



Life Sciences and
Facility Management



Master of Science in Environment and Natural Resources

Master Research Units

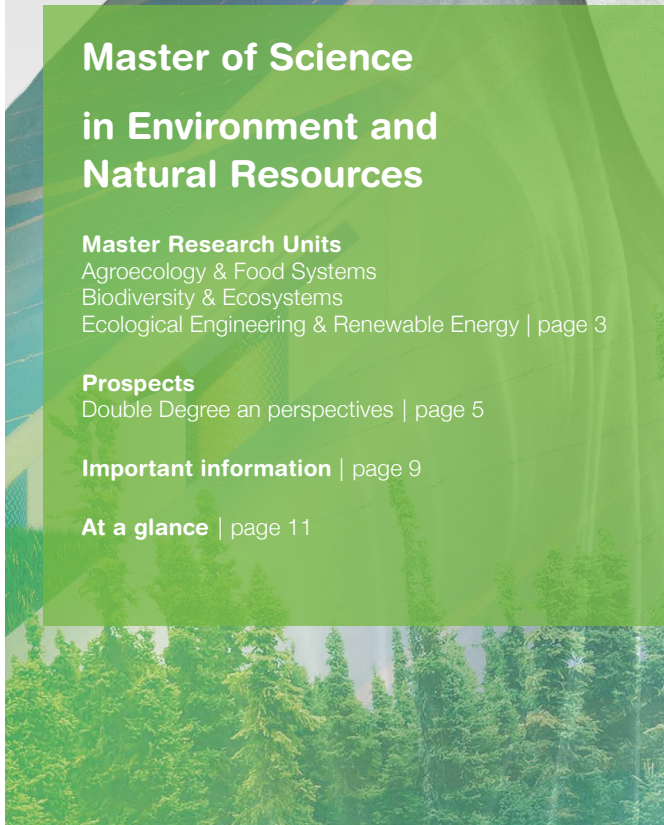
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Master Research Units

Research at the point where society, the environment and technology meet

How can we make the transition to a sustainable society? Which ideas, strategies, methods and solutions make this transformation possible? These questions form the starting point of the Master's programme in Environment and Natural Resources. This course qualifies you as an environmental expert and sustainability specialist in preparation for challenges you might face both in companies as well as in educational and research institutions.

Study goals

The course equips you with the ability to recognise current problems and future developments in your professional environment and to analyse them holistically. The transformation can only be made possible through good networking and recognised competencies in your specialist area. In order to develop viable and sustainable solutions, you also need curiosity, openness and the ability to work with stakeholders and researchers from other scientific fields. Knowledge of, and involvement in, project management are also of particular importance. In the Master's programme, you will learn to look at issues from different perspectives and to take these into account in concept development and implementation projects. Your collaboration with a research group aims to train your initiative, critical thinking and teamworking skills.

Master's Research Units

At the beginning of your studies, you choose one of the three main specialisations (Master Research Units). This determines the main focus of your studies:

- Agroecology & Food Systems
- Biodiversity & Ecosystems
- Ecological Engineering & Renewable Energy

For your MRU specialisation you choose a research unit from the Institute of Natural Resource Sciences or one of our partner organisations, where you complete your Master's Studio (Project Work 1 and 2 as well as Master's thesis). This Master's Studio accounts for 50% of your studies. Being integrated in a research group allows you to choose an individual specialisation and provides you with in-depth insights into current research and development work. This enables you to already start building your research and professional network during your studies.

In addition to the individual specialisation, the Master's programme includes modules in research methods and socio-economics, a summer school and lectures on your chosen specialisation. Furthermore, the large number of electives allows you to organise your studies according to your interests and professional goals.

International mobility

Forming your own individual profile creates the opportunity to organise your studies internationally. The ZHAW is networked with over 60 partner universities in 15 European countries. Thanks to these partnerships, you can complete an exchange semester in another country. Another option is to complete your master's thesis by working with an organisation or university abroad. You can also obtain a double degree by completing a fourth semester at one of our partner universities in Slovenia, Norway or Germany.

Find out more about international mobility and read reports of students' experiences at: www.zhaw.ch/lsfm/international/en

Agroecology & Food Systems

To safeguard food security for the world population today and in the future, our food system must be transformed and redesigned. Inequalities, environmental degradation, scarcity and overabundance characterise the conventional system and new approaches are required. Here the focus is on agroecological concepts, regional value chains and fair-trade relationships.

The focus on agroecology and food systems enables you to develop alternative concepts for sustainable agriculture. You will learn about the economic, social and political contexts that influence the global and Swiss food system. You will also be able to identify sustainability conflicts within the food value chain and design solutions with regard to sustainable production methods and supply chains.

Biodiversity & Ecosystems

Progressive species decline and the silent disappearance of ecosystems make it necessary to consistently work on valorisation and protection concepts. This specialist area focuses on regional, sustainable solutions for rural and urban areas, in relation to both terrestrial and aquatic ecosystems. The latter are most at risk and their protection is correspondingly urgent. The sustainable development and revitalisation of water bodies requires a fundamental understanding of the complex aquatic-terrestrial interactions.

In the Biodiversity & Ecosystems focus area, you will learn about the ecological, social and political contexts that influence land use and species protection. You will be able to work on complex questions concerning biodiversity and ecosystem services, and to model the interaction of important processes within ecosystems. Furthermore, you will be able to use scientific methods to assess the quality of ecosystems, quantify changes and develop suitable protective measures, and you will develop practical solutions based on ecological criteria, taking participative approaches into account.

Ecotechnologies & Renewable Energy

Are you interested in the interplay between technology and ecology? Would you like to shape the energy system of the future, characterised by efficiency and sufficiency? Circulatory systems, renewable energies and advancing digitalisation are opening up completely new possibilities. The vision of this focus area is that a future sustainable society will not only be achieved with increasingly complex technical means, but through a skillful combination of ecology, technology and socio-economic factors.

In this specialisation, you will deal with the question of how the Paris climate goals or net zero greenhouse gas emissions can be achieved by 2030. You will become familiar with the technical, social and political relationships that influence the Swiss energy system. You will be able to integrate holistic thinking into technical systems and to contribute to the design of sustainable mobility.

Prospects

Double Degree

The Environment and Natural Resources course allows you to complete a fourth semester at one of our partner universities to obtain a double degree. This degree gives you eligibility to pursue doctoral studies. A double degree is offered with the following courses:

- Master's degree in Water Science and Environmental Engineering from the University of Ljubljana, Slovenia
- Masters in Applied Ecology from Inland Norway University, Norway
- Master's degree «Ökologische Landwirtschaft und Ernährungssysteme» (Organic Agriculture and Food Systems) from the University for Sustainable Development in Eberswalde, Germany

You can find more information about the double degree at: www.zhaw.ch/iunr/master/en

Further education

Continuing education is becoming increasingly important in our constantly changing world of work. The Institute for Environment and Natural Resources offers innovative and professionally oriented further education studies (CAS, DAS, MAS), further education courses and specialist conferences that are unique in Switzerland. The courses are designed to reflect our international context and provide you with a platform to broaden your knowledge and exchange expertise. Further information can be found at:

www.zhaw.ch/iunr/weiterbildung

Qualifications

The focus area chosen and the topic of your Master's Studio enable you to specialise individually and set the tone for your future career. With your master's degree, you can find employment as an environmental expert or project manager in consulting and planning offices in the environmental sector, in specialist federal and cantonal departments, in NGOs, and as a sustainability officer in production and service companies, especially in companies along the agrofood value chain. You will have the skills and know-how to take on managerial functions, to set up your own company or a consultancy firm. In addition, doctoral studies are open to you as part of the double degree programmes.

Your areas of expertise depend on the specialisation:

Agroecology & Food Systems

- Person responsible for sustainability matters in a food company
- Consultant in a consulting agency for agriculture or tourism
- Project manager in the field of sustainable food supply and consumption
- Expert in an NGO for rural development
- Researcher for sustainable agriculture or regional development at a university or research institution

Biodiversity & Ecosystems

- Project manager for nature conservation in an engineering firm
- Consultant for species conservation projects
- Research assistant with the canton or the federal government
- Project manager in an NGO for alpine and landscape protection

Ecotechnologies & Renewable Energy

- Person responsible for energy and sustainability matters in a company
- Consultant in an energy consulting company
- Project manager in the area of recycling and circular systems
- Technical expert in an NGO
- Researcher for sustainable energy systems at a university or research institution

“In the Master's in Environment and Natural Resources programme you are part of a research team and can study in a creative environment.”



Master's Degree Student

“My goal is to improve people's quality of life and their health, be it in my professional environment or in my studies, where I am committed to creating a more sustainable and liveable city. I need sporting activities for balance – everything is possible thanks to the individually customisable part-time studies.”

Raina

About us

The Institute

The Institute for the Environment and Natural Resources is located in Wädenswil on the left bank of the Lake of Zurich. At the Grüental campus, the Institute conducts research related to landscape development and use, and land and energy management. The range of both the study and continuing education options includes the Bachelor's degree in Environmental Engineering, the Master's Degree in Environmental and Natural Resources, as well as a broad selection of continuing education courses.

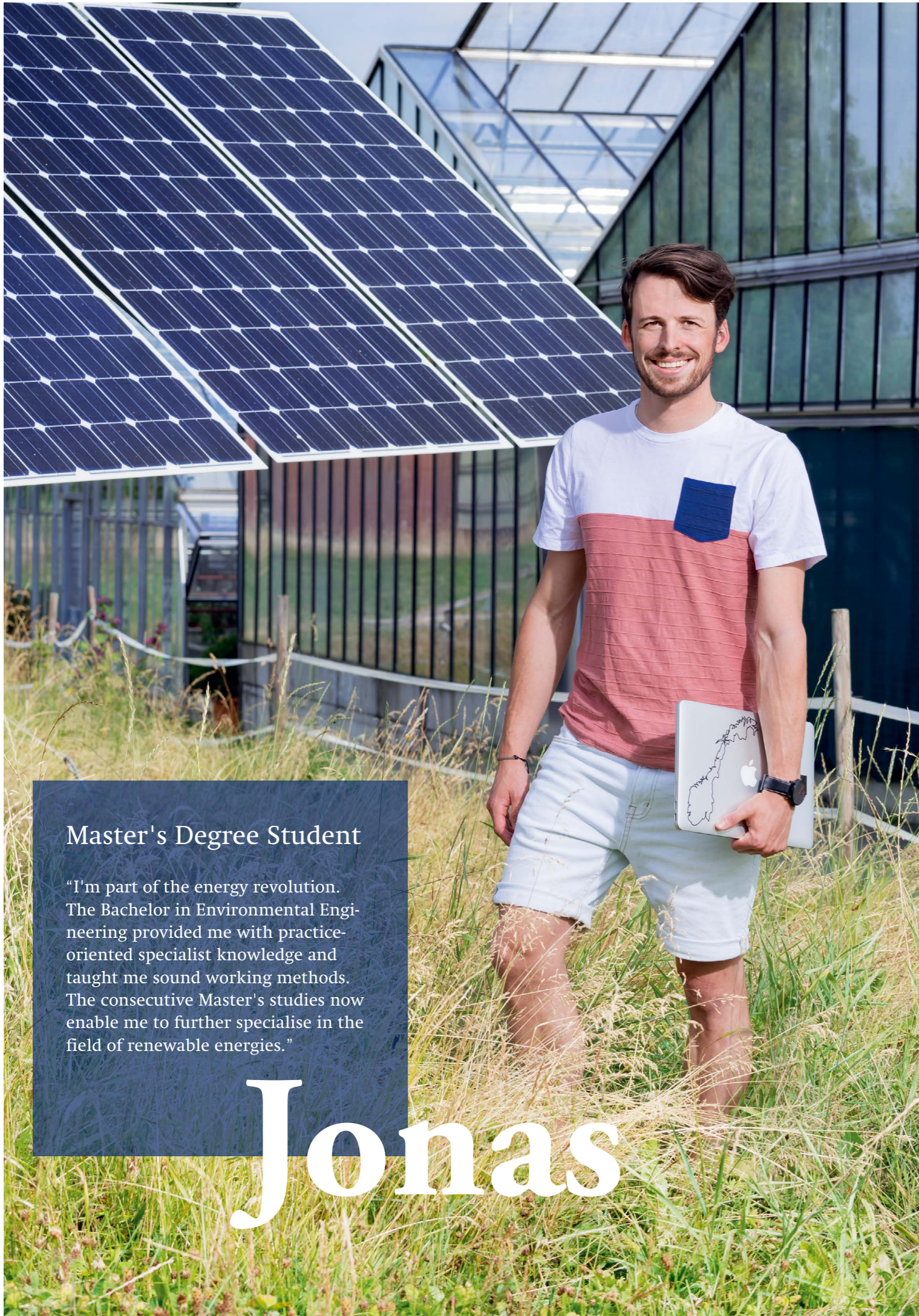
The Institute both teaches and conducts practical research. Accordingly, cooperation with industry, public institutions, associations and research partners is very close. This promotes both knowledge and technology transfer between the university and practice. The Institute has high-tech testing rooms, open-air laboratories, greenhouses and arable land. The gardens in Grüental are of value for both study and research and are an important attraction for the general public.

Collaborations & partnerships

In addition to the partnerships in the form of double degree programmes, the Master's is based on close cooperation with other institutions:

- University of Zurich Department of Geography
- ZHAW Institute for Sustainable Development of the School of Engineering
- ZHAW Department of Social Work – ZHAW School of Management and Law
- ZHAW Institute of Computational Life Sciences
- Institute of Chemistry and Biotechnology, Institute for Food and Drink Innovation of the Department of Life Sciences, and the Institute of Facility Management
- UFGD Federal University of Grande Dourados
- Flathead Lake Bio Station, University of Montana
- University of Agricultural Sciences Bangalore

These partnerships enable us to offer a diverse range of courses. In addition, the researchers involved in these partnerships hold lectures and seminars. For research and teaching, we also work closely with the FiBL Research Institute of Organic Agriculture, Agroscope and the Swiss Federal Institute for Forest, Snow and Landscape Research.



Master's Degree Student

"I'm part of the energy revolution. The Bachelor in Environmental Engineering provided me with practice-oriented specialist knowledge and taught me sound working methods. The consecutive Master's studies now enable me to further specialise in the field of renewable energies."

Jonas

Important to know

Admissions criteria

For a Master's Degree, a degree in environmental sciences, a related field or an equivalent degree is required. Lateral entrants are also welcome.

If you decide to study at the Master's level, you should choose one of the three areas of specialisation and a research group in which you would like to complete your Master's Studio (Project Work and Master's thesis). Once these decisions have been made, you can apply online.

All information about the research groups and the possible topics for your Master's Studio can be found on the website. Please note that space is limited for Master's students in the research groups. It is therefore recommended to apply early.

After registration, a suitability assessment will be conducted to determine admission for admission to the programme (specific subject competences for the chosen specialisation, study ability and motivation). You may be required to meet further conditions if your previous studies were in a different field. Furthermore, your language abilities in English and German will also be examined. You will be informed as soon as possible about the decision regarding your admission.


Dates

The programme begins February (week 8) or September (week 38). The application deadline is October 30th (for start in week 8), resp. April 30th (for start in week 38).

Every year several information events take place, in which students, MRU officers and lecturers report on their studies and are available to answer questions. On these occasions, you can visit classrooms and laboratory facilities on the Grüental campus. This will give you some insight into the diverse teaching and research activities of the Institute for the Environment and Natural Resources.

Important dates, information events and other information can be found at:
www.zhaw.ch/lsvm/study

At a glance

Degree Programme Specialisations	Environment and Natural Resources Master Research Units (MRU): Agroecology & Food Systems, Biodiversity & Ecosystems, Ecological Engineering & Renewable Energy
Title	Master of Science (MSc) ZHAW in Environment and Natural Resources
Master's Studio	For your MRU specialisation you choose a research unit from the Institute of Natural Resource Sciences or one of our partner organisations, where you complete your Master's Studio (Project Work 1 and 2 as well as Master's thesis). You write your thesis as part of one of the research groups' projects and answer a concrete question arising from practical or applied research in your area of specialisation
Double Degree	By taking an additional 30 ECTS at one of our partner universities, you can obtain a university degree
Duration	Full-time: 3 semesters (90 ECTS credits) or 4 semesters (120 ECTS credits) for the Double Degree The part-time study program is integrated into the full-time study programme and lasts 2 to 3 years, depending on the workload
Start of studies	September (calendar week 38) and February (calendar week 8)
Workload	90 credits (ECTS); 1 credit equals 25 to 30 hours of study
Campus location	Lectures usually take place at the ZHAW in Wädenswil or virtually; excursions and project weeks occur at various national or international locations
Costs	Semester fees: CHF 720 (subject to change) plus learning materials, membership to the sports association (ASVZ) and individual living expenses. An additional tuition fee of CHF 500 per semester is applied to all students who come to Switzerland for the purposes of studying and who are not officially Swiss residents at the start of their programme.
Admissions criteria	You will be admitted to the programme if you have a Bachelor's Degree in the field of environmental sciences or an equivalent university degree and a successfully completed suitability assessment.
Important to know	In the 3-semester Master's programme (full-time) you will broaden your technical and methodological knowledge as well as your scientific skills. Interdisciplinary skills and application-oriented research are the focus of your studies; Language in the spring semester mostly English, in fall semester mostly German; The Master's thesis is completed at the research group's location in the language agreed upon with the supervisor.
Information dates	Details: www.zhaw.ch/lsfm/study
Kontakt	 <p>Program Director: Martina Weiss msc-enr@zhaw.ch</p>

“Focus on sustainability: In Wädenswil your finger is on the pulse of current research towards creating a resource-efficient economy.”

Study and research in Wädenswil: practically-oriented, creative, passionate and reflective

The ZHAW is one of the leading Swiss universities of applied sciences. The School of Life Sciences and Facility Management currently has around 1800 students and employs more than 600 people. The educational programme comprises Bachelor's and Master's degree programmes as well as a broad range of further training and education courses.

Our expertise in life sciences and facility management in the areas of the environment, food and health enables us to make a vital contribution to solving social challenges and improving quality of life. Our success is based on dynamic institutes with extensive competence in research, development and services in the disciplines of applied computational life sciences, biotechnology, chemistry, food and beverage innovation, natural resource sciences and real estate & facility management.



Environment | Food | Health | Society
Our competencies in Life Sciences
and Facility Management.

ZHAW Campus Deidbach / Einsiedlerstrasse

ZHAW Campus Reibbach / Seestrasse

ZHAW Campus Gruental

Residential building for students

Contact

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Visit us



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wädenswil