## Higher Education and Research in Switzerland



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**Cover:** The National Centre of Competence in Research ,MUST – Molecular Ultrafast Science and Technology' (NCCR MUST) is an interdisciplinary research programme launched by the Swiss National Science Foundation. It brings together 15 Swiss research groups headed by the ETH Zurich and the University of Bern. The NCCR MUST opens up new perspectives in the study of molecular systems and controlled structural investigations in physics, chemistry and biology. Picture: Tomas Wuthrich, University of Bern.

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## At a glance

### Higher education sector – a diverse range of highquality options

The Swiss higher education landscape is comprised of a diverse and comprehensive range of high-quality cantonal universities, federal institutes of technology, universities of applied sciences and universities of teacher education. It follows the three-tiered structure of Bachelor's, Master's and doctoral studies (with PhD titles being reserved to cantonal universities and federal institutes of technology). All higher education institutions are active in teaching, research, continuing education and training and the provision of services to third parties.

Swiss higher education institutions have demonstrated internationally recognised performance and have made significant contributions to the economic, cultural and social development of our country. Key strong points include:

- A diverse range of high-quality study options in all disciplines and fields of study. Various tier-one universities figure prominently in international university ranking lists;
- The open access to higher education: enrolment is possible for anyone who has recognised upper-secondary level qualifications;
- High employment rates of university graduates;
- Strong international appeal. Foreign nationals account for around one-fourth of all students enrolled in Swiss higher education institutions, over half of all postdoctoral students and one-third of all professors.

### **Research – international networks**

The traditional distribution of private and public sector roles has meant that fundamental research has mainly been the preserve of federal institutes of technology and cantonal universities. In contrast, applied research as well as the development of research findings into marketable innovations have mainly been driven by the private sector and the universities of applied sciences.

Public expenditure for research is mainly the result of personal initiatives on the part of researchers. Research funding is awarded on a competitive basis, according to qualitative assessment criteria. The Confederation is responsible for providing research funding through two federal agencies: the Swiss National Science Foundation (SNSF) and the Commission for Innovation and Technology (CTI). The Confederation also provides funding to affiliated research institutes within the FIT Domain as well as to thirty non-university research institutes. For their part, the Cantons are responsible for managing and co-funding cantonal universities and universities of applied sciences.

International research cooperation is very important for Switzerland. First of all, it enables our country to take part in numerous international research organisations such as CERN as well as in multiyear research programmes such as the EU's research framework programmes. In addition, it allows Switzerland to pursue bilateral research cooperation with selected priority countries.

In terms of the volume of published scientific articles per inhabitant, Switzerland ranks at the top alongside Finland in international comparisons. In addition, Swiss research publications receive above-average recognition within the international research community. Moreover, Swiss researchers are successful in bids to se-



Cutting-edge research at the Center of MicroNanoTechnology at the EPF Lausanne.



CERN in Geneva is the world's largest research centre in the field of particle physics.

cure research funding from the EU's research framework programmes. Swiss researchers excel both in terms of the rate of successful bids and the amount of secured funding.

### A leading innovative and competitive position – worldwide

Switzerland is among the world's most competitive countries. Switzerland regularly appears near or at the top of the list in prominent international comparisons such as the Global Competitiveness Report, INSEAD's Global Innovation Index and the Innovation Union Scoreboard.

Among other reasons, these achievements are the result of productive interactions between the private sector and publically funded research conducted within the FIT Domain, as well as in cantonal universities and universities of applied sciences. The guiding principles for Swiss higher education institutions are autonomy and openness to the rest of the world, together with the exchange of new ideas and people. General conditions for the private sector are favourable, which is one of the reasons why over two-thirds of all research in Switzerland is funded by the private sector (2008: Total CHF 16.3 billion; Private sector CHF 11.1 billion (68%)).



Successful knowledge and technology transfer between higher education institutions and industry.

Key figures for Switzerland	
Surface area:	41,300 km²
Population:	8 million inhabitants
National languages:	German, French, Italian and Romansh
Gross domestic product (BIP):	USD 405 billion (2011)
Per capita GDP:	USD 51,300 (2011)
Annual GDP growth:	1.9% (2011)



## Portrait of Switzerland

Switzerland is a small country with great diversity: languages, cultures, economic branches, and different landscapes all co-exist in this tiny area. At the same time, however, Switzerland is a country that is open to the rest of the world: over 20% of the population holds a foreign passport, the Swiss economy is heavily export-driven and several international organisations are based here. The standard of living is high.

Switzerland has a population of over 8 million inhabitants, 20% of whom hold a foreign passport. Covering a surface area of 41,300 km<sup>2</sup>, Switzerland is one of Europe's smallest states. Thanks to its outstanding natural beauty, Switzerland has also developed an excellent reputation as a tourist destination.

### In the heart of Europe – ethnic and cultural diversity

Located in the middle of Western Europe, Switzerland shares borders with Germany, France, Italy, Liechtenstein and Austria. As a result, Switzerland is very diverse both from an ethnic and cultural standpoint. This diversity can be seen in Switzerland's four official languages German, French, Italian and Romansh; around 64% of the Swiss population speak Swiss German (in addition to High German) and 20% speak French, making these two languages the most prevalent languages spoken. As in many other countries, considerable importance is given to English in Switzerland, where it is mainly used as a language of communication in business, higher education and research settings.



### Mountainous region and highly populated areas

Switzerland is an important communication and transport hub between Northern and Southern Europe. The natural and cultural space is strongly influenced by the Alps, which stretch across the country from the West to the East and include mountains as high as 4,600 metres. Flat areas such as Central Switzerland are densely populated and are home to more than 75% of the country's total population. With over one million inhabitants, Zurich is the largest metropolitan area in Switzerland, followed by Basel and Geneva, each of which has just under half a million inhabitants.

### **Best quality of living**

The quality of life in Switzerland is high. In Mercer's Quality of Living Survey (2012), an international comparison of 460 cities, Zurich and Geneva ranked 2<sup>nd</sup> and 8<sup>th</sup> respectively, whereas Bern, Switzerland's capital city, ranked 10<sup>th</sup>. The study considered a number of different criteria, including political, economic and social life, as well as public services relating to the environment, personal safety, health, education and transport.

Rank	City	Country
1	Vienna	Austria
2	Zurich	Switzerland
3	Auckland	New Zealand
4	Munich	Germany
5	Vancouver	Canada
6	Dusseldorf	Germany
7	Frankfurt	Germany
8	Geneva	Switzerland
9	Copenhagen	Danmark
10	Bern	Switzerland
10	Sydney	Australia
		Quelle: Mercer Survey, 2012

#### An innovative and competitive economy

Switzerland's economy is internationally competitive, highly specialised and clearly service-oriented. Some 70% of the country's working population are active in the Tertiary Sector. Around 25% work in the Secondary Sector, while only 4% earn their living from the Primary Sector.

Thanks to Switzerland's highly educated population and strong innovative capacities of the private sector, the unemployment rate in Switzerland rarely exceeds 4%, even during global economic downturns.

The Swiss economy derives its strength from its many small and medium-sized enterprises, which account for 99% of all Swiss companies and provide two-thirds of the country's jobs. We should not forget, however, that Switzerland is also the home and decision-making centre of many large Swiss and foreign multinationals. Multinationals that originated in Switzerland include the food products group Nestlé, the world's largest watch-making company Swatch, the reinsurance company Swiss Re or the pharmaceutical or chemical concerns Novartis and Roche. Many foreign or Swiss multinationals manage their worldwide or European activities from their headquarters in Switzerland.

The largest source of employment in the Secondary Sector can be found in the mechanical engineering, electrical engineering and metalworking industries. The high-tech industry also plays a key role in the Swiss economy. Significant economic branches include biotechnology, medical technology and environmental technology. Switzerland's health care sector also enjoys a solid reputation.

Switzerland's economy is very export-oriented. One in every two Swiss francs is earned abroad, mainly as a result of exports to EU member states. Mechanical, electrical engineering and chemical products account for over half of Switzerland's export revenues.



Research and development is extremely important for the Swiss economy.

#### Significant expenditure in research and development

Compared to other countries, Switzerland has an extremely innovative and competitive economy. One of the reasons for this is the fact that great importance is given to education and research in Switzerland: education expenditure accounts for just under 6% of Swiss GDP. Research and development (R&D) activities account for a further 3% of Swiss GDP. Privately-owned companies in particular invest heavily in R&D: currently around CHF 11.1 billion each year (2008). In conjunction with public research expenditure, which is mainly intended to promote fundamental research, the effect



Parliament Building in Bern.

achieved by private R&D expenditure has had a very visible impact: on an international level, Switzerland enjoys an extraordinarily solid reputation as a location for knowledge and innovation.

#### **Political stability**

Founded in 1848, Switzerland is democratic republic with a long tradition. As a country, it is the very epitome of stability and safety. The reason for this lies in its political and economic systems, which are characterised by political balance and decentralised power. Built on federal principles, Switzerland is comprised of 26 cantons. Each canton has its own constitution, parliament, government and court system. The cantons enjoy considerable autonomy over matters relating to education, health, spatial planning, public safety and the administration of justice.

For its part, the Federal Administration (also referred to as the Confederation) is responsible for national defence, foreign policy, the financial system, the postal system, the railways and the national road network. The Swiss Parliament, the Federal Council and most of the Federal Administration can be found in the federal capital Bern.

Switzerland's foreign policy is based on the principle of neutrality. This does not prevent the country from playing an active role on an international level, such as within the context of the UN, which maintains one of its headquarters in Geneva. Switzerland's image is also the result of its humanitarian commitments and the fact that it is home to a large number of international organisations, such as the International Committee of the Red Cross (ICRC), which is also based in Geneva. In addition, a number of sporting associations are based in Switzerland: the International Olympic Committee (IOC) and the International Federation of Volleyball (FIVB).

### **Cooperation with the European Union**

Through a series of bilateral agreements, Switzerland and the EU have steadily established closer ties in specific policy areas. In the area of education and research, Switzerland initially took part in EU framework programmes as well as mobility and exchange programmes as an associate member. It then gradually became a full-fledged participant.

The Free Movement of Persons Agreement is a bilateral agreement signed and gradually introduced by Switzerland and the EU. It establishes the basic rules enabling Swiss and EU nationals to live and work in any of the signatory countries. The mutual recognition of professional qualifications as well as the coordination of social insurance systems in signatory countries facilitates mobility even further.



Palais des Nations, European seat of the UN in Geneva.

## Higher education and research in Switzerland compared to other countries

The quality of its education system and the creativity of its researchers are the main reasons for Switzerland's high level of innovation and commercial competitiveness. Moreover, the public authorities and the private sector continue to devote substantial financial resources towards maintaining and expanding Swiss education and research activities, which are internationally competitive in so many different areas.

#### **Education expenditure**

According to the OECD, Switzerland's total education expenditure corresponds to 5.6% of its gross domestic product, which is just under the average for OECD countries (6.3%). Countries that spend more on education include the Denmark (8%), Korea (7.6%), the USA (7.3%) and France (6.3%). Countries that spend less on education than Switzerland include Germany (5.3%) and Japan (5.1%).

Education expenditure as a percentage of GDP



### erage is USD 9,300.

Quite a different picture emerges, however, if we relate national

education expenditure to the total number of people undergoing

education and training in the country in question: Switzerland spends over USD 14,900 per capita on education and training each

year. Among OECD countries, only the USA has a higher level of na-

tional education expenditure at USD 15,200 per year. The OECD av-

### Education expenditure per capita in USD



### **R&D** expenditure

According to the OECD, Switzerland's total R&D expenditure corresponds to 2.9% of its gross domestic product. This is partly due to the significant R&D expenditure of Swiss companies, which is significantly above the OECD average of 2.4%. The corresponding figure achieved by major industrialised nations such as the USA (2.8%) or France (2.2%) is significantly lower than that of Switzerland. In a European context, countries such as Finland (3.8%), Sweden (3.4%) and Denmark (3.1%) devote a significantly higher percentage of their GDP to R&D than Switzerland.

#### R&D expenditure as a percentage of GDP



Source: OECD, Main Science and Technology Indicators 2013

### **Scientific papers**

Swiss researchers produce roughly 1.2% of all scientific papers published worldwide. If we compare the absolute number of scientific papers produced in Switzerland to the country's total population, we find that Switzerland and Finland are at the top with respect to other countries.

### Scientific papers per 1,000 inhabitants, annual average 2005-2009



Source: SERI 2011, Bibliometric study of research activities in Switzerland 1981-2009

Switzerland also compares extremely well internationally in terms of the number of citations of scientific papers (i.e. scientific impact of national research output). Scientific papers from Switzerland are highly regarded within the research community.

### Citations of scientific papers, average for the years 2005-2009



Source: SERI 2011, Bibliometric study of research activities in Switzerland 1981-2009

If the scientific impact of national research output is broken down into specific fields (see below), Switzerland actually appears in first place in three of the disciplines in question: in "Technical Sciences and Engineering, Information Technology", "Physical, Chemical & Earth Sciences" and "Life Sciences". Switzerland achieves fourth place in the field of "Agriculture, Biology and Environmental Sciences" and fifth place in the area of "Clinical Medicine".

An important indicator for the scientific performance of individual countries is the extent to which their institutions and researchers take part in international networks. In the case of Switzerland, the available data reveal a sharply rising trend. In 2005-2009, the average proportion had already risen as high as 70%. Swiss scientists

### Countries that partner with Swiss researchers in 2005-2009 in percentage of total cooperation initiatives



Source: SERI 2011, Bibliometric study of research activities in Switzerland 1981-2009

most frequently co-author publications with colleagues from institutions in the USA. Three neighbouring countries (Germany, France and Italy) form the second largest group of partner countries in Switzerland's dense international research network.

#### Patents

Swiss R&D activities ultimately give rise to patents. The same rule applies here as earlier on, namely that while the absolute figures relating to Switzerland's patent activities are relatively small, if we relate them to the number of inhabitants, Switzerland comes out on top. After Japan, Switzerland has the second largest number of triadic patents per million inhabitants (i.e. patents held simultaneously at the European Patent Office, the US Patent & Trademark Office and the Japan Patent Office).

#### Triadic patents per million inhabitants, 2010



Source: OECD, Factbook 2013

### Top-ten countries measured in terms of scientific impact in various fields 2005-2009

Technical Sciences and Engi- neering, Information Tech- nology	Physics, Chemistry, Earth Sciences	Life Sciences	Agriculture, Biology and Environmental Sciences	Clinical Medicine
1. Switzerland	1. Switzerland	1. Switzerland	1. Netherlands	1. USA
2. USA	2. Netherlands	2. USA	2. Denmark	2. Netherlands
3. Denmark	3. USA	3. United Kingdom	3. Belgium	3. Belgium
4. Netherlands	4. Denmark	4. Netherlands	4. Switzerland	4. Denmark
5. Singapore	5. Germany	5. Austria	5. Sweden	5. Switzerland
6. Belgium	6. United Kingdom	5. Germany	6. United Kingdom	6. Sweden
7. Sweden	7. Austria	5. Belgium	7. Singapore	7. Finland
7. Israel	8. France	8. Denmark	8. USA	8. Austria
9. Germany	9. Sweden	9. Sweden	9. France	8. Canada
10. France	10. Canada	10. France	9. Germany	10. United Kingdom

Source: SERI 2011, Bibliometric study of research activities in Switzerland 1981-2009

### International ranking of Swiss tier-one universities

The quality of the Swiss higher education sector is reflected, among other things, in international university ranking lists. Swiss tier-one universities (i.e. cantonal universities and Switzerland's two federal institutes of technology: ETH Zurich and EPF Lausanne) hold strong to very strong positions in these international ranking lists.

### Position of Swiss tier-one universities in international ranking list

	EPFL	ETHZ	Basel	Bern	Fribourg	Geneva	Lausanne	Saint Gallen	Zurich
Shanghai Ranking 2013 (Top 500)	101-150	20	83	151-200		69	201-300		60
QS Ranking 2013/14 (Top 400)	19	12	110	154		71	115	411-420	78
Times Ranking 2012 (Top 400)	40	12	142	151	301-350	133	111		89
Leiden Ranking 2013 (Top 500)	13	26	85	177		59	68		70

Source: SERI, 2013 (only higher education institutions that appear at least once in the ranking lists are shown).



Swiss tier-one universities like ETH Zurich hold strong to very strong positions in international ranking lists.

### **Nobel Prize laureates**

Albert Einstein, who was a Swiss citizen from 1901 onwards and who worked in Switzerland for many years, is one of the most famous thinkers of all time. He developed the theory of relativity and wrote revolutionary academic papers. In 1921, he was awarded the Nobel Prize in Physics, joining the ranks of many Swiss scientists, beginning with Emil Theodor Kocher (who won the Nobel Prize in Medicine in 1909). So far, twenty scientists holding Swiss citizenship have been awarded a Nobel Prize in natural sciences. There are also quite a few Nobel Prize laureates for literature and peace.

### Swiss Nobel Prize laureates\* in natural sciences and medicine

Year	Name of laureate	Location	Citizenship	Nobel Prize
1909	Emil Theodor Kocher	University of Bern	Swiss	Medicine
1913	Alfred Werner	University of Zurich	Swiss	Chemistry
1920	Charles-Edouard Guillaume	Bureau international des Poids et Mesures/France	Swiss	Physics
1921	Albert Einstein	Kaiser-Wilhelm-Institut für Physik/ Germany	German/Swiss since 1901/USA	Physics
1937	Paul Karrer	University of Zurich	Swiss	Chemistry
1939	Leopold Ruzicka	ETH Zurich	Swiss since 1917	Chemistry
1948	Paul Hermann Müller	Laboratorium der Farben-Fabriken J.R. Geigy AG Basel	Swiss	Medicine
1949	Walter Rudolf Hess	University of Zurich	Swiss	Medicine
1950	Tadeus Reichstein	University of Basel	Swiss since 1915	Medicine
1951	Max Theiler	Rockefeller Foundation/USA	Swiss/South Africa/USA	Medicine
1952	Felix Bloch	Stanford University/USA	Swiss/USA	Physik
1957	Daniel Bovet	Istituto Superiore di Sanità / Italy	Swiss/Italy	Medicine
1975	Vladimir Prelog	ETH Zurich	Swiss since 1959	Chemistry
1978	Werner Arber	University of Basel	Swiss	Medicine
1986	Heinrich Rohrer	IBM Research Laboratory Rüschlikon	Swiss	Physics
1987	Karl Alexander Müller	IBM Research Laboratory Rüschlikon	Swiss	Physics
1991	Richard Robert Ernst	ETH Zurich	Swiss	Chemistry
1992	Edmond Henri Fischer	University of Washington/USA	Swiss	Medicine
1996	Rolf Zinkernagel	University of Zurich	Swiss	Medicine
2002	Kurt Wüthrich	ETH Zurich	Swiss	Chemistry

\* Nobel Prize laureates who, at the time of receiving the prize, held Swiss citizenship

Studies at higher education institutions in Switzerland are based on the international three-tiered Bachelor, Master and Doctoral structure.

## Higher education in Switzerland

The Swiss higher education sector offers a complete and diverse range of study options at cantonal universities and federal institutes of technology, universities of applied sciences (UAS) and universities of teacher education (UTEs). Studies are based on the three-tiered Bachelor, Master and Doctoral structure (with the title of PhD only being awarded by tier-one universities). All higher education institutions are required to pursue teaching and research as well as offer continuing education and training courses and provide fee-based services to third parties.

Swiss higher education dates back several centuries. The first university was founded in Basel in 1460. Today, Switzerland has a highly structured higher education sector with internationally recognised attainments in both teaching and research. This higher education sector makes significant contributions to Switzerland's economic, cultural and social development.

### **Tier-one universities**

The term "tier-one university" specifically refers to Switzerland's two federal institutes of technology (ETH Zurich and EPF Lausanne) and its ten cantonal universities. At present (2012/2013), around 140,000 people study at these twelve tier-one universities. Of those, around 50% are women and approximately 30% foreign nationals. The higher the level of studies, the greater the proportion of foreign nationals: Over 50% of all PhD students hold a foreign passport.

The main courses and research activities at federal institutes of technology relate to science, engineering, mathematics and archi-



Rolex Learning Center at the EPF Lausanne.

tecture. While it is possible to attend courses in science, mathematics and architecture at a number of cantonal universities, the two federal institutes of technology are the only tier-one universities in Switzerland that offer courses in engineering.

Most cantonal universities offer degree programmes in a full range of disciplines. Students may attend courses in law, social science, mathematics, science, as well as in a range of arts subjects. Half of all cantonal universities also include a faculty of medicine. Only a few universities have a more specific profile and concentrate on selected areas. This would be the case, for instance, for the University of Saint Gallen, which is one of Europe's leading universities for business.

Switzerland and fifty other countries are involved in the Bologna process, which is intended to create a European Higher Education Area. As part of this process, the participating countries are introducing the "Anglo-Saxon" model of higher education studies, which consists of a Bachelor's degree (generally three years of fulltime study), a Master's degree (a further one and a half to two years of full-time study) and a doctorate (which involves writing a thesis to obtain a PhD). At the same time, participating countries are also developing the European Credit Transfer System (ECTS), which enables students to obtain credit for comparable study undertaken in another member state. The last, but no less important, effect of the Bologna process is that universities are increasingly redesigning the courses of study they offer at Master's degree level to enable attendance by foreign students who have an adequate mastery of English.

### Universities of applied sciences (UAS)

Switzerland has seven regional public universities of applied sciences, which were developed from the mid-1990s onwards. In 2005 and 2008, two private UAS were approved by the Federal



### Proportion of students at tier-one universities by nationality and educational background

Source: FSO 2013

### No. of students 18931 Swiss 10 000 Foreign nationals – prior education in Switzerland 5 000 Foreign nationals – prior education abroad 1 728 Zurich Universities of d Sciences a University of Applied Scien Northwestern Switzerland ences and Arts FHNW Lucerne Applied Bern University of Applied Science HES-SO - University of Applied Sciences of Western Switzerlan 50 km 25 Switzerland No. of students: 84 035 Cantons Map layout: of which other UTE/UAS (not shown) 11 773

### Proportion of students at public universities of applied sciences by nationality and educational background

Source: FSO 2013

Council. By far, most prospective candidates for UAS studies hold an upper-secondary level Federal VET Diploma. UAS students develop the ability to apply scientific knowledge and methodologies and, in some cases, make use of artistic abilities. Unlike tier-one universities, which mainly conduct fundamental research, UAS focus on applied research and development. At the crossroads between practical training and academic knowledge, UAS play an important role as drivers of innovation. Today, research activities account for around 20% of the total operating costs of UAS.

Although not all UAS offer the full range of courses, the courses on offer include: engineering, information technology, architecture, construction and planning, chemistry, life sciences, agriculture and forestry, business and services, design, health, social work, music, theatre and other artistic disciplines, applied psychology, applied linguistics and physical education.

Taken together, UAS offer around 300 degree programmes. Around 220 of these programmes are at Bachelor's degree level. They generally require three years of full-time study or four to five years of part-time study. Around 20% of those who obtain a Bachelor's degree go on to obtain their Master's degree, which generally takes about three semesters. Master's degree programmes at UAS focus on research and lead to a more advanced professional qualification. Because UAS are geared to the needs of the labour market, they also offer a wide range of continuing education and training courses, including advanced studies programmes leading to the Certificate of Advanced Studies (CAS), Diploma of Advanced Studies (DAS) or Master of Advanced Studies (MAS).



Bern UAS - School of Architecture, Wood and Civil Engineering in Biel.

In 2012/2013, over 70,000 students were enrolled in a Swiss UAS, just under 20% of whom were foreign nationals and nearly 50% were women.

### Universities of teacher education (UTEs)

Universities of teacher education were created in 2001 from previous teacher training schools. They are based on the same principle as UAS: the syllabus places emphasis on both practical training and applied research. UTEs also offer continuing education and training courses and provide fee-based services to third-parties. UTEs are mainly funded by the Cantons.

The vast majority of teachers working in compulsory and postcompulsory education receive their training at UTEs. Swiss-wide, there are 14 UTEs to choose from. Four other teacher training institutions are embedded in other types of higher education institution. In addition, there are two federal institutions that train teachers: the Swiss Federal Institute for Vocational Education and Training (SFIVET) and the Swiss Federal Institute of Sports Magglingen (EHSM). In 2012/13, there were around 12,000 students enrolled in UTEs, over 50% of whom were women.



University of Teacher Education Lucerne.

### Federal and cantonal agencies and bodies responsible for higher education and research policies

### State Secretariat for Education, Research and Innovation (SERI)

Among other things, the State Secretariat for Education, Research and Innovation (SERI) is the federal agency responsible for higher education, science, research and space affairs. Its remit includes the following: promoting high-quality teaching and research at Swiss tier-one universities and universities of applied sciences; increasing the international competitiveness of Swiss higher education and research; helping Swiss higher education institutions to join European and international cooperation networks; and coordinating Switzerland's space policy on a national and international level.

www.sbfi.admin.ch

### Swiss Conference of Cantonal Ministers of Education (EDK)

The EDK enables the cantons, which are generally responsible for education policy matters, to find national solutions to important issues. Typical examples of policy matters handled by the EDK include a national agreement on key education indicators (structures, objectives), on exchange programmes or on the recognition of qualifications. In the area of higher education, the EDK pursues intercantonal agreements on funding and mobility to ensure equal access to higher education throughout Switzerland and a sharing of the financial burden among the Cantons. The EDK is also comprised of specialised bodies and coordination committees such as the UAS Council.

#### www.edk.ch

### **Swiss University Conference (SUC)**

The SUC is a joint body that enables the cantons and the Confederation to coordinate higher education policy. The SUC issues binding directives regarding the nominal duration of courses of study, the recognition of prior studies and higher education qualifications. The SUC also provides funding for specific projects involving several higher education partners. Finally, it recognises institutions and degree programmes and issues guidelines for the assessment of teaching and research.

### Rectors' Conference of the Swiss Universities (CRUS)

CRUS represents the shared concerns and interests of all Swiss universities in their dealings with political authorities, companies, social and cultural institutions and the general public. While preserving the autonomy of each individual institution, CRUS promotes inter-university cooperation in teaching, research and the provision of services.

Its core activities include the following: ensuring the mutual exchange of information; harmonising academic processes and definitions; seeing to it that tasks are suitably allocated among Swiss universities and universities of applied sciences; promoting international cooperation; and working with Swiss universities to implement the Bologna Declaration.

www.crus.ch

### Rectors' Conference of the Swiss Universities of Applied Sciences (KFH)

The KFH was established for the purpose of representing the interests of Swiss universities of applied sciences (UAS) in their dealings with federal and intercantonal agencies, education and research institutions and the general public. This means that KFH works closely with the EDK's UAS Council and maintains regular contact with SERI, which is responsible for managing and cofunding the UAS sector at national level.

### www.kfh.ch

### Swiss Conference of Rectors of Universities of Teacher Education (COHEP)

COHEP is a specialised body within the Swiss Conference of Cantonal Ministers of Education (EDK). COHEP advises the EDK on all issues pertaining to teacher training. In addition, COHEP also coordinates and supports the professional development of teachers in areas such as teaching theory, research, continuing education and training and services.

www.cohep.ch

### **Swissuniversities**

The Swissuniversities association will prepare the merger of the three rectors' conferences CRUS, KFH and COHEP into a single entity, as provided for under the Higher Education Act (HEdA). Swissuniversities intends to deepen and expand cooperation between Swiss tier-one universities, universities of applied sciences (UAS), and universities of teacher education (UTEs) and contribute to Swiss-wide coordination of these higher education institutions.

### www.swissuniversities.ch



With its universities and federal institutes of technology, as well as its universities of applied sciences and universities of teacher education, Switzerland's higher education landscape is comprehensive and varied.

### Professional education and training (PET) – part of Swiss tertiary education

Professional education and training (PET) is also part of Swiss tertiary education. It allows broader swathes of the population to obtain specific professional skills that suit their own needs as well as those of the labour market. The PET sector therefore indirectly strengthens the higher education sector, which focuses mainly on academics and research. The PET sector also helps to ensure that employers are able to find qualified workers with an ideal blend of different types of skills.

### Highly relevant for professions

There are around 400 different federal PET examinations for the Federal PET Diploma and Advanced Federal PET Diploma as well as over thirty different core curricula in eight different areas at PET colleges. The key features of the PET sector are the strong correlation with the needs of the labour market and the close combination of theory and practice. Trade associations and other professional organisations are involved in organising examinations and developing core curricula at PET colleges. It is this involvement that allows new competence requirements to be quickly met. It also ensures a fast pace of innovation and prevents training courses from being maintained when the economy no longer has a need for them.

### Various options

Professional education and training (PET) is tailored to suit the specific learning circumstances, learning curves and needs of professionals. Regardless of the person's age, the PET sector offers the opportunity to obtain a tertiary-level qualification. The person generally requires several years of recognised professional experience in the given field. For holders of the upper-secondary level Federal VET Diploma (or equivalent qualification), the PET sector offers prospects for further development and higher-level training.

This flexibility has the effect of enhancing the appeal of the Swiss VPET system as a whole. Even those with higher education qualifications may also prepare for a federal PET examination, particularly for the Advanced Federal PET Diploma. This allows them to acquire highly developed professional skills (e.g. in the area of fiduciary services and finance) as a complement to their original academic studies.

#### Shared commitment from both the private and public sector

The Confederation, the Cantons and professional organisations work together to ensure high-quality within the upper-secondary level VET sector, the tertiary-level PET sector as well as the VPET system as a whole. The heavy involvement of professional organisations in this endeavour is a key prerequisite ensuring that all training programmes and examinations reflect the realities of the labour market. In addition to preparatory courses for federal PET examinations, there are also PET college degree programmes. In both cases, training can be found at either a private and public education institution. Both the private and public sector contribute funding for the PET sector. However, it is mainly individuals and employers who shoulder most of the costs.

#### Additional information about the Swiss VPET system:

### www.sbfi.admin.ch/berufsbildung\_en/

Yearly publication on the Swiss VPET system:

www.sbfi.admin.ch/berufsbildung\_dok\_en



Professional education and training offers qualifications for demanding occupations entailing a high level of expertise or management responsibilities.



# From fundamental research to market-ready innovation

The traditional distribution of private and public sector roles has meant that fundamental research has mainly been the preserve of tier-one universities. Applied research as well as the development of research findings into marketable products and services (collectively referred to as R&D) has mainly been driven by the private sector and the universities of applied sciences.

Public expenditure for research is mainly the result of personal initiatives on the part of researchers. Research funding is competitively awarded on the basis of qualitative assessment criteria. The Confederation is responsible for providing research funding through two federal agencies: the Swiss National Science Foundation (SNSF) and the Commission for Innovation and Technology (CTI). The Confederation also provides funding to affiliated research institutes within the FIT Domain as well as to thirty nonuniversity research institutes. For their part, the Cantons are responsible for managing and cofunding cantonal universities and universities of applied sciences.

International research cooperation is very important for Switzerland. First of all, it enables our country to take part in numerous international research organisations such as CERN as well as in multi-year research programmes such as the EU's research framework programmes. In addition, it allows Switzerland to pursue bilateral research cooperation with selected priority countries.

### R&D expenditure in 2008

	in million CHF	%
Public sector	3,725	22.8
- Confederation	2,355	14.5
- Cantons	1,370	8.3
Private sector	11,115	68.2
Other national sources	490	3.0
Abroad	970	6.0
Total	16,300	100

#### R&D activities in 2008

	in million CHF	%
Private sector	11,980	73.5
Public sector	120	0.7
Higher education institutions	3,940	24.2
Private (non-profit)	260	1.6
Total	16,300	100

### **Higher education institutions**

Most publicly-funded fundamental research is carried out by cantonal universities and the FIT Domain. The latter is comprised of Switzerland's two federal institutes of technology (ETH Zurich and EPF Lausanne) and four affiliated research institutes: the Paul Scherrer Institute (PSI), the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), the Swiss Institute for Materials Science and Technology (EMPA) and the Swiss Federal Institute of Aquatic Science and Technology (EAWAG). Universities of applied sciences focus mainly on applied research and development to serve the needs of the private sector, culture and the public sector. They enable the transfer of knowledge between research laboratories and the market. In so doing, they form an important link in the innovation chain.

### Affiliated research institutes within the FIT Domain

#### Paul Scherrer Institut PSI

PAUL SCHERRER INSTITUT

Based in Villigen, in the canton of Aargau, the Paul Scherrer Institute (PSI) is the largest research facility for natural sciences and engineering in Switzerland. Its research activities are concentrated in three main areas: the structure of matter, energy and the environment, people and health. The PSI develops and operates complex research facilities. Each year, over 2,000 scientists from all over the world conduct experiments at these unique facilities. With its large-sized SINQ Neutron Source, Swiss Light Source (SLS) and the SµS Muon Source, the PSI offers extraordinary glimpses into the inner workings of different substances and materials. These installations are unique in Switzerland, and some can be found nowhere else in the world except at the PSI. The PSI's next large-scale facility is currently being developed: the novel X-ray free-electron laser SwissFEL.



### Swiss Federal Institute for Forest, Snow and Landscape Research WSL

The Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) is a research facility devoted to the use, management and protection of natural and urban habitats. It also serves as a bridge between scientists and practitioners. It prepares presentations and solutions on the careful and responsible use of landscapes and forests as well as on the handling of natural hazards, particularly in mountainous regions. The WSL is internationally recognised as a leading research institute in these areas. Its findings also serve as the basis for Switzerland's sustainable environmental policies. The WSL also works with partners from the research community, civil society and the private sector to devise strategies aimed at addressing socially relevant issues.



### Swiss Institute for Materials Science and Technology EMPA

Based in Dübendorf, Saint Gallen and Thun, the Swiss Institute for Materials Science and Technology (EMPA) is an affiliated research institute within the FIT Domain. As a bridge between research and practice, EMPA develops solutions for major industrial and social challenges. Thanks to efficient technology transfer, EMPA is able to work with industry partners to transform its research findings into marketable innovations. This helps to strengthen the competitive position of the Swiss economy. In addition, it creates the scientific basis for sustainable social development. As an affiliated research institute within the FIT Domain, EMPA is required to pursue excellence in all of its activities.



### Swiss Federal Institute of Aquatic Science and Technology EAWAG

Based in Dübendorf, the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) works with concepts and technologies designed to ensure the sustainable use of water resources and treatment of wastewater. In collaboration with universities, research institutes, the public and private sector, and NGOs, EAWAG helps reconcile environmental, economic and social interests in relation to wastewater. In this respect, it serves as a bridge between scientific knowledge and practice. EAWAG's research is focused on three main areas: water for human welfare, water for ecosystem function and strategies for human versus ecosystem water use conflicts.

### **Swiss National Science Foundation SNSF**

The SNSF is the most important public research funding institution in Switzerland. The SNSF does not conduct its own research but rather has a federal mandate to provide funding for non-profit research projects both in and outside the higher education sector. Within the context of its public service agreement with the Federal Administration, the SNSF mainly funds fundamental research of a general nature. Its grant funding programmes are also specifically intended to foster the development of junior researchers and professors so that the next generation of researchers will be as highlyqualified as the previous one.

In addition to funding fundamental research projects, which are subject to the most stringent quality criteria, the SNSF is also responsible for implementing national research programmes (NRPs) and national centres of competence in research (NCCRs):

- National research programmes (NRPs) focus mainly on finding ways to solve problems of national importance. Topics addressed by NRPs range from challenges facing society (for ex. NRP "Gender equality"; NRP "Religions, the State and society") to medical issues (NRP "Stem cells and regenerative medicine"; NRP "Antibiotic resistance") and areas of technology that are thought to offer significant innovation potential (NRP "Smart materials"; NRP "Implants and transplants").
- National centres of competence in research (NCCRs) are institutionally supported research initiatives with a nationwide scope. Funding is only provided to the highest quality research networks that place special emphasis on interdisciplinary approaches and/or new and innovative issues within a given discipline. NCCRs also play an active role in fostering the development of young researchers and women and facilitating knowledge transfer. Each NCCR consists of a competence centre and a network of national and international partners

from the university or non-university sectors. First created in the year 2000, there are currently thirty NCCRs that receive research funding.

### Commission for Technology and Innovation CTI – "Science to market"

The Commission for Technology and Innovation (CTI) is the federal agency responsible for promoting innovation. Its motto is "Science to market". The primary aim of its work is to ensure that innovative knowledge developed in the laboratory is transformed more rapidly into marketable products and services. To this end, CTI supports joint R&D projects where higher education and business partners work together.

CTI provides support to R&D projects (which combine applied research with development activities), mainly at universities of applied sciences (UAS). It also runs technology-driven programmes and supports R&D projects in industry. In order to boost UAS research activities, CTI created what are known as "national competence networks". These create linkages among the various UAS in Switzerland as well as between Swiss UAS, Swiss tier-one universities and foreign partners. Through the "CTI Start-up" programme, CTI helps start-up companies get off the ground. In order to more effectively encourage entrepreneurial mindsets and company formation, CTI also offers a training course in entrepreneurship.

### **Swiss Academies of Arts and Sciences**

The Swiss Academies of Arts and Sciences is an umbrella organisation for the following institutions: the Swiss Academy of Natural Sciences (SCNAT), the Swiss Academy of Humanities and Social Sciences (SAHS), the Swiss Academy of Medical Sciences (SAMS) and the Swiss Academy of Engineering Sciences (SATW). The purpose of the umbrella organisation is to coordinate the competences and resources of the various academies. As such, it performs three core tasks: early recognition and announcement of socially relevant developments in education, research and innovation, together with an explanation of the impact of these developments; showing a commitment to ethical principles in relation to scientific discoveries and their practical applications; maintaining a collaborative dialogue between science and society. This umbrella organisation, together with individual member academies, receives public funding for services rendered to the Confederation.

### Research institutions outside of the higher education sector

The Confederation provides part of the start-up funding for selected research institutions outside of the higher education sector. Examples of this include the Centre suisse d'électronique et de microtechnique (CSEM) in Neuchâtel, the Swiss Institute for Allergy and Asthma Research in Davos, the decentralised Swiss Institute of Bioinformatics (Geneva, Lausanne, Bern, Basel, Zurich), the Swiss Tropical and Public Health Institute (SwissTPH) in Basel or the Swiss Foundation for Social Sciences Research (FORS) in Lausanne. The Confederation expects these and over thirty other institutions to provide a valuable scientific boost in areas such as the humanities and social sciences, medicine and biology, as well as in a variety of scientific and technical disciplines.

### International research cooperation

Because Switzerland is such a small country, it places the highest priority on ensuring the closest possible ties with global knowledge networks. EU member states are among Switzerland's main partners for international cooperation in education, research and innovation. However, Switzerland also has ties – some of which are long-standing – with several non-European countries.

In line with their autonomous role, individual higher education institutions in Switzerland maintain their own international cooperation strategies. The Confederation also provides support for this, by attempting to create the best possible conditions for the internationalisation of university activities. Swiss foreign research policy is intended to promote the appeal of Switzerland and its institutions in the area of science and innovation and enhance competitiveness. This particular policy is highly bottom-up in its approach. If the Swiss scientific community is convinced that an international research organisation or a supranational research programme can help Switzerland to make significant scientific and technological progress, then the Confederation will enter into international agreements to ensure the participation of Swiss researchers.

### Swiss participation in international research programmes and organisations

Switzerland plays an active role in various international research programmes and organisations. The international realm is impor-

tant to Swiss researchers in that it enables them to gain access to otherwise cost-prohibitive infrastructures that would be required for such fields as aerospace, astronomy, high energy physics, or particle physics. In today's increasingly globalised world, international cooperation is also a means of overcoming obstacles and sharing information in areas that spill beyond national borders and that can only be effectively addressed through international programmes and joint cooperation projects. In both cases, international research cooperation strengthens national scientific and economic capacities through a more efficient usage of resources, which also makes the country more competitive.

Swiss participation in EU research framework programmes is particularly important as such programmes are the EU's main instrument for support in the areas of research, technological development and demonstration as well as for implementation of pan-European strategies, such as the European Research Area. Switzerland has taken part in the programmes by virtue of a bilateral agreement since 2004. This has enabled Swiss researchers from universities and industry to participate in the annual calls for proposals on an equal footing with fellow researchers in EU member states. For Swiss researchers, the EU's research framework programmes have become the most important source of public funding, second only to the Swiss National Science Foundation.

### Swiss participation in international research programmes

Programme	Aim
EU-FP, the European Union's framework programmes for research and technological development	To implement the EU's common science and technology policy (7 <sup>th</sup> programme generation 2007-2013. The 8 <sup>th</sup> programme generation will run from 2014 to 2020 and will be called "Horizon 2020"). Such programmes are the main instrument used by the European Union for this purpose
EUREKA, initiative for European technological research cooperation	To enhance European competitiveness. Through EUREKA, R&D projects with clear market potential are devised and carried out according to the bottom-up principle. Cooperation between com- panies, research institutes and higher education institutions makes it possible to bring innovative products, processes and services to the market. The initiative is particularly important for small- and medium-sized enterprises (SMEs), which today constitute half of its partners.
COST, European Cooperation in the Field of Scientific and Technical Research, Brussels (Belgium)	To enable researchers from various research institutes, higher education institutions and companies to work together at the European level in pursuit of a broad range of R&D activities.
EMBC, European Molecular Biology Conference, Heidelberg (Germany)	To promote research in molecular biology in Europe by supporting training programmes and the exchange of information between European researchers.
CIESM, International Commission for the Scientific Research of the Mediterranean Sea), Monaco	To advance scientific cooperation by supporting the international use of national research stations.
IMS, Intelligent Manufacturing Systems, Brussels (Belgium)	To promote the development of harmonised standards and gree- ner, more efficient manufacturing methods. This is an industry-led international R&D programme.
HFSP, Human Frontier Science Program, Strasbourg (France)	To promote innovative fundamental research around the world with a focus on the complex mechanisms of living organisms. This programme covers a broad range of life science topics: from molecular and cellular approaches to systems and cognitive neu- roscience.
European XFEL, European x-ray free electron laser Ham- burg (Germany)	To build a facility capable of generating high-intensity electromag- netic radiation by accelerating electrons to relativistic speeds. This will enable such things as taking pictures of the atomic details of viruses, the molecular composition of cells, elements of the nanocosmos as well as filming physical, chemical and biological reactions.

### Swiss participation in international research organisations

Organisation	Aim
ESA, European Space Agency, Paris (France)	To encourage cooperation between European countries in the area of space research and technology for the purpose of advan- cing scientific knowledge and developing practical applications such as navigation systems and weather satellites.
CERN, European Organization for Nuclear Research, Geneva (Switzerland)	To provide facilities for European countries cooperating in nuclear and particle physics research for exclusively peaceful purposes. Through its accelerator facilities, CERN promotes advanced re- search in the fields of high-energy physics.
EURATOM, European Atomic Energy Community, fusion research programme, Brussels (Belgium)	To coordinate national research activities for the peaceful use of nuclear energy across national borders.
ESO, European Southern Observatory, Garching (Germany)	To build, equip and operate astronomical observatories in the sou- thern hemisphere as well as to encourage and organise European cooperation initiatives in the field of astronomy research.
ESRF, European Synchrotron Radiation Facility, Grenoble (France)	To allow scientists to use X-rays with hitherto unattained energy, intensity and precision. Such X-rays are required for structural ana- lyses in solid-state physics, molecular biology, material sciences, for medical diagnoses and therapies as well as for special experiments in radiobiology, fundamental physics and physiochemistry.
ILL, Institute Max von Laue - Paul Langevin, renoble (France)	To serve as a reliable neutron source for research and studies in the fields of material sciences, solid-state physics, chemistry, crystal- lography, molecular biology as well as nuclear and fundamental physics.
EMBL, European Molecular Biology Laboratory, Heidelberg (Germany)	To promote European cooperation in fundamental research in molecular biology, provide the necessary infrastructures and con- tribute to the on-going development of state-of-the-art instru- mentation for modern biology.

### Bilateral research cooperation with priority countries outside of Europe

Switzerland has broadened the scope of its foreign science policy beyond its traditional Eurocentric focus. It is now actively working to develop bilateral research cooperation ties with countries outside Europe. In order to provide the best possible general conditions to encourage the international research cooperation efforts of researchers and their institutions, Switzerland has entered into bilateral agreements with numerous countries (e.g. USA, Brazil, Russia, India, China and South Africa). This has helped to foster cooperation and exchange in the area of scientific and technological research.

In 2007, in consultation with the Rectors' Conference of the Swiss Universities (CRUS), a list was drawn up of priority countries with which Switzerland would pursue broader and deeper scientific policy relations. Corresponding bilateral research cooperation agreements have served as the basis for the elaboration of joint research programmes aimed at deepening scientific cooperation between Switzerland and the partner country in research fields of mutual strategic interest. These joint research programmes are also intended to encourage international networking activities among Swiss higher education and research institutions and raise their profile. Cooperation is based on the principles of scientific excellence, mutual interest and reciprocity (matching funds). On the Swiss side, each joint research programme is coordinated by a cantonal university or federal institute of technology.

### A foreign network for education, research and innovation: Swiss science counsellors and swissnex consular annexes

In the area of education, research and innovation, Switzerland maintains an official presence in two forms: through Swiss science counsellors, who work from Swiss embassies in specific countries, and swissnex consular annexes.

Swiss science counsellors and the staff of swissnex consular annexes are either specialists from the State Secretariat for Education, Research and Innovation (SERI) or are diplomats and employees of the Federal Department of Foreign Affairs (FDFA). They currently work in 25 different locations and in 18 different countries.

Swiss science counsellors and swissnex consular annexes serve as liaisons among research institutions in Switzerland and corresponding institutions in the host country. They facilitate bilateral relations among education and research institutions, administrations and on ERI policy. They observe science, technology, innovation and education policy developments in the host region and submit corresponding reports to interested parties in Switzerland. Another important task that they perform is to establish and maintain personal and institutional networks that may be of use to Swiss researchers, higher education institutions and businesses. The main objective of each swissnex consular annex is to help Swiss higher education and research institutions and start-ups involved in research to develop their international activities. swissnex consular annexes therefore establish extensive networks of contacts with local universities, research institutes and companies in the host country. These contacts are then used to facilitate contacts with Swiss partners. In order to enhance Switzerland's profile as a location for higher education and research, swissnex consular annexes organise scientific and cultural events intended for a specific public. This opens the door for new cooperation opportunities.

swissnex can be found at the following locations:

- Boston, USA (opened in 2000);
- San Francisco, USA (2003);
- Singapore (2004);
- Shanghai, China (2008);
- Bangalore, India (2011);
- Rio de Janeiro, Brazil (2013)





Infrastructure at Swiss higher education institutions, such as here at the main library of the University of Zurich offer ideal conditions for learning and research.



www.ethz.ch www.admission.ethz.ch

### ETH Zurich (Swiss Federal Institute of Technology Zurich)

Consistently ranked the top university in continental Europe, ETH Zurich is renowned worldwide for its excellent education, groundbreaking fundamental research and for putting its new findings directly into practice.

ETH Zurich teaches the fundamental principles required to tackle current and future issues in the natural and engineering sciences, mathematics, and architecture and it inspires enthusiasm for these subjects in its students. As all degree programmes are closely linked to current research, and ETH Zurich's faculty maintain close ties to industry, ETH graduates are ideally equipped for a career in a global environment – be it in academia, business and industry, or as entrepreneurs. Whereas Bachelor programmes are taught in German, English is the language in the international setting of the Master's and doctoral programmes. Two thirds of the professors have been recruited from abroad.

Students at ETH Zurich enjoy a rich university life with many places to study, various student restaurants and cafés, excellent sport facilities and a great number of events. A diverse urban setting, countless nearby recreational areas, an extensive range of cultural offerings and a vibrant nightlife, all make Zurich a cosmopolitan city which offers the highest quality of living. The greater Zurich area being the economic centre of Switzerland and home to numerous international companies, adds to the attractiveness, opening a wide range of job opportunities.

### **Key Figures**

Nobel laureates	21
Number of students	17,800
Female students	31%
International students	37%
Annual tuition fees for Swiss and non-Swiss students	CHF 1,288

- Architecture and Civil Engineering: Architecture; Civil Engineering; Environmental Engineering; Geomatic Engineering and Planning; Spatial Development and Infrastructure Systems
- Engineering Sciences: Mechanical and Process Engineering; Micro and Nanosystems; Robotics; Nuclear Engineering; Electrical Engineering and Information Technology; Biomedical Engineering; Energy Science; Biotechnology; Computer Science; Computational Biology and Bioinformatics; Materials Science
- Natural Sciences and Mathematics: Mathematics; Statistics; Quantitative Finance; Computational Science and Engineering; Physics; Chemistry; Chemical and Bioengineering; Pharmaceutical Sciences; Biology;
- System-oriented Natural Sciences: Earth Sciences; Applied Geophysics; Atmospheric and Climate Science; Environmental Sciences; Agricultural Sciences; Food Science; Health Sciences and Technology
- Management and Social Sciences: Management, Technology and Economics; Comparative and International Studies



www.epfl.ch student.services@epfl.ch

### Federal Institute of Technology Lausanne (EPFL)

Founded in 1853, the Federal Institute of Technology Lausanne (EPFL) has become one of the most renowned science and technology institutions in Europe.

The EPFL is located in Lausanne, on the shores of Lake Geneva, one of the most beautiful lakes in Europe, and at the foot of the Alps and Mont Blanc. Its main campus brings together over 13,000 students, researchers and staff in the same magical place. With 125 nationalities represented on campus and over half of teaching staff coming from abroad, the school encourages exchanges and meetings. Thanks to its dynamism and rich student community, the EPFL has been able to create a special spirit imbued with curiosity.

13 complete study programmes, from Bachelors to Masters degrees, are offered in engineering, basic sciences, IT and communication, life sciences, as well as in the fields of construction, architecture and the environment. These are accompanied by exchange programmes at the world's leading institutions and industrial internships to better understand the realities of the corporate world.

With over 350 laboratories and research groups on campus, the EPFL is one of Europe's most innovative and productive scientific institutions. Continuously combining basic research and engineering, ranked top 3 in Europe and top 20 worldwide in many scientific rankings, the EPFL has attracted the best researchers in their fields.

The infrastructure and high-tech platforms at the heart of a campus of almost 4,000 researchers from around the world offer ideal conditions to generate new ideas and new partnerships. In addition, there is the flagship Rolex Learning Center housing the school's library and the recently built SwissTech Convention Center. The Innovation Square and the Science Park, also on the site of the EPFL, are home to over 120 start-ups and leading research centres belonging to a host of prestigious companies.

### **Key Figures**

Number of students	9,400
Female students	27%
International students	40%
Annual tuition fees for Swiss and non-Swiss students	CHF 1,266

- Mathematics, Physics, Chemistry and Chemical Engineering
- Architecture, Civil Engineering, Environmental Sciences and Engineering
- Electrical and Electronics Engineering, Mechanical Engineering, Materials Science and Engineering, Microengineering
- Computer Science, Communication Systems
- Life Sciences and Technologies
- Management, Technology and Entrepreneurship
- Financial Engineering



### www.unibas.ch mobility@unibas.ch international@unibas.ch

### University of Basel

The town of Basel is home to the oldest university in Switzerland. Founded in 1460, Basel University is a modern and attractive centre of teaching, learning, and research situated on the three-nation border of Switzerland, Germany, and France.

Promoting talent stands at the very centre of Basel University. The knowledge-driven society of today's interdependent world needs best qualified students and universities that cross boundaries – both in mind and in geography. Basel University offers both: top research facilities for highly motivated and enthusiastic students and the encouragement to inter-disciplinary research work that leads to new concepts and inventions.

Basel University has full university status. It offers degree programmes across the arts and sciences, ranging from Archaeology to Zoology. Specific focus is put in the following six areas of study defined as "Thematic Focal Areas": Life Sciences, Visual Studies, Nanoscience, Sustainability and Energy Research, European and Global Studies, and Narrativity.

Comprising 6,500 undergraduate and 6,000 postgraduate and doctoral students, Basel University has a warm and personal atmosphere. Its 350 professors and 3,900 academic staff are dedicated to advancing knowledge and fostering independent thinking and socially responsible action. The mission of the University of Basel is to accomplish first-class research, teaching, and public service. It ranks among the world's one hundred best universities and boast top-ten place among German-speaking universities.

### **Key Figures**

Nobel laureates	2
Number of students	12,500
Female students	54%
International students	24%
Annual tuition fees for Swiss and non-Swiss students	CHF 1,400

- Theology
- Law
- Medicine
- Humanities and Social Sciences
- Natural Sciences
- Economics
- Psychology



www.unibe.ch info@unibe.ch

### University of Bern

The University of Bern offers top quality across the board. It earns special recognition in cutting-edge disciplines, is reputed for the excellent quality of its teaching, offers a delightful setting, and a campus environment intimately linked to the social, economic and political life of the city.

The University of Bern's comprehensive offering includes 60 Bachelor and 83 Master programmes, PhDs in all disciplines, 8 Graduate Schools and more than 200 executive programmes. The University encompasses the complete array of classical disciplines: theology, humanities, human sciences, law, economics and social sciences, medicine, veterinary medicine and natural sciences.

The historic roots of the University of Bern go back to 1528. Today, most of the 160 institutes are located within walking distance of the historic main building. With 17,000 students, Bern is of mid-range size among Swiss universities. Unlike the bigger institutions, it retains a human dimension and a warm and friendly atmosphere.

The University of Bern's academic and research organisation prides itself on its interdisciplinary approach, exemplified by its Strategic Research Centers and its three National Centres of Competence in Research (NCCR): Trade Regulation, TransCure and MUST (experimental physics) with the ETH Zurich. The University of Bern is an international leader in climate research and is also involved in research on sustainable development. The University is actively involved in a wide range of European and worldwide research projects, notably in the field of Space Research: The Physics Institute of the University of Bern took part in Man's first lunar expedition, and continues to regularly supply research instruments and experimental results to NASA and ESA missions.

### **Key Figures**

Nobel laureates	1
Number of students	17,000
Female students	54%
International students	12%
Annual tuition fees for Swiss and non-Swiss students:	CHF 1,568

#### **Teaching and Research Areas**

- Science
- Medicine
- Humanities
- Human Sciences
- Business, Economics and Social Sciences
- Law
- Veterinary Science
- Protestant and Old Catholic Theology
- Languages and Cultural Studies

#### Key areas

- Fundamental Physics
- Development and Environment
- Climate Change
- International Trade Regulation
- Medical Technology
- Cognition, Learning and Memory
- Space Research
- Public Management and Regional Economic Development
- Natural and Life Science



www.unifr.ch international@unifr.ch

### University of Fribourg

The University of Fribourg, Switzerland's only bilingual University was founded in 1889 on roots going back to the 16<sup>th</sup> century. It is committed to excellence in research and teaching and takes pride in its truly international and interdisciplinary spirit. Located directly at the language border between French and German speaking parts of Switzerland and Europe, the University of Fribourg is a place of encounter for students, teachers, and researchers from all over the world. Its position at the intersection of two European cultural spaces makes Fribourg an ideal conduit for all manner of cultural contact and exchange.

The international outlook of Fribourg is reflected by Faculty members originating from all continents and students from over 110 different countries. The University of Fribourg attracts those who seek more and wish to look beyond. In addition to a first-rate education, Students are provided with opportunities to enlarge their perspectives by living in a bilingual environment, working in an interdisciplinary fashion, and above all engaging with social and ethical questions.

The complete curriculum can be followed either in French or German language, specific Master programmes, including all Master programmes in Science, are taught in English. The University maintains a large network of exchange partnerships with leading universities around the world. All teaching is closely connected to scientific research; among the 9,900 students, some 1,300 are pursuing doctoral studies.

### **Key Figures**

Number of students	9,900
Female students	58%
International students	20%
Annual tuition fees for Swiss students	CHF 1,310
Annual tuition fees for non-Swiss students	CHF 1,610

- Arts and Humanities
- Law
- Economics and Social Sciences
- Roman CatholicTheology
- Natural Sciences and Medicine



www.unige.ch intl@intl.unige.ch

### University of Geneva

The University of Geneva was founded in 1559, upon the initiative of Jean Calvin and Theodore de Beze. It is nestled in the heart of a city of great international renown and intellectual heritage, and defines itself as a place of reflection, teaching, and dialogue.

With a student body from 146 different countries, the University of Geneva is the second largest university in Switzerland, and also hosts the largest number of female students. Just like the town of Geneva itself, the university enjoys a strong international reputation, both for the quality of its research (it is one of the top institutions among the League of European Research Universities) and the excellence of its education. This acclaim has been won thanks to its strong ties to many national and international Geneva-based organi¬zations, such as the World Health Organization, the International Telecommunications Union, the International Committee of the Red Cross, and the European Organization for Nuclear Research (CERN).

The University of Geneva is a comprehensive university offering a wide range of programmes, from Bachelor's degree to doctoral level. Its domains of excellence in research include life sciences (molecular biology, bio-informatics), physics of elementary particles, mathematics and astrophysics. Furthermore, the University of Geneva boasts one of the oldest and finest translation and interpreting faculty in the world, the FTI.

### **Key Figures**

Number of students	16,200
Female students	60%
International students	36,5%
Annual tuition fees for Swiss and non-Swiss students	CHF 1,000

### Teaching and Research Areas

- Science
- Medicine
- Humanities
- Economic and Social Sciences
- Law
- Protestant Theology
- Psychology and Educational Sciences
- Translation and Interpreting

Independent institute with links to the University of Geneva: Graduate Institute of International and Development Studies (IHEID)

VIVERSITÄT

www.unilu.ch info@unilu.ch

### University of Lucerne

The University of Lucerne is young. Although its roots go back to 1600, it has been inaugurated as a modern university only in 2000. The convenient size of the university provides students with a great degree of freedom and the possibility to form innovative combinations. Study courses are offered in traditional as well as in interdisciplinary subjects. Moreover, it is possible to combine elements from different faculties.

Excellent support of students is a special feature of the University of Lucerne. Law students are allocated a mentor for the period of their studies in order to ensure optimal support and to maintain a dialogue between the students and lecturers. The academic staff cultivates cooperation with numerous foreign scientific institutions. These include, among others, renowned institutions such as various Max Planck Institutes and Harvard University in Cambridge, MA.

### **Key Figures**

Number of students	2,400
Female students	59%
International students	11%
Annual tuition fees for Swiss students	CHF 1,620
Annual tuition fees for non-Swiss students	CHF 2,220

- Law
- Humanities and Social Sciences
- Theology



www.unil.ch international@unil.ch

### University of Lausanne

Founded in 1537, the University of Lausanne comprises seven faculties where approximately 13,000 students and 2,200 researchers work and study. Emphasis is placed on an interdisciplinary approach, and there is close cooperation between students, professors, and teaching staff.

The University of Lausanne is spread over three sites, the largest of which is in Dorigny on the shores of Lake Geneva. The peaceful green landscape with views of the Alps and the lake provides an ideal setting for study and research. A wide variety of disciplines are covered, ranging from Greek Numismatics to Cyber-Marketing or Developmental Biology, and three faculties are unique in Switzerland: Law and Criminal Justice, Biology and Medicine, and Geosciences and Environment.

Attractively located in the heart of the French-speaking region of Switzerland, the University of Lausanne pursues an active collaboration at local and international levels. More than 30% of the teaching staff and more than 20% of the students come from abroad. Up-to-date, well-equipped, and at the forefront of the latest technological developments, the University of Lausanne is an ideal centre for the exchange of ideas that lead to intellectual, scientific, and economic progress.

### **Key Figures**

Number of students	13,000
Female students	56%
International students	25%
Annual tuition fees for Swiss and non-Swiss students	CHF 1,160

- Arts
- Biology
- Business and Economics
- Criminal Justice
- French as a Foreign Language
- Geosciences and Environment
- Law
- Medicine
- Political Sciences
- Protestant Theology
- Psychology
- Social Sciences
- Sport Science
- Study of Religions



www.unine.ch contact@unine.ch

### University of Neuchatel

Established in 1838 the "Académie de Neuchâtel" became a University in 1909. Today the University of Neuchatel comprises five faculties, namely, humanities, sciences, law, economics, and theology, which in turn cover more than 30 different disciplines. The university offers a unique setting in French-speaking Switzerland, ensuring close contact between teachers and the 4,400 students, of which 590 are doctoral students.

The University of Neuchatel offers three Master's degree programmes taught in English: a Master of Science in Finance, a Master of Science in Economics, Major in Economic Policy and a Master of Science in Statistics. Other Master's degree programmes are conducted partially in English.

Also offered – jointly with the University of Lucerne – two bilingual French-German Master's degree programmes in Law and History.

Its French Language and Civilization Institute (ILCF) is specialized in teaching French for non-native French speakers. ILCF courses are designed for foreign students who wish to reinforce and extend their knowledge of French language, literature, and civilization. It also offers a summer programme during four weeks in July.

### **Key Figures**

Number of students	4,400
Female students	59%
International students	22%
Annual tuition fees for Swiss students	CHF 1,030
Annual tuition fees for non-Swiss students	CHF 1,580

- Humanities: Archeology, Ethnology, Geography, History, Museum Studies, Literatures, Language and Communication Sciences, philosophy, sociologys
- Sciences: Biology, Hydrogeology, Geothermic, Computer Science and Internet Technologies, Science and Sport
- Geothermics, Computer Science and Internet Technologies
- Law: Health and Biotechnology, Sport, Social, Entrepreneurship and Innovation
- Economics: Financial Analysis, Journalism, Work and Organizational Psychology, International Business Development, Statistics, Public opinion and Survey Methodology
- Theology: specialization in Protestant Theology



### www.unisg.ch info@unisg.ch

### University of St. Gallen (HSG)

The University of St.Gallen (HSG), based in the German-speaking part of Switzerland, was founded as a "Business Academy" in 1898. The HSG pursues the goal of providing its over 7,000 students with a practice-oriented education, guided by an integrative view of management, economics, law, social sciences and international affairs. With success: we have constantly been ranked among the top business universities in Europe. In the Financial Times Rankings 2012 we are ranked 1<sup>st</sup> worldwide with the Master in Strategy and International Management, 3<sup>rd</sup> with the double degree programme CEMS MIM and 5th with the Master in Banking and Finance. Accreditations by EQUIS and AACSB International underline our commitment to a holistic curriculum that meets the highest academic standards.

The HSG is a bilingual institution and offers programmes at various levels: The Bachelor's courses for undergraduates are taught in German and in English. Seven of the thirteen subsequent Master's programmes (post-graduate programmes) are taught entirely in English. Furthermore, the HSG offers most of the Ph.D. programmes in English. The Executive School of Management, Technology and Law (ES-HSG) provides several courses, e.g. a full-time MBA.

The HSG is linked up with 170 partner universities worldwide and offers exchange and double degree programmes. At the same time, we are part of the CEMS, PIM and APSIA networks. 25% of students come from foreign countries, from a total of 80 nations worldwide.

The HSG is Switzerland's business university with the strongest placement results. Graduates may expect top-level starting salaries and the University's Career Services Center (CSC-HSG) supports them upon their entry into the labour market.

### **Key Figures**

Number of students	7300
Female students	32%
International students	25%
Annual tuition fees for Swiss students	CHF 2,452
Annual tuition fees for non-Swiss students	CHF 4,252

The fees will be increased per Autumn Semester 2014. Please visit our website for further information: www.unisg.ch

#### **Teaching and Research Areas**

- Business Administration
- Economics
- Law
- International Affairs

#### Learn more about our degree courses

- www.bachelor-stufe.unisg.ch
- www.master-stufe.unisg.ch
- www.phd.unisg.ch

#### **Admission Criteria**

Please contact the Admission and Crediting Office: www.admissions.unisg.ch / admissions@unisg.ch



www.unisi.ch relint@lu.unisi.ch

### Università della Svizzera italiana

Founded in 1996, the Università della Svizzera italiana (USI) is a recognised interdisciplinary and multilingual university with four faculties. Its relatively small size and high-quality infrastructure facilitate student-teacher interaction and create the ideal conditions for study and research at both the Lugano and Mendrisio campuses.

The official language is Italian, but English, the second working language, is used in many of the Master's degree programmes, in the graduate schools, and in the Master of Advanced Studies (MAS) programmes. German and French are also used as languages in a few specialist courses.

USI was among the first Swiss universities to adopt the new European university system. By means of teaching and research agreements or partnerships with other Swiss universities and with major universities in Northern Italy, USI has established an academic bridge between Northern and Southern Europe, paving the way for inter-university Master's degree courses, cross-border doctoral schools, and research projects, notably with the Polytechnic University of Milan and ETH Zurich. The development of research in the sectors of urban planning, finance, healthcare communication, health economics, distance teaching, and in some sectors of informatics, has considerably boosted the number of postgraduates (currently around 300) as well as funding for Swiss and European projects.

### **Key Figures**

Number of students	2,900
Female students	48%
International students	67%
Annual tuition fees for Swiss students	CHF 4,000
Annual tuition fees for non-Swiss students	CHF 8,000

- Architecture
- Computer Science
- Communication Sciences
- Economics



www.uzh.ch international@int.uzh.ch

### University of Zurich

University of Zurich (UZH) is Switzerland's largest university, with a current enrollment of over 26,000 students. Made up of seven faculties covering approximately 100 different subject areas, University of Zurich offers the most comprehensive academic program in the country.

The University of Zurich's strong commitment to the highest academic standards and ethical research lays the foundation for excellence in both research and teaching. The University of Zurich is a member of the League of European Research Universities (LERU) and, on the national level, is leading house at six National Centers of Competence in Research.

The University of Zurich places great emphasis on promoting young academics by encouraging and supporting them in their scholarly pursuits and preparing them for international careers. In addition, the University of Zurich initiates and sustains academic exchange of the highest quality through close cooperation with ETH Zurich and other higher education institutions both in Switzerland and abroad. A modern infrastructure and its location in the cultural and economic metropolis of Zurich ensure that the University of Zurich is an attractive and stimulating place for its staff and students.

### **Key Figures**

Nobel laureates	12
Number of students	26,400
Female students	57%
International students	12%
Annual tuition fee for Swiss students	CHF 1,538
Annual tuition fee for non-Swiss students	Bachelor: CHF 2,538 Master: 1,738

- Arts and Social Sciences
- Law
- Economics, Business Administration and Information Technology
- Medicine
- Mathematics and Natural Sciences
- Veterinary Medicine
- Theology



www.bfh.ch office@bfh.ch

### Bern University of Applied Sciences

The canton of Bern, including the Swiss capital of the same name, is home to a million inhabitants. The Bern University of Applied Sciences consists of six departments at various locations in the cities of Bern, Biel, Burgdorf, Magglingen, and Zollikofen.

Bern, Biel, and Burgdorf are medieval cities which not only have beautiful surroundings, but also offer a wide variety of cultural events and institutions. The Bern University of Applied Sciences welcomes students from all around the globe and provides student services which help students with their curricula, accommodations, career plans, cultural and sports activities. Some of the schools maintain exchange programmes with international partner institutions and encourage their students to study abroad.

### **Key Figures**

Number of students	6,700
Female students	45%
International students	11%

### Departments

- Engineering and Information Technology
- Architecture, Wood and Civil Engineering
- Business and Administration, Health, Social Work
- School of Agricultural, Forest and Food Sciences
- Bern University of the Arts
- Swiss Federal Institute of Sports Magglingen

- Science and Engineering
- Information Technology
- Business Administration
- Social Work
- Health
- Architecture
- Construction
- Conservation and Restoration
- Sports
- Arts
- Agriculture
- Food Sciences



www.hslu.ch info@hslu.ch

### Lucerne University of Applied Sciences and Arts

Lucerne is world-renowned for its beautiful setting, as well as for its rich cultural and outdoor activities. More than a tourist destination, however, Lucerne is also a centre of higher education. Three institutions closely collaborate in the "Campus Lucerne": the Lucerne University of Applied Sciences and Arts, the University of Lucerne and the University of Teacher Education Lucerne.

The Lucerne University of Applied Sciences and Arts comprises five schools with over 5,500 students enrolled in Bachelor's and Master's degree programmes and approximately 4,200 students in a continuing education (Master of Advanced Studies, Diploma of Advanced Studies, Certificate of Advanced Studies). Together the five schools offer bachelor's and master's degree programmes in engineering, architecture, economics, social work, art, design and music.

More specialised programmes, such as the Master of Advanced Studies and courses in continuing education, are directly focused on the practical needs of postgraduates and their employers.

To foster national and international mobility and networks, the Lucerne University of Applied Sciences and Arts collaborates with other Swiss and foreign higher education institutions, offers study programmes in English and encourages extra-curricular activities.

### **Key Figures**

Number of students	5,500
Female students	41%
International students	5%

### Schools

- School of Engineering and Architecture
- School of Business
- School of Social Work
- School of Art and Design
- School of Music

- Engineering and Architecture
- Business
- Social Work
- Art and Design
- Music



www.fho.ch info@fho.ch

### University of Applied Sciences of Eastern Switzerland

The University of Applied Sciences of Eastern Switzerland is one of the largest and most renowned educational institutions in its region. Modular study programmes allow students to tailor the curriculum to their personal preferences. Most of the faculty have extensive professional experience and are able to present their topics dynamically with a focus on problem-solving research.

The various schools conduct applied research and development, allowing the University of Applied Sciences to maintain close contact with organisations from various sectors of industry, business, and society in general. Due to their solid knowledge and experience in generating solutions to practical problems, students can graduate with an attractive professional profile and have promising prospects in the job market.

The UAS offers an excellent learning environment: small campuses, a communal atmosphere, a good learning infrastructure, wellequipped laboratories, small study groups and highly qualified teachers. International exchange programms with students and faculties enable fruitful cooperation with partner institutions in North America, Europe and Asia.

### **Key Figures**

Number of students	6,600
Female students	38%
International students	15%

### **Affiliated Universities**

- University of Applied Sciences Rapperswil (HSR)
- FHS St.Gallen
- University of Applied Sciences University of Applied Sciences HTW Chur
- Interstate University of Applied Sciences of Technology (NTB)

- Engineering and IT
- Building Engineering and Planning
- Business Administration, Management and Tourism
- Social Work
- Health



www.fhnw.ch

### University of Applied Sciences and Arts Northwestern Switzerland FHNW

The University of Applied Sciences and Arts Northwestern Switzerland FHNW comprises nine schools and academies that cover a wide range of studies. They offer very individualised, high-quality programmes to their approximately 9,400 students.

Nationally, the University of Applied Sciences and Arts Northwestern Switzerland FHNW works closely with PSI, the University of Basel and the universities of applied sciences, and, on the international level, it cooperates with many foreign institutions. Applied research generates solutions to resolve practical problems, which is of particular interest to the private sector in Switzerland and abroad. The University of Applied Sciences and Arts Northwestern Switzerland FHNW emphasises human aspects in its learning environment, and is committed to internationalise its research and academic instruction.

### **Key Figures**

Number of students	9,400
Female students	51%
International students	11%

#### Schools

- FHNW School of Applied Psychology
- FHNW School of Architecture, Civil Engineering and Geomatics
- FHNW Academy of Art and Design
- FHNW Academy of Music
- FHNW School of Life Sciences
- FHNW School of Social Work
- FHNW School of Engineering
- FHNW School of Business
- FHNW School of Education

- Applied Psychology
- Engineering
- Architecture, Civil Engineering Geomatics
- Arts and Design
- Music
- Business
- Teacher Education
- Life Sciences
- Social Work



www.supsi.ch segreteria@supsi.ch

### University of Applied Sciences of Southern Switzerland SUPSI

The University of Applied Sciences of Southern Switzerland (SUPSI) is the only Italian-language University of Applied Sciences in Switzerland. Since its founding in 1997, SUPSI has been a fundamental part of the Italian-speaking university system in Switzerland in the marvelous Lugano region. In addition to its regional orientation, it also has a national and international strategy through its affiliation with the Fernfachhochschule Schweiz (the swiss distance university of applied sciences) and encouraging the mobility of students and staff.

The University offers a wide range of study programs, with 20 Bachelor and 14 Master Programs, together with Continuing Education courses conducted by qualified university teachers, professors and teacher researchers. The courses can be attended full time but also allow students to balance their study commitments with professional working activity. SUPSI is also very active in applied research and service provision, in collaboration with companies and institutions within the region. The great number of applied research projects conducted, allows SUPSI to contribute directly to the economic and social development of the region.

### **Key Figures**

Number of students	4,000
Female students	44%
International students	26%

#### **Affiliated Schools**

- Conservatorio della Svizzera italiana
- Fernfachhochschule Schweiz
- Scuola Teatro Dimitri

- Architecture, Construction and Planning: Architecture, Civil Engineering
- Design: Interior Design, Visual Communication, Conservation and Restoration
- Economics: Business Administration
- Teacher Training: Pre-primary Education; Primary Education; Lower secondary school teaching; upper secondary school teaching
- Social Work
- Music and Theatre: Music, Music and Movement, Theatre
- Health: Nursing, Occupational Therapy, Physiotherapy
- Engineering and IT: Electrical Engineering; Engineering and Management; Computer Science; Mechanical Engineering



### HES-SO-University of Applied Sciences of Western Switzerland

The HES-SO - University of Applied Sciences of Western Switzerland is noted for its faculty and its support staff. 44 Bachelor's and 18 Master's degree programmes are offered in six different fields of study. The Master of Advanced Studies programme and continuing education courses provide further possibilities for attaining professional excellence.

Applied research, technology transfer, and postgraduate studies are conducted in the institutes of the 27 HES-SO schools. The main focus of each group is to fulfill public and private expectations to meet a practical need. This strengthens the cooperation between the schools and industry on the national level and helps, very promising research and development projects to earn international recognition. HES-SO - UAS Western Switzerland is involved in many European research projects (FP7, Sciex) and is leading for 3 of them. HES-SO has more than 100 cooperation agreements with universities abroad with special programmes to enable international mobility of students and faculty.

### **Key Figures**

Number of students	19,100
Female students	52%
International students	20%

#### Schools

- HES-SO Arc
- HES-SO Fribourg
- HES-SO Genf
- HES-SO Valais Wallis
- Canton de Vaud Direction générale de l>enseignement supérieur
- Hautes écoles conventionnées
  - Ecole d'ingénieurs de Changins EIC
  - Ecole hôtelière de Lausanne EHL
  - Haute école de théâtre de Suisse romande HETSR La Manufacture
- HES-SO//Master

#### **Fields of Studying and Research**

- Business, Management and Services
- Design and Fine arts
- Engineering and Architecture
- Health
- Music and Performing Arts
- Social Work



www.zfh.ch info@zfh.ch

### Zurich Universities of Applied Sciences and Arts

Zurich is a city of global importance in terms of science and higher education. In addition to its higher education institutions, which are renowned both nationally and internationally, private sector businesses, some of which have a great deal of scientific potential, also contribute to Zurich's excellent reputation. As a strong economic hub Zurich has one of the world's highest standards of living with a lively cultural scene and a wide range of theatres, museums and cinemas.

In this environment, the Zurich Universities of Applied Sciences and Arts (Zürcher Fachhochschule ZFH) offer a broad range of study programmes, including Bachelor's and Master's degree programmes, Master of Advanced Studies (MAS) programmes and other tertiary-level continuing education and training courses (CAS, DAS).

The Zurich University of Applied Sciences and Arts is composed of three public institutes of higher education: Zurich University of Applied Sciences ZHAW, Zurich University of the Arts ZHdK and the Zurich University of Teacher Education – as well as the private University of Applied Sciences in Business Administration. It is one of the largest universities of applied sciences in Switzerland.

The Zurich Universities of Applied Sciences and Arts ZFH conduct research – both disciplinary and interdisciplinary – that serves practical purposes. It is an innovative partner and works closely with business, cultural, social and state institutions. The many projects it conducts in conjunction with other higher education institutions and the private sector ensures knowledge and technology transfer to industry and business. The ZFH encourages students and staff to make use of mobility programmes and participates in various national and international research networks.

### **Key Figures**

Number of students	16,800
Female students	53%
International students	6%

### Universities

- ZHAW Zurich University of Applied Sciences
- Zurich University of the Arts ZHdK
- Zurich University of Teacher Education
- University of Applied Sciences in Business Administration Zurich

- Architecture and Civil Engineering
- Technology and Information Technology
- Chemistry and Life Sciences
- Business and Management
- Design and Art
- Music, Theatre and Film
- Applied Linguistics
- Social Work
- Applied Psychology
- Health
- Teacher Education

### Additional information

### Education, Research and Innovation in Switzerland

- State Secretariat for Education, Research and Innovation (SERI): www.sbfi.admin.ch
- Swiss Conference of Cantonal Ministers of Education (EDK): www.edk.ch
- Federal Statistical Office (FSO): www.bfs.admin.ch
- Swiss Coordination Office for Research in Education (SKBF): www.skbf-csre.ch
- Swiss Center of Accreditation and Quality Assurance in Higher Education (OAQ): www.oaq.ch
- Swiss participation in international research programmes and organisations: www.sbfi.admin.ch/schweiz\_int\_forschung
- Foreign network with ERI mandate: www.swissnex.org

### Pursuit of education and research in Switzerland

- Rectors' Conference of the Swiss Universities (CRUS): www.crus.ch
- Federal Institutes of Technology Domain: www.ethrat.ch
- Studies at a university of applied sciences (overview): www.sbfi.admin.ch/uas.htm
- Rector's Conference of the Swiss Universities of Applied Sciences (KFH): www.kfh.ch
- Swiss Conference of Rectors of Universities of Teacher Education (COHEP): www.cohep.ch
- Studying in Switzerland (student visa, permits, student exchange programmes, cost of living, accommodation, etc.):
  www.swissuniversity.ch
- Living on or near campus: www.semestra.ch
- Website for research and innovation: www.myscience.ch
- Information for researchers: www.euraxess.ch
- Ranking Forum of Swiss Universities: www.universityrankings.ch



### Swiss education system

### Contact

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