

Master of Science in Life Sciences

An Ever-growing Life Sciences Market Demands Trained Specialists



The master of science program in life sciences is conducted in various fields of specialization at Swiss Universities of Applied Sciences. Master's studies enhance the Bachelor's degree with know-how that prepares students for management positions, including responsibilities for personnel and budgets. At the same time, course work provides in-depth specialization that leads graduates into the global industrial life sciences environment quickly and efficiently, fulfilling career expectations.

Programm Structure

General and extended theoretical foundation modules (see reverse side for description) are provided jointly by the Swiss life sciences institutes universities.

The University of Applied Sciences Northwestern Switzerland, School of Life Sciences provides two possible fields of specialization.

The two fields of specialization in *Molecular Technologies* and *Therapeutic Technologies* belong to the area of industrial life sciences. This includes activities in industry carried out in conjunction with research, development, manufacturing, and the application and optimization of active substances and materials in classical pharmaceutical as well as combined medtech and diagnostic products. In parallel, reference is made to sustainable, environmentally responsible manufacturing.

Molecular Technologies (MT)

- Organochemical synthesis, drug/lead optimization, formulation development
- Development and implementation of drug screening systems
- Biomarker analyses, biomarker identification, development of diagnostic tests
- Analytic technologies (trace-, radio-analytics, ecotoxicology)
- Bio-nanotechnology

Therapeutic Technologies (TT)

- Development and manufacturing of implants and medtech systems /devices
- Development and production of pharmaceutical products and drug delivery systems
- Technologies for diagnostic evaluation and modeling of disease parameters
- Patient-specific tools for therapy and monitoring
- Industrial ecology for medtech and pharma products (clean technologies)

Areas of application

Skills acquired in the fields of specialization will find application in the following areas: pharmaceuticals, diagnostics, chemistry and medical technology, as well as engineering, design of installations and ancillary supply operations.

Prerequisites

- Excellent Bachelor's or FH degree in chemistry, biotechnology, life sciences technologies, molecular life sciences, mechanical engineering, information technology, electrical engineering (grades A, B, or grade ≥ 5). Other forms of education require consultation prior to admission.
- Good to very good English proficiency
- Motivation and a willingness to hand work

Duration of studies

As a rule, studies require three semesters (90 ECTS credits)

Start of studies

September 15, 2008

Information Events

(Online application required)

April 21, 2008 / May 15, 2008

Further information

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Basic modules**General basic courses**

(choose three elective modules)

- Innovation and information management
- Leadership
- Business management
- Communications and marketing
- Sociology
- Law and politics

Extended theoretical foundations

(choose six elective modules)

- Quality development
- Health and nutrition
- Applied statistics and mathematics
- Geo-information systems and data banks/documentation
- Environmental politics and future models
- Socio-cultural aspects and the environment
- Environmental awareness
- Comparative physiology
- Systems theory
- Natural materials
- Nanosciences