related fields. MSc graduates have broad training and extensive knowledge, combined with in-depth practical experience. During the eight months of their thesis, they demonstrate that they can work independently on demanding projects.

With these qualifications, graduates of the programme are able to plan and carry out projects in the fields of applied research, development, translational research and production. They are also aware of entrepreneurial issues such as budgeting, personnel, deadlines, markets and products.

Graduates are able to present and explain the results of their work in their native language and in English to other specialists as well as to colleagues with different backgrounds. They bring high-level skills and knowledge to multi-disciplinary and interdisciplinary teams.

**New career prospects**

MSc graduates typically hold positions in organisations where they manage and participate in projects that build on their expertise. Such organisations are active in chemistry, biotechnology, environmental protection and nutrition as well as pharmaceutical and medical technology. The Master of Science degree is internationally recognised and allows students to continue their studies with a doctorate in most countries.
Where Life Sciences come alive
The Master’s programme

The international Master of Science in Life Sciences is conducted in collaboration with other Swiss Universities of Applied Sciences: Berner Fachhochschule BFH, Haute Ecole Spécialisée de la Suisse Occidentale HES-SO and Zürcher Hochschule für angewandte Wissenschaften ZHAW.

Programme structure
The MSc study programme encompasses lectures (50 ECTS credits) and the thesis (40 ECTS credits). The Specialisation modules are offered by the School of Life Sciences FHNW and take place in Muttenz/Canton Basel-Landschaft. The Core Competence modules and the Cluster-specific modules, which are organised in cooperation with the partner universities, are held in Olten and Bern and are offered partly online.

The modules are offered during the semesters (see pages 10–11). All modules usually take place at least once a year. The students are supported by an innovative e-learning platform.
Study consultation
After acceptance, the Dean of the programme will consult each student regarding which modules shall be taken in which semester. Thus each student will have an individual study programme that best meets his/her interests. It is also possible to complete part of the course at a foreign higher education institution: www.fhnw.ch/en/degree-programmes/lifesciences/international/partner-universities.

Teaching language
The language of teaching is English. This requires that in addition to the technical and scientific skills applicants must be able to read scientific articles and books, follow the lectures, participate in discussions and be able to write the thesis in English on their own. Therefore, it must be emphasised that students who want to undertake the MSc programme need adequate skills in English (see also page 22).

Educational concept
The educational concept of “blended learning” combines independent learning with lessons on site. When preparing course contents, modern forms of teaching and learning such as e-learning and case studies are included. In seminars and workshops, students deal with challenging issues and differing points of view. Complex issues will be explained by the instructors in lessons. In the Master’s programme, great emphasis is put on “research learning,” where traditional teaching is augmented by individual context-based knowledge generation.

Start
The programme starts in the autumn semester (calendar week 38) or in the spring semester (calendar week 8).

Completion
Successful completion of the course leads to the award of the title “Master of Science” which is recognised around the world.

Learn more
The School of Life Sciences FHNW offers information evenings that provide more details about the MSc study programme. Please consult www.fhnw.ch/en/degree-programmes/lifesciences/master/info-event-master-in-life-sciences for more information and dates.
**Full-time students**
The MSc study programme comprises 90 ECTS credits. Shown here is a full-time study plan starting in the autumn semester (1.5 years):

### Study plan

<table>
<thead>
<tr>
<th>Autumn semester</th>
<th>Spring semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sep</strong></td>
<td><strong>Feb</strong></td>
</tr>
<tr>
<td>Lectures (1st sem.)</td>
<td>Lectures (2nd sem.)</td>
</tr>
<tr>
<td>Thesis (3rd sem., 8 months)</td>
<td>Thesis (8 months)</td>
</tr>
</tbody>
</table>

### Programme structure full-time students

- **Master’s thesis**: 8 months from end of 2nd to 3rd semester, 40 ECTS credits

### Modules

- **Core Competence Modules**
  - 5 – 7 modules of 3 ECTS
  - are taken during the first two semesters
  - (for details see pages 12 – 13 & 18 – 19)

- **Specialist Modules**
  - 10 – 12 modules of 3 ECTS
  - are taken during the first two semesters
  - (for details refer to modules groups pages 14 – 19)

Note: It is possible that modules or final exams take place outside the semester.
Part-time students
It is also possible to study part time. In this case, the studies take approximately six semesters depending on the individual study plan. Part-time students may work in parallel – as a guideline 50 to 60 percent workload is appropriate. Other plans are possible; please consult the Dean.

Study plan

<table>
<thead>
<tr>
<th>Autumn semester</th>
<th>Spring semester</th>
<th>Thesis (5/6th sem., 8 or 12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep</td>
<td>Feb</td>
<td></td>
</tr>
<tr>
<td>Lectures (1st sem.)</td>
<td>Lectures (2nd sem.)</td>
<td></td>
</tr>
<tr>
<td>Lectures (3rd sem.)</td>
<td>Lectures (4th sem.)</td>
<td></td>
</tr>
</tbody>
</table>

Programme structure part-time students

Master’s thesis 8 months from end of 4th to 5th semester or
12 months from end of 4th to 6th semester  40 ECTS credits

Modules  min. 50 ECTS credits

Core Competence Modules
5–7 modules of 3 ECTS
are taken during the first four semesters
(for details see pages 12–13 & 18–19)

Specialist Modules
10–12 modules of 3 ECTS
are taken during the first four semesters
(for details refer to modules groups pages 14–19)

Note: It is possible that modules or final exams take place outside the semester.
The Core Competence modules are designed to introduce students to the life sciences industry, focusing on professional life within the industry as well as providing insight into data handling and analysis techniques.

**Business, Management and Society**

Three of the modules – Business Administration, Management and Leadership, and Project and Innovation Management – focus on providing an understanding of how Life Sciences companies function. In contrast, the fourth module is devoted to the social, political and ethical context within which Life Sciences companies operate.

Students who complete these modules will have an understanding of how Life Sciences companies work, how they are managed, and how they are led. They will therefore be aware of diverse entrepreneurial issues and be thoroughly prepared for a career in the industry.
Data

The three “Data” Core Competence modules (Handling and Visualizing Data, Design and Analysis of Experiments and Modelling and Exploration of Multivariate Data) reflect the increasing importance of information in all technical and scientific areas. Today more and more data is generated and gathered than ever, and it needs to be skillfully analyzed in order for companies to profit from it. In these three modules students are trained to plan and design experiments, to handle large data sets, to visualize them, and to analyze them with state-of-the-art methods. All modules use “R”, a powerful and open software suite for data analysis.

After having completed the data modules students will have acquired all the necessary skills to analyze their own data, to prepare high quality figures for meaningful data visualization, and to select and apply the appropriate methods for data analysis.
**Specialisation**

**Biomedical Engineering**

**MSc in Life Sciences – Specialisation Biomedical Engineering**

The Biomedical Engineering specialisation empowers diagnostics and therapy based on technology and engineering. The application of engineering skills for the benefit of patients requires detailed knowledge of human anatomy and physiology, a profound understanding of the human-device interface, and the consideration of the physiological, safety and treatment repercussions of using electronic and mechanical devices in medicine.

Students gain an in-depth education in Biomedical Engineering, enabling them to work in a wide range of fields in Medtech companies. The taught modules highlight the medical implant design and manufacturing process and the importance of biointerfaces between tissues and implants. Students get to know implant biomaterials, learn how to assess biocompatibility, and to characterise and engineer surfaces for biomedical applications. In addition the course covers the design and implementation of embedded systems for active electronic implants and medical devices, as well as therapeutic applications using surgical robotics.

Further modules emphasize the use of mathematical optimisation techniques, simulation, clinical problem modelling as well as medical image analysis. As medical devices are subject to European directives and national laws, students are introduced to the regulatory and quality aspects of the entire development process.

After the eight month Master’s thesis, usually in cooperation with a Medtech firm or at a foreign university or research organisation, our alumni are well prepared to take on responsibility. A major current challenge facing the Medtech industry is the hiring of skilled professionals, hence our graduates have bright prospects for careers in fields such as research and development, product management, regulatory and quality affairs.
The MSc in Life Sciences – Biomedical Engineering is especially suited for students with a BSc degree in Biomedical Engineering, Electronic Engineering, Mechanical Engineering or related fields. For admission criteria, please consult page 22.

**Further Specialisations offered in the MSc in Life Sciences FHNW**
- Analytical Chemistry
- Applied Cell Biology
- Bioanalytics
- Biotechnology
- Chemical Engineering
- Environmental Technologies
- Organic and Supramolecular Chemistry
- Pharmatechnology

Please consult the respective Study Guides for your information.
# Module Groups for the Specialisation Biomedical Engineering

<table>
<thead>
<tr>
<th>Module Group Biomedical Engineering (4 out of 5)</th>
<th>Type</th>
<th>Semester</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model-Based Signal Processing and Medical Diagnostics</td>
<td>S</td>
<td>AS</td>
<td>Muttenz</td>
</tr>
<tr>
<td>Sensors and Signal Processing</td>
<td>S</td>
<td>AS</td>
<td>Muttenz</td>
</tr>
<tr>
<td>Implant Design and Manufacturing</td>
<td>S</td>
<td>SS</td>
<td>Muttenz</td>
</tr>
<tr>
<td>Medical Device Development</td>
<td>S</td>
<td>SS</td>
<td>Muttenz</td>
</tr>
<tr>
<td>Surgical Robotics</td>
<td>S</td>
<td>SS</td>
<td>Muttenz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Group Electives (4 out of 7 required)</th>
<th>Type</th>
<th>Semester</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Science</td>
<td>CS</td>
<td>AS-1</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Modelling of Complex Systems</td>
<td>CS</td>
<td>AS-1</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Machine Learning and Pattern Recognition</td>
<td>CS</td>
<td>AS-2</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Surface Characterisation</td>
<td>CS</td>
<td>AS-2</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Optimisation Methods</td>
<td>CS</td>
<td>SS-1</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Medical Imaging and Image Processing</td>
<td>CS</td>
<td>SS-2</td>
<td>Olten/online</td>
</tr>
<tr>
<td>Regulatory Affairs</td>
<td>CS</td>
<td>SS-B1</td>
<td>Sion</td>
</tr>
</tbody>
</table>

N.B. In total 50 ECTS (meaning 17 modules à 3 ECTS) have to be gained. Further modules can be chosen: Complete Module Offer: [www.fhnw.ch/hls/master-ls-module](http://www.fhnw.ch/hls/master-ls-module)
## Contents

<table>
<thead>
<tr>
<th>Module Group</th>
<th>Biomedical Engineering (4 out of 5)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model-Based Signal Processing and Medical Diagnostics S</td>
<td>AS</td>
<td>Muttenz</td>
<td>Bioelectrical signals, physical diagnostic measurements, model-based signal analysis, pattern detection, signal classification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sensors and Signal Processing S</td>
<td>AS</td>
<td>Muttenz</td>
<td>Sensors for implants; noise reduction, filtering and error corrections</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implant Design and Manufacturing S</td>
<td>SS</td>
<td>Muttenz</td>
<td>Active and passive medical implants, “hands on” design of patient-specific implants, medical additive manufacturing, test methods for medical implants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical Device Development S</td>
<td>SS</td>
<td>Muttenz</td>
<td>Development process, regulators, risk management procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surgical Robotics S</td>
<td>SS</td>
<td>Muttenz</td>
<td>Robot kinematics, robot dynamics, safety; practical exercise</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Group</th>
<th>Electives (4 out of 7 required)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Materials Science CS</td>
<td>AS-1</td>
<td>Olten/online</td>
<td>Solid state bulk materials, crystallographic and electronic structure, structural, optical, mechanical and magnetic properties, metallic and ceramic materials, nanoscale materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modelling of Complex Systems CS</td>
<td>AS-1</td>
<td>Olten/online</td>
<td>System theory, system dynamics, modeling software Vensim, numerical integration methods, Monte-Carlo simulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machine Learning and Pattern Recognition CS</td>
<td>AS-2</td>
<td>Olten/online</td>
<td>Bayesian inference, graphical models, classification, ensemble methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface Characterisation CS</td>
<td>AS-2</td>
<td>Olten/online</td>
<td>Advanced microscopy, infrared and Raman spectroscopy, EDX, WDX, XPS; Interactions with surfaces: SPR, QCM, OWLS, contact angle, ellipsometry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optimisation Methods CS</td>
<td>SS-1</td>
<td>Olten/online</td>
<td>Identification of problems solvable with optimisation methods; linear, non-linear, deterministic and stochastic optimisation methods; Matlab exercises</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical Imaging and Image Processing CS</td>
<td>SS-2</td>
<td>Olten/online</td>
<td>Quantitative image processing, segmentation, registration, classification; practical work with Matlab and other tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regulatory Affairs CS</td>
<td>SS-B1</td>
<td>Sion</td>
<td>Quality management in production and development, license application process</td>
<td></td>
</tr>
</tbody>
</table>

S = Specialisation module
CS = Cluster-specific modules
CC = Core Competences
AS = Autumn semester
SS = Spring semester
-1: first semester half
-2: 2nd semester half
-Bx: block week after the semester
## Module Groups for the Specialisation
### Biomedical Engineering

<table>
<thead>
<tr>
<th>Module Group Core Competences (5 out of 8 required)</th>
<th>Type</th>
<th>Semester</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling and Visualizing Data</td>
<td>CC</td>
<td>AS-1A</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Data and Ethics</td>
<td>CC</td>
<td>AS-1B</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Design and Anlaysis of Experiments</td>
<td>CC</td>
<td>AS-2A</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Modelling and Exploration of Multivariate Data</td>
<td>CC</td>
<td>AS-2B</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Business Administration for Life Sciences</td>
<td>CC</td>
<td>SS-1A</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Management and Leadership for Life Sciences</td>
<td>CC</td>
<td>SS-1B</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Innovation and Project Management</td>
<td>CC</td>
<td>SS-2A</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
<tr>
<td>Politics and Society</td>
<td>CC</td>
<td>SS-2B</td>
<td>Lectures: online Coaching: Muttenz</td>
</tr>
</tbody>
</table>

N.B. In total 50 ECTS (meaning 17 modules à 3 ECTS) have to be gained.
Further modules can be chosen: Complete Module Offer: [www.fhnw.ch/hls/master-ls-module](http://www.fhnw.ch/hls/master-ls-module)
## Contents

<table>
<thead>
<tr>
<th>Module Group</th>
<th>Core Competences (5 out of 7 required)</th>
<th>S = Specialisation module</th>
<th>AS = Autumn semester</th>
<th>-1: first semester half</th>
<th>CS = Cluster-specific modules</th>
<th>SS = Spring semester</th>
<th>-2: 2nd semester half</th>
<th>CC = Core Competences</th>
<th>-Bx: block week after the semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling and Visualizing Data CC AS-1</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Introduction to R, organising data, databases, describing data: scatter, skewness, outliers, visualising data, informative plots</td>
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<td></td>
</tr>
<tr>
<td>Data &amp; Ethics CC AS-1A</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Personal data security, information security, encryption, digital signatures, data stewardship, data ethics, privacy</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Design and Analysis of Experiments CC AS-2A</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Statistical interference, experimental design, feasibility, efficiency and power of experiment designs, statistical analysis, interpretation and visualisation of results</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Modelling and Exploration of Multivariate Data CC AS-2B</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Modelling: linear, nonparametric and multiple regression, model selection and diagnosis; exploration: visual inspection, principal component analysis, clustering</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Business Administration for Life Sciences CC SS-1A</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Business models, marketing, production, sourcing, capital budgeting, financial accounting, cost accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management and Leadership for Life Sciences CC SS-1B</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Management, corporate ethics, strategic management, HR management, leadership, change management</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Innovation and Project Management CC SS-2A</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Entrepreneurship, megatrends, innovation management, presentation techniques, project management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politics and Society CC SS-2B</td>
<td>Lectures: online</td>
<td>Coaching: Muttenz</td>
<td>Politics: a process of negotiation, struggle and compromise; the role of society; public opinion, responsibility, ethics</td>
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</tr>
</tbody>
</table>
Amounting to 40 ECTS points, the thesis is the most important module of the MSc programme. It addresses a scientific or technical question of practical relevance and is carried out either at an institute of the School of Life Sciences FHNW, at the site of an industrial partner or at a foreign university or research institute. In all cases, the student is supervised by a member of the school’s faculty.

The thesis has to be written in English and lasts eight months in full-time study.
The School of Life Sciences has over 40 international partner schools (www.fhnw.ch/en/degree-programmes/lifesciences/international/partner-universities) all over the world. Students may spend one semester at a foreign university in selected MSc programmes. In addition, it is possible to do the Master's thesis abroad. The School of Life Sciences is a member of the SEMP (Swiss European Mobility Programme) which supports student exchanges within Europe.

Cooperation with the University of Basel
Students of the MSc programme may visit additional lectures offered by the University of Basel. Please consult the Dean for details.
General information
Admission and enrolment

Terms of admission
As a rule, outstanding bachelor’s degree qualifications are accepted for the MSc programme.

Candidates will be admitted without an entry examination if they have
– gained a BSc in a related subject and graduated with grade A, B or ≥ 5, or demonstrated an equivalent qualification (≤ 2.5 for Germany/Austria)
– the required English skills

Motivated students who do not fulfil the entry requirements entirely might be invited for an assessment interview.

Adequate English competency has to be proven with one of these certificates:

<table>
<thead>
<tr>
<th>Type of certificate</th>
<th>Required level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAE (Certificate of Advanced English)</td>
<td>FCE</td>
</tr>
<tr>
<td>IELTS (English Language Testing System)</td>
<td>5.5</td>
</tr>
<tr>
<td>TOEFL (Test of English as a Foreign Language)</td>
<td>iBT 71</td>
</tr>
<tr>
<td>Spoken or Written Academic English (module of the Bachelor programme at the School of Life Sciences FHNW)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

In the event of a lower English level, the applicants may be admitted but have the obligation to improve their English during the Master’s course. They may attend the Advanced English course offered by the School of Life Sciences or may attend other courses. At the end of the studies, students have to prove that they have attained the required English level (see table above).
**Application**
Deadline for applications is end of April for the autumn semester (start in calendar week 38) and end of November for the spring semester (start in calendar week 8). Please apply online via our webportal: [www.fhnw.ch/lifesciences/master](http://www.fhnw.ch/lifesciences/master)
Fees and grants
General information

**Fees and expenses**

<table>
<thead>
<tr>
<th>Description</th>
<th>CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition fees per semester for students domiciled in a Swiss canton, or in</td>
<td></td>
</tr>
<tr>
<td>the Principality of Liechtenstein*</td>
<td>700*</td>
</tr>
<tr>
<td>For students who are legally resident in the EU/EFTA at the start of their</td>
<td></td>
</tr>
<tr>
<td>studies, the semester fees are</td>
<td>1000</td>
</tr>
<tr>
<td>Tuition fees per semester for all other students</td>
<td>5000</td>
</tr>
<tr>
<td>Enrolment fee</td>
<td>200</td>
</tr>
<tr>
<td>Graduation fee</td>
<td>300</td>
</tr>
</tbody>
</table>

*Essentially the tuition fee of CHF 700 applies to those students whose parents or guardians are in Switzerland or Liechtenstein; who are citizens of Switzerland, Liechtenstein; who for the previous two years were financially independent due to being employed in Switzerland, Liechtenstein and who did not undertake any higher or further education in this time.

**Grants**

In Switzerland, grants are regulated on a cantonal basis. The canton of your place of residence decides on grants or interest-free loans. In addition to public grants, there are also private institutions that award scholarships.
The FHNW University of Applied Sciences and Arts Northwestern Switzerland is a leading education and research institution with strong links to the surrounding region. It is one of the most innovative universities of applied sciences in Switzerland.


More than 13,100 students are enrolled at the FHNW campuses in the cantons of Aargau, Basel-Land, Basel-Stadt and Solothurn. Around 1,300 lecturers teach 29 bachelor’s and 18 master’s degree courses as well as a range of practical and market-focused continuing education programmes. FHNW graduates are highly sought-after specialists.

Application-oriented research and development has an equally high priority at the FHNW. With national and international partners from industry, business, culture, government and institutes, the FHNW runs research projects and is an active participant in European research programmes. The FHNW supports the transfer of expertise and technology to firms and institutions: in 2020, application-oriented research and development included 1,291 research projects and 359 service projects.
We are at your service
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– FHNW Academy of Art and Design
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– FHNW School of Engineering
– **FHNW School of Life Sciences**
– FHNW Academy of Music
– FHNW School of Social Work
– FHNW School of Education

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